



***Creating Technologies That Create Solutions***



*A scientist in his laboratory is not  
a mere technician... - Marie Curie*

## Company Profile

Cree, Inc. develops and manufactures semiconductor materials and devices based on silicon carbide (SiC), gallium nitride (GaN), Silicon (Si) and related compounds. The company's products include blue, green and ultraviolet (UV) light emitting diodes (LEDs), near UV lasers, radio frequency (RF) and microwave devices, power switching devices and SiC wafers sold for production and for use in research and development. Cree has new product initiatives based on its experience in SiC and GaN-based semiconductors and Si devices, including blue laser diodes for optical storage applications, high frequency microwave devices for wireless infrastructure, radar, and wideband communications systems, and power devices for power conditioning and switching.

Cree owns outright or licenses exclusively 135 U.S. and 79 foreign patents. The company is traded on the NASDAQ National Market System under the symbol "CREE."

## Cautionary Statement

This report contains forward-looking statements that relate to our plans, objectives, estimates and goals. Words such as "expect," "anticipate," "intend," "plan," "believe," and "estimate," and variations of such words and similar expressions identify forward-looking statements. Our business is subject to numerous risks and uncertainties, including variability in our operating results and margins, risks associated with the production ramp-up of our LDMOS 8 RF transistors and our XBright™ LEDs, including risks that we will be unable to achieve necessary improvements to these products and the possibility of unexpected delays, concentration of our business among few customers including the risk that customers may reduce or cancel orders or fail to honor purchase commitments, risks from increased competition, uncertain product demand, variability in our production yields, and risks associated with product development, including the planned commercial introduction of new products. These and other risks and uncertainties, which are described in more detail in our Annual Report on Form 10-K, which is included with this report, could cause actual results and developments to be materially different from those expressed or implied by any of these forward-looking statements.

### About the Cover:

**LEDs illuminate the previously unlit text frieze within the rotunda of the Jefferson Memorial.**  
(Courtesy of Peter Aaron/ESTO National Park Service-National Capital Region and Osram Sylvaia).



## Shareholder Summary

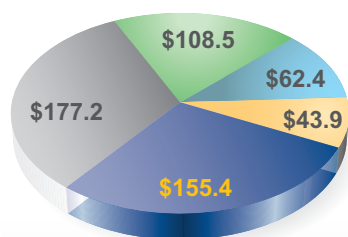
Selected Consolidated Financial Data (in thousands, except per share data)

Statement of Operations Data	Y e a r s E n d e d				
	June 30, 2002	June 24, 2001	June 25, 2000	June 27, 1999	June 28, 1998
Product revenue	\$ 136,230	\$ 159,533	\$ 96,742	\$ 53,424	\$ 34,891
Contract revenue	19,204	17,694	11,820	8,977	9,071
Total revenue	155,434	177,227	108,562	62,401	43,962
Net Income	\$ 15,796*	\$ 48,283*	\$ 30,520	\$ 12,448	\$ 6,243
Net income per cash share, diluted	\$ 0.21*	\$ 0.64*	\$ 0.43	\$ 0.20	\$ 0.11
Weighted average shares outstanding, diluted	75,170	75,735	70,434	60,864	57,974

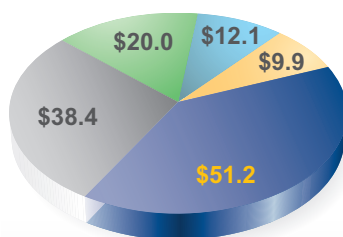
  

Balance Sheet Data	Y e a r s E n d e d				
	June 30, 2002	June 24, 2001	June 25, 2000	June 27, 1999	June 28, 1998
Working capital	\$151,851	\$ 244,178	\$ 265,957	\$ 59,889	\$ 28,265
Total assets	504,195	615, 123	486,202	145,933	74,379
Long-term obligations	--	--	--	4,650	11,046
Shareholders' equity	\$482,104	\$589,096	\$463,140	\$131,001	\$55,905

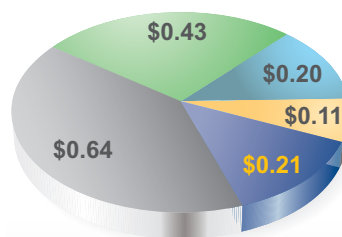
## 5 Year Summary



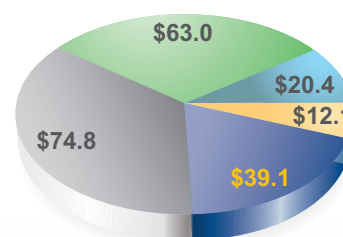
Revenues  
(in millions)



Gross Research & Development\*\*  
(in millions)



Cash Earnings Per Share\*  
(diluted)



Cash Flow From Operations  
(in millions)

■ 2002

■ 2001

■ 2000

■ 1999

■ 1998

\* Excludes costs for purchased intangibles and other non-cash charges.

\*\* Includes customer and government funded programs.

*Energy and persistence conquer all things.*  
- Benjamin Franklin



## Letter to Our Shareholders

Fiscal 2002 proved to be a challenging year for Cree. We were faced with tough business conditions and significant declines in the U.S. equity markets. Despite these challenges, we remained committed to our core strategy of leveraging our leadership in SiC and GaN materials technology to create products that create solutions for our customers. We invested in research and development at unprecedented levels to deliver enabling new products and technology while improving our manufacturing capabilities. We believe that this investment positions the company for growth in fiscal 2003 and beyond.

Our financial results declined compared to fiscal 2001 as we worked to overcome the hurdles in our business and a weak economy. Revenue was \$155.4 million, a decrease of 12% from 2001, but still the second highest in our history. We recorded asset write-downs as a result of tough business conditions, which resulted in a net loss of \$101.7 million for the year. Excluding these charges, adjusted net income was \$15.8 million for the year. Despite the challenges, our balance sheet remained strong with \$170 million in cash and investments and no debt at year end. We also received more than \$54 million in new government contracts directed toward LED, microwave and

power research. Our new product pipeline is the strongest it has been in several years and we are targeting to deliver more than 70% of our sales in the new fiscal year from technology developed in the last fiscal year.

Our R&D investment has resulted in a threefold improvement in the brightness of our LED products, improved yields, higher power laser diodes, a new power device product line, improved SiC microwave transistors and our first prototype GaN microwave product. As we continue to pursue our plan to create enabling new products and grow our business, we have to manage a number of challenges to keep the business on track. We need to satisfy our customers' increasing demand, ramp up our factory, develop key new product features for our LEDs and successfully finish development of our LDMOS 8 products.

Our LED business has gone through an impressive evolution in the last year. With the introduction of our MegaBright™ and XBright™ LED products, we have built upon our high volume, low cost platform and established Cree as a leader in nitride LED brightness. As a result of our new product offerings, we have made significant strides in penetrating the cell phone



market and have recently gained market share. Blue and white LEDs using our chips are being incorporated into a number of new state-of-the-art mobile phone designs for back lighting both the keypad and the new full color displays. As mobile phones become more integrated, we believe that full color displays will become an integral feature for many future designs. We have also seen an increase in demand for blue and green LEDs in a number of traditional applications such as video screens and traffic signals. We increased our penetration in automotive applications with LEDs in new 2003 models from several manufacturers. New applications continue to emerge utilizing blue, green and white LED technology and we are seeing some of the first niche applications where LEDs are beginning to replace the incandescent bulb.

The development and qualification of our LDMOS 8 devices at Cree Microwave has taken longer than we originally anticipated, but we are making important strides with this new technology. We have made progress with major power amplifier manufacturers as potential customers and are optimistic that we can add new customers as we release and qualify these products. We have also received strong interest in the SiC and GaN products that were demonstrated during the year and we are planning to continue our R&D investment in this area. As the wireless infrastructure market recovers, we believe we will be well-positioned to grow this segment of the business with a unique combination of silicon based LDMOS products and next generation wide bandgap products.

In fiscal 2002, we started to realize the benefits of our investment in silicon carbide power semiconductor technology. We introduced our first Schottky diode and have continued to expand the product family, which has led to our first customer design win. This is an important milestone for Cree in an area that we believe can provide a significant growth opportunity for our technology. We are continuing to expand the 600V product line with higher current devices and are working on our first 1200V devices for motor control applications. We need to continue our focus on the development objectives and drive down the cost of these devices to increase the value proposition and expand the market opportunity.

We made strong progress in our laser development efforts as we demonstrated a prototype laser diode with 10,000 hour capability and 3 mW of output. We continue to work with laser diode packagers to further define the specifications required to supply lasers for the next generation DVD applications. We have recently determined that initial system production is targeted for read/write applications, which will require a 30 mW device. Although we have achieved this power level with limited lifetimes on a prototype basis, we still have a significant



amount of development work ahead of us in this area. We continue to pursue the new requirements and are targeting to supply initial samples of our 30 mW devices to customers during fiscal 2003.

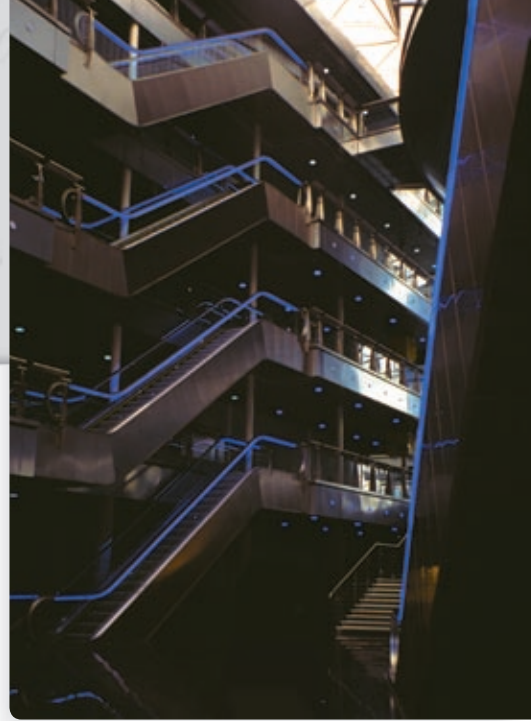
A year ago, I stated that fiscal 2002 would be remembered as a turning point in the history of the company. Although we could not foresee all the challenges that we would face, fiscal 2002 was truly a turning point for Cree. We dealt with a number of challenges while making a tremendous investment in the development of new technology. As a result of our investment, we succeeded in developing an array of new products that are changing the competitive landscape for our industry. These new products and technology are targeted to provide more than 70% of our revenue in fiscal 2003. We still have challenges and must continue our R&D efforts to keep our new product momentum in LEDs while continuing to expand our microwave, power and laser businesses. Our balance sheet remained strong in fiscal 2002 and provides a foundation to fund future growth. We remain committed to our strategy of leveraging our new product developments into market leadership, operating excellence and positive financial results. We are optimistic that fiscal 2003 will be a year of building on our new product success and delivering our mission of creating products and technology that create shareholder value.

Sincerely,

A handwritten signature in black ink that reads "Charles M. Swoboda". The signature is written in a cursive, flowing style.

Charles M. Swoboda  
President and Chief Executive Officer

*Genius is one percent inspiration and  
ninety-nine percent perspiration.*  
- Thomas Alva Edison



Structural illumination featuring LEDs

*“Creating technologies that create solutions...”*

During the past year, Cree has invested over \$51 million in research and development, including government and customer funded programs. To undertake these projects, we harnessed the creative powers of brilliant minds to develop state-of-the-art technology that can offer innovative solutions for our customers' markets. These projects have been broad in scope and will be instrumental in enabling Cree to target approximately 70% of fiscal year 2003 revenue from technology developed during fiscal 2002. We believe our products are key to extending the boundaries in lighting, RF and wireless, power switching and we are now pursuing the new emerging optical storage market utilizing near ultraviolet laser technology.

## Light Emitting Diodes (LEDs)

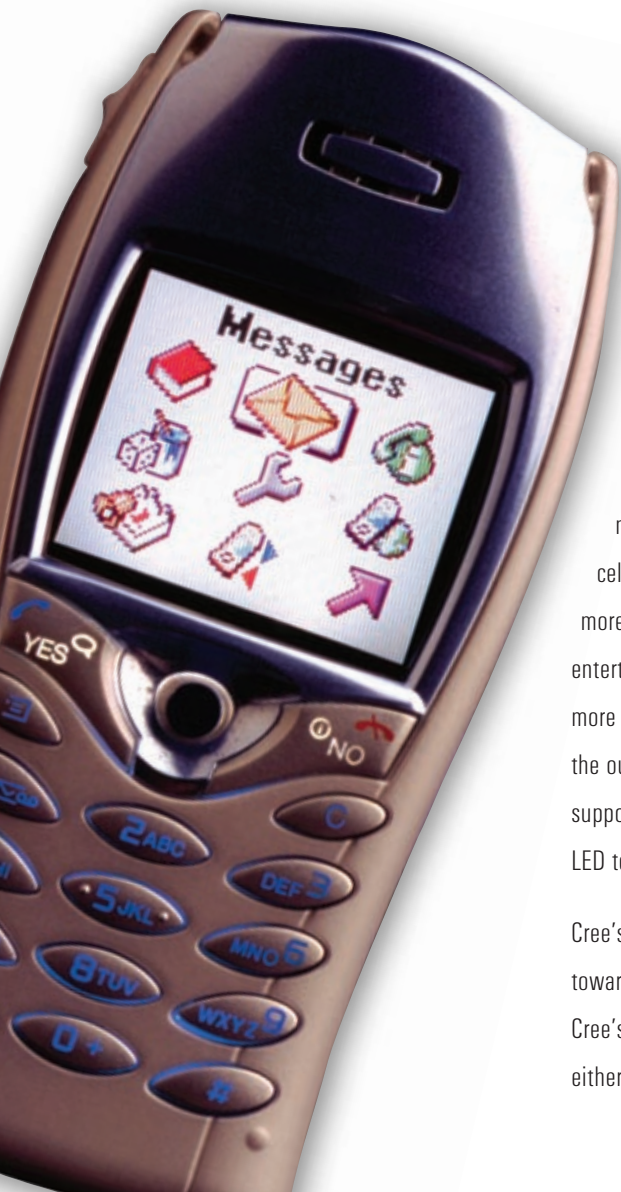
Over a 12-month period, we increased our LED brightness level threefold and broadened the product family to enable new applications. As a result of these enhancements, we believe our XBright™ products are the brightest blue and green LEDs in the marketplace today. These brightness and performance gains may impact applications for lighting and cellular phones, which are expected to become more highly integrated data, communication and entertainment devices. It also enables Cree to more aggressively pursue new designs including the outdoor signage and signaling markets, and support new emerging applications incorporating LED technology.

Cree's innovations continue to drive applications toward next generation lighting. As an example, Cree's blue, green and near ultraviolet LEDs are either already incorporated in, or are targeted to

be integrated in the following applications over the next few years:

- Interior and exterior automotive lighting
- Full color displays
- Backlighting for wireless handsets and PDAs
- LED traffic heads
- Architectural, landscape and channel letter lighting, and
- Incandescent bulb replacements

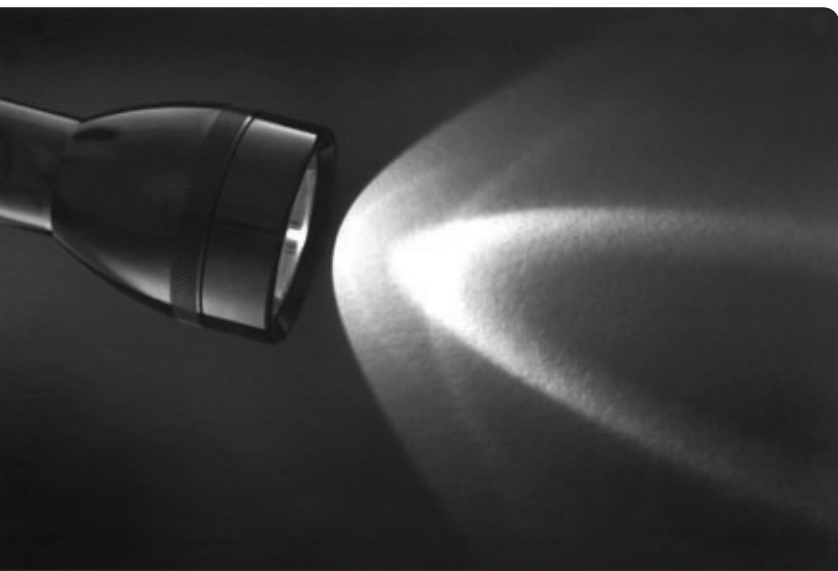
Our philosophy is to continually extend the boundaries by developing new products that can have an impact on existing markets. As a result of our intense R&D efforts and introduction of new products, we believe we have expanded the penetration of our technology and gained market share over the past year. As an example, we are currently designed into a variety of new leading edge cellular phones emerging in the market with either a style changing blue, white or full color display.



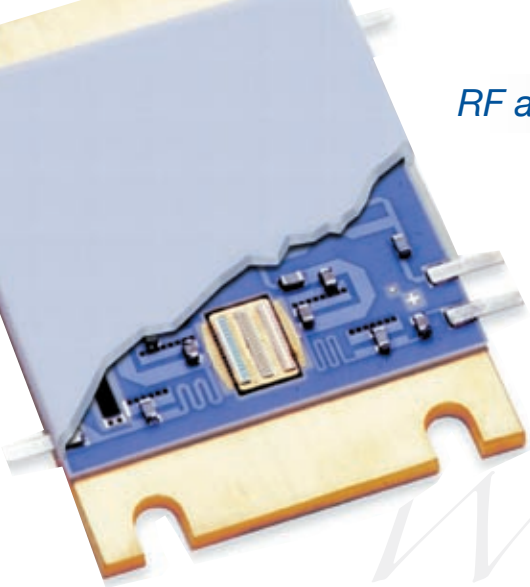
LEDs continue to make inroads into lighting applications that have traditionally been dominated by incandescent bulbs and other light sources. For traffic signals, Cree has developed LEDs that are not only brighter than the competition, but are projected to last seven years versus one year for an incandescent bulb and deliver an 80% energy cost savings. LEDs are replacing light bulbs in automobile dashboard lighting, resulting in significant cost savings that can be recognized over the life of the vehicle.

*“Our philosophy is to continually extend the boundaries by developing new products that can have an impact on existing markets.”*

Architectural lighting, landscape and other outdoor lighting are examples where LED technology is replacing incandescent bulbs, enabling energy savings and reducing maintenance costs. LEDs even shine on Thomas Jefferson at the Jefferson Memorial in Washington, DC. We believe this technology is just beginning to scratch the surface of the global lighting market, which accounted for \$12 billion in sales last year.



## RF and Microwave



Cree Microwave continues to focus on advancing RF power technologies with our new silicon-based LDMOS transistors. The new generation cellular standards require higher performance RF power amplifier levels for base stations. Traditional RF power transistors are relatively inefficient and not suitable for these new systems and standards. We believe our new LDMOS 8 products can address this market with improved efficiency, gain and linearity.

Cree Microwave is working to develop future RF and microwave communications. By utilizing Cree's expertise in SiC and GaN materials, Cree Microwave has demonstrated wide bandwidth amplifiers, which can operate at high power levels across the entire digital cellular infrastructure band of 1.8-2.2 GHz. This is not possible with today's silicon technology. These results indicate that it is now possible to serve multiple frequency bands and multiple air-interface protocols (WCDMA, CDMA, GSM, Edge) with a single device which could alter how future infrastructure is designed. We are also working on devices that we believe will offer significantly enhanced abilities for radar and communication devices.

We believe the combination of our silicon bipolar, LDMOS, SiC and GaN product families should enable Cree to offer the broadest transistor product line for high power wireless infrastructure in the industry.

## Power

Cree has established itself as an innovator for power switching devices, made possible by the creation of the SiC Schottky diode. SiC Schottky diodes enable operation at high voltages and temperatures with significantly lower switching losses resulting in smaller, more compact and more efficient systems.

Our strategy is to replace today's silicon-based technology with the next generation of devices based on SiC. One of the target applications where SiC-based devices can offer a benefit over current silicon devices is in switched mode power supplies for use in telecom central offices, computer servers and medical equipment. Other

applications where SiC power devices could potentially be utilized include motor control for HVAC, elevators, factory robotics, high tech manufacturing equipment, appliances and industrial equipment.

We continue to accelerate the pace of change by directing our R&D efforts toward higher current and voltage devices designed to meet market requirements. During this fiscal year, we enhanced the product family to include products ranging from 1 to 20 amps at 600 volts and moved production of our power products to a 3-inch platform to begin the process of reducing the cost and improving the value proposition for these devices. Products have been shipped to a variety of customers in both chip and packaged form and we have already received our first design win for these newly introduced products.

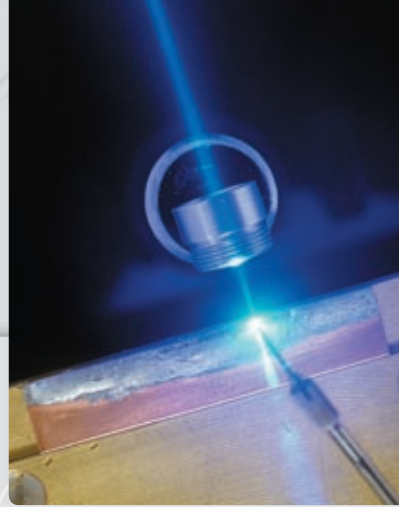


Computer server incorporating power device that could utilize SiC Schottky diodes



*The desire to know is natural in all men.*

*- Leonardo da Vinci*



## *Blue Laser*

Cree is accelerating the pace of change in optical storage. The next generation DVDs are poised to incorporate a near ultraviolet laser into the system. The near ultraviolet laser's shorter wavelength allows the DVD system to focus a smaller spot of data on the disk resulting in five times greater data storage. This is the equivalent to storing approximately 40 hours of ordinary television broadcasts or more than two hours of digital high-definition video.

We've demonstrated the 10,000 hour lifetime capability target with a 3 mW prototype designed for read applications. Our research efforts continue as we work with our customers to enhance our laser diode to meet the more powerful 30 mW laser diode specifications focused on read/write applications.

Ultraviolet lasers may also be suitable for use in a variety of applications including small handheld electronic devices such as cellular phones, PDAs, digital cameras for data storage, as well as in non-storage applications including particle detection and medical equipment.

*"...Creating solutions that create value"*

Creativity functions today at a pace, a level and proficiency driven by the ever-changing marketplace. Cree's strategy of creating innovative technology that provides solutions for our customers to increase market penetration has been the foundation of our success, and, as in the past, new product development will continue to be the key driver to propel our future growth.

*Seattle Seahawks high definition LED screen incorporating Cree's blue and green LEDs*





## CREE Opens the NASDAQ

Cree, Inc., incorporated in July 1987, celebrated its fifteenth year of incorporation during an opening ceremony on July 31, 2002 at the Nasdaq Market Site in New York City's Times Square. Cree completed its initial public offering in 1993 and has seen its revenue grow 2367% through fiscal 2002.

*the way of progress*

Left to Right: Adam Broome, Alfred Berkeley (Nasdaq), Dr. Calvin Carter, Dr. John Edmond, F. Neal Hunter, Charles Swoboda, Dr. John Palmour, Frances Barsky, Michael Rogers, Cynthia Merrell

*was not*



Left to Right: Dr. John Palmour, Adam Broome, Dr. John Edmond, Frances Barsky, Dr. Calvin Carter, Charles Swoboda, Alfred Berkeley (Nasdaq), David Wicks (Nasdaq), F. Neal Hunter, Cynthia Merrell, Charles Brown (Nasdaq), Michael Rogers



Charles Swoboda, Alfred Berkeley (Vice Chairman, Nasdaq)

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended June 30, 2002**

**CREE, INC.**

(Exact name of registrant as specified in its charter)

**North Carolina**  
(State or Other Jurisdiction  
of Incorporation)

**0-21154**  
(Commission File No.)

**56-1572719**  
(I.R.S. Employer  
Identification No.)

**4600 Silicon Drive, Durham, North Carolina 27703**  
(Address of principal executive offices)

**(919) 313-5300**  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: **None**

Securities registered pursuant to Section 12(g) of the Act:

**Common Stock, \$0.00125 par value**  
(Title of Class)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

The aggregate market value of common stock held by non-affiliates of the registrant as of August 1, 2002 was approximately \$1,019,706,031 (based on the closing sale price of \$14.49 per share).

The number of shares of the registrant's Common Stock, \$0.00125 par value per share, outstanding as of August 1, 2002 was 72,728,948.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive Proxy Statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held October 29, 2002 are incorporated by reference into Part III.

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**CREE, INC.**  
**FORM 10-K**  
**For the Fiscal Year Ended June 30, 2002**

**INDEX**

	<u>Page</u>
<b>Part I</b>	
Item 1. Business .....	3
Item 2. Properties .....	25
Item 3. Legal Proceedings .....	26
Item 4. Submission of Matters to a Vote of Security Holders .....	28
<b>Part II</b>	
Item 5. Market Price for Registrant's Common Equity and Related Stockholder Matters .....	29
Item 6. Selected Financial Data .....	30
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations ..	31
Item 7A. Quantitative and Qualitative Disclosures about Market Risk .....	43
Item 8. Financial Statements and Supplementary Data .....	44
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosures	72
<b>Part III</b>	
Item 10. Directors and Executive Officers of the Registrant .....	73
Item 11. Executive Compensation .....	73
Item 12. Security Ownership of Certain Beneficial Owners and Management .....	73
Item 13. Certain Relationships and Related Transactions .....	73
<b>Part IV</b>	
Item 14. Exhibits, Financial Statement Schedules and Reports on Form 8-K .....	74
<b>SIGNATURES</b> .....	76

## PART I

### Item 1. *Business*

#### Introduction

Cree, Inc., a North Carolina corporation, was established in 1987 to commercialize semiconductor wafers and devices made from silicon carbide, or SiC. Today, we are the world-leader in developing and manufacturing compound semiconductor materials and electronic devices made from SiC and a leading developer and manufacturer of optoelectronic and electronic devices made from gallium nitride, or GaN, and related materials. We also produce RF power transistor components and modules for wireless infrastructure applications using silicon-based bipolar and laterally diffused metal oxide semiconductor, or LDMOS, process technologies. We operate our business in two segments, the Cree segment, which consists of our SiC-based products and research contracts, and the Cree Microwave segment, which consists of RF transistors and RF transistor modules based on a silicon platform.

SiC and GaN-based devices offer technical advantages over competitive products made from silicon, gallium arsenide, or GaAs, sapphire and other materials for certain electronic applications. We use our wide bandgap compound semiconductor technology to make enabling products such as near ultra-violet (products with wavelengths between 380 and 410 nanometers), or UV, blue and green light emitting diodes, or LEDs. We sell our LEDs to customers who package them for use in applications such as wireless handsets, backlighting for automotive dashboards and other consumer products. Other applications for our LEDs include indoor and outdoor full color displays, such as video boards in arenas and stadiums, billboards and message signs. Our LEDs are also used in traffic signals, indicator lights for consumer or industrial equipment and miniature white lights used for illumination applications. We have developed several generations of LED products, including our MegaBright™ and XBright™ LEDs released during fiscal 2002. Based on our own measurements, we believe that our XBright™ product family includes the highest brightness (which is defined as the optical power output from a chip at 20 milliamps of drive current) UV, blue and green LEDs commercially available. All of our SiC-based GaN UV, blue and green LEDs offer benefits to our customers over competing products, which include a vertical chip structure, improved resistance to electrostatic discharge and small size. We also manufacture SiC material products, including SiC wafers, which we sell for use in manufacturing LEDs and power devices and for research directed to optoelectronics (which includes LEDs and laser diodes), microwave and power devices, and bulk SiC material, which we sell for use in gemstone applications. The remainder of our Cree segment revenue is derived from sales of laser diodes and power diodes, and sales from industrial contracts and government contracts for research work performed for the U.S. Government.

Our entry into the wireless infrastructure market as a component supplier occurred with our acquisition in December 2000 of the UltraRF business of Spectrian Corporation, or Spectrian. We renamed the UltraRF business Cree Microwave during fiscal 2002. Cree Microwave operates its own wafer fabrication facility that utilizes silicon substrates to create bipolar and LDMOS devices to produce high-power, high performance radio frequency, or RF, power semiconductors for use in wireless infrastructure equipment.

We have new product initiatives aimed at developing LEDs with higher luminous efficiency to expand our existing family of optoelectronic devices. We believe that if certain significant milestones are achieved, the LED chips currently in development may enable our customers to produce white lamps designed to compete in the lighting market. Some of our customers are already offering early illumination products using our devices. We also have new product initiatives for RF and microwave transistors using SiC and GaN technology. We believe that these products may be useful in a variety of applications, including power amplifiers for next generation wireless infrastructure and solid state radar. In addition, we are developing and sampling high power rectifiers for power conversion and switching uses, which we believe will allow for more efficient use of energy in certain applications over alternative silicon-based semiconductor solutions.

We are working on the development of a high-powered UV laser diode for use in next generation high-density digital versatile disk, or DVD, and other optical storage applications. At Cree Microwave, we are developing higher performance LDMOS devices for next generation power amplifiers for base station infrastructure applications.

## **Background**

Most semiconductor devices are fabricated on wafers made from silicon crystals. Silicon is the dominant semiconductor material because the technology has evolved to the point where it can be grown into large, high quality single crystals that are suitable for fabricating many electronic devices. Alternative materials, such as GaAs, have emerged to enable the fabrication of new devices with characteristics that could not be obtained using silicon, including certain RF, microwave, LED, laser and other semiconductor devices. However, GaAs, silicon and other commercially available semiconductor materials have physical and electronic characteristics that limit their usefulness in certain applications. For example, conventional silicon and GaAs-based semiconductors have not demonstrated the ability to enable short wavelength (UV, blue or green) LED or laser devices. In addition, the power handling capabilities of silicon and GaAs-based microwave transistors can limit the power and performance of microwave systems used in certain commercial and military applications. With the possibility of allowing higher power densities, SiC and GaN-based wireless systems may use fewer transistors per base station with less complex circuitry, which may result in a lower system cost. Furthermore, few silicon or GaAs devices can operate effectively at temperatures above 400° Fahrenheit. This is a significant limitation for applications such as advanced electronic systems for high power electric motors and high frequency RF devices.

Substantial research and development efforts have been undertaken to explore the properties of other potential semiconductor materials. These efforts have identified few candidate materials that are capable of being grown as low defect single crystals, a requirement in the production of most semiconductors. The properties of SiC and GaN make them excellent materials for extending existing semiconductor device technology where high power, high temperature or UV, blue and green wavelengths are important for performance.

## **SiC and GaN Overview**

Wide bandgap semiconductors are an emerging class of semiconductors that enable a variety of capabilities for solid state devices. Two of the most common wide bandgap semiconductors are SiC and GaN. SiC is most commonly targeted for power devices and RF devices, while GaN is generally targeted for optoelectronic applications, as well as higher frequency microwave power devices. SiC makes an excellent substrate for growing layers of GaN due to its material properties. For GaN optoelectronic devices, conductive SiC substrates allow the fabrication of vertical devices (a single contact on top and bottom), as opposed to the use of insulating sapphire substrates where devices need both diode contacts placed on the top of the die. This allows GaN-on-SiC LEDs to be smaller in size than the two top contact devices made on sapphire. For high power GaN RF devices, the high thermal conductivity of SiC allows for very efficient heat dissipation. This is important for the high power densities generated in these devices.

SiC has many physical characteristics that make it difficult to produce. For example, in a typical semiconductor manufacturing process, the semiconductor material is grown as a single crystal and sliced into wafers. The wafers are then polished and chemically etched, coated with thin crystalline films containing controlled levels of impurities and fabricated into devices. Because SiC can form many different atomic arrangements and must be grown at process temperatures above 3,500° Fahrenheit to achieve our desired crystal structure, it is difficult to grow large single crystals that have a homogeneous structure. In addition, the high temperatures required to grow SiC make the control of impurity levels in SiC crystals and thin films difficult. “Micropipes”, or small diameter holes, may appear in the crystals during their growth, affecting the electrical integrity of the wafer and reducing the usability of portions of the wafer for certain applications.

Slicing and polishing SiC wafers is hindered by the intrinsic hardness of the material. Similarly, its inherent chemical resistance makes SiC a difficult material to etch.

The characteristics discussed below distinguish SiC and GaN from conventional silicon and GaAs-based semiconductor materials, resulting in significant advantages if production hurdles can be overcome.

*Wide Energy Bandgap.* Bandgap is the amount of energy required to ionize an electron from the valence band to the conduction band. SiC and GaN are classified as wide bandgap semiconductor materials, meaning that more energy is required for ionization. Electronic devices made from these materials can operate more efficiently and at much higher temperatures than devices made from other common semiconductor materials. The wider energy bandgap also enables the generation of shorter wavelength (UV, blue and green) light in optoelectronic devices.

*High Breakdown Electric Field.* The “breakdown electric field” is the amount of voltage per unit distance that a material can withstand and still effectively operate as a semiconductor device. SiC and GaN have much higher breakdown electric fields than silicon or GaAs. This characteristic allows wide bandgap devices to operate at much higher voltage levels. Additionally, it allows SiC power devices to be significantly smaller while carrying the same or greater power levels than comparable silicon and GaAs-based devices. This same advantage holds true for SiC and GaN RF power devices.

*High Thermal Conductivity.* SiC is an excellent thermal conductor compared to other commercially available semiconductor materials. This enables a SiC-based device to operate at high power levels and still dissipate the excess heat generated. It also enables efficient heat dissipation when used as a substrate for GaN-based devices such as RF transistors.

*High Saturated Electron Drift Velocity.* SiC and GaN have “saturated electron drift velocities” higher than that of silicon or GaAs. The saturated electron drift velocity is the maximum speed at which electrons can travel through a material. This characteristic, combined with a high breakdown electric field, allows the fabrication of SiC and GaN-based microwave transistors that operate at RF frequencies with significantly higher power density levels than current silicon and GaAs-based devices.

*Robust Material.* SiC has an extremely high melting point and is one of the hardest known materials in the world. As a result, SiC can withstand much higher electrical pulses and is more radiation-resistant than silicon or GaAs. SiC and GaN are also extremely resistant to chemical breakdown and can operate in harsh environments.

## **The Cree Solution**

Some of the same physical characteristics that make SiC an excellent material for certain semiconductor applications also make the material a technical challenge to produce. Through our 15 years of development and manufacturing experience, we have succeeded in overcoming many of the difficulties involved in processing SiC substrates for commercial use. We believe that our proprietary process techniques and the inherent attributes of both SiC and GaN give our products significant advantages over competing products for certain electronic applications. These advantages include:

*UV, Blue and Green Light Emission.* We produce high efficiency UV, blue and green LEDs using GaN and other nitrides grown on SiC substrates. Most other manufacturers of nitride-based LEDs currently use sapphire substrates, other than Osram Opto Semiconductors GmbH, a subsidiary of Osram GmbH, or Osram, which has licensed the ability to manufacture SiC-based devices and buys SiC wafers for use in their manufacturing process, from us. The conductive properties of SiC enable us to fabricate a single top contact LED chip that is smaller than the “two top contact” products made by competitors who use sapphire substrates. Our chips made with SiC substrates can be packaged the same way as red, green and amber LED

chips made from other materials that are widely used in the LED industry. We believe that the single top contact design of our chip affords our customers flexibility for certain package types. We are also continuing development of nitride-based UV laser diodes grown on SiC. The principal advantages of SiC over sapphire substrate materials for UV laser diodes are the high thermal conductivity attributes of the material and the ability for the material to be easily cleaved, providing an excellent surface for laser light emission.

*Enabling Substrate Properties.* The inherent attributes of SiC as a substrate enable researchers to work on developing new optoelectronic, microwave and power devices that offer significant advantages over competing products and which could not be produced as effectively on other substrate materials. We manufacture SiC wafers for both internal use and for sale to external development programs to further new product development. The majority of our current production is on two-inch diameter (50 millimeter) material. We also have released three-inch diameter (75 millimeter) wafers and demonstrated a four-inch diameter (100 millimeter) prototype wafer.

*High Power RF and Microwave Operation.* We have demonstrated SiC RF and microwave transistors that can operate at much higher voltages than silicon or GaAs because of SiC's high breakdown electric field, allowing much higher power operation at high frequencies. Similar advantages exist for microwave devices made using GaN on SiC substrates, which can also operate at much higher frequencies than SiC-only devices. In fiscal 2000 we first began shipping sample quantities of SiC RF devices which have potential applications in wireless infrastructure systems. We have continued development efforts directed to improving the performance and reliability of our SiC RF devices which has increased their attractiveness to wireless system manufacturers. As the performance of silicon-based LDMOS products continued to improve, we determined that near term wireless infrastructure power transistors were likely to be manufactured with silicon-based products rather than our SiC-based devices. As a result, we acquired the business now comprising Cree Microwave in December 2000 to participate in the RF power transistor market in the near term. We believe our SiC transistors will likely be more desirable for broadband amplifiers that can cover the entire DCS/PCS/UMTS frequency band of 1.8-2.2 gigahertz, or GHz. Additional applications include wide bandwidth military radio and test and instrumentation equipment. In addition, we continue to develop GaN-based devices for high frequency wireless infrastructure and other commercial and defense related applications. We are also pursuing the development of monolithic microwave integrated circuit, or "MMIC", power amplifiers in both SiC and GaN for a variety of military applications.

*High Power, High Voltage Operation.* We are producing small quantities of a product family of SiC Schottky diodes that have a greater breakdown voltage than Schottky diodes made from other semiconductor materials currently available. We believe our Schottky diodes offer inherent system benefits beyond these competitive products because of the significant reduction of reverse recovery current at similar breakdown voltages. We believe that our SiC power diodes operate with significantly lower switching losses than those made with silicon or GaAs, for the same breakdown voltage. In addition, we believe that our SiC power transistors under development operate with lower resistive losses and lower switching losses than those made with silicon or GaAs.

## **Products**

We operate our business in two segments, the Cree segment, which consists of our SiC and GaN-based products, and the Cree Microwave segment, which consists of silicon-based RF power transistor components and modules.

### ***The Cree Segment:***

#### *UV, Blue and Green LEDs*

LEDs are solid-state electronic components used in miniature packages in everyday applications such as indicator lights on televisions, radios, printers, computers and other equipment. LEDs generally offer



substantial advantages over small incandescent bulbs, including longer life, lower maintenance cost and energy consumption, and smaller space requirements. Groups of LEDs can make up single or full-color electronic displays. In 1989 we introduced the first commercially viable blue LED made using a SiC only design. Subsequently, we have developed and released several generations of LED products, including UV, blue and green LEDs made from GaN and related materials on SiC substrates. With the initial release of our XBright™ LEDs in fiscal 2002, we believe we have introduced the brightest commercially available UV, blue and green product family of LEDs. Our customers are currently in the qualification stages of packaging XBright™ chips and some have encountered challenges in qualifying their packaging process. We target a ramp-up to commercial production levels during the first half of fiscal 2003.

We will continue to work to improve the brightness of our UV, blue and green chips to achieve higher performance than currently available. Over the next five to ten years or perhaps longer, we believe these yet to be developed products could be used to produce white lamps to compete with conventional lighting products for certain applications. We believe that LEDs made using SiC substrates offer important benefits over competitive devices using sapphire substrates including:

- an industry standard vertical chip structure requiring a single wire bond that permits more efficient LED assembly;
- a smaller area chip size; and
- higher performance in terms of brightness.

Presently, our LED chips are used for backlighting purposes in applications such as wireless handsets and automotive dashboard lighting. They are also used in white light products designed for specialty indoor illumination and for the illumination of outdoor buildings and structures and in landscape lighting. In addition, they are used in consumer products and office equipment as indicator lighting, in full color video displays, such as arena replay screens, billboards and moving message advertising and informational signs and as the green light in traffic signals. Our standard brightness LED products, offered in blue wavelengths only, are primarily used in indoor applications, automotive designs or as indicator lights. Some customers manufacture solid-state LED components that emit white light using our blue LEDs. Customers are also working to develop white light components using our UV LEDs. By passing blue or UV LED light through certain conversion materials such as phosphors, or by using blue in combination with LEDs of other appropriate colors, white light emission can be obtained from lamps made with blue or UV LEDs. We currently sell blue LED chips to customers who produce packaged components that emit white light. Current commercial applications of white LEDs using Cree's blue LEDs include backlighting applications for automobile dashboards and instrumentation, backlighting for wireless handsets and early general illumination applications. During fiscal 2002, we received our QS 9000 registration, which signifies that our quality systems met a set of requirements established by international auto manufacturers.

We believe that our products are well positioned to take advantage of recent trends in the wireless handset market. Although the global market for wireless handsets may be flat to declining due to a slow global economy, we believe our share of this market could increase as a result of changes in backlighting applications. Handset manufacturers recently have begun to use blue or white backlighting in new models, rather than traditional yellow-green backlighting that has been common during the last several years. We believe that our chips meet the blue and or white lighting characteristics that the market is now demanding. In addition, we believe that the development of full color displays for mobile handsets will increase demand for white LEDs in order to maximize the effectiveness of the full color display.

We are focusing current development efforts on further improving the efficiency as well as lowering our cost to manufacture our LEDs and improving other performance characteristics of the devices for certain markets, such as thinner chips and lower forward voltages. Responding to a market trend towards devices with a lower forward voltage, we undertook major development initiatives during fiscal year 2002 as we

trailed sapphire-based LEDs in this important area for new high-volume cell phone applications. The current “two top contact” sapphire-based devices have certain advantages compared to our single top contact design in terms of lower forward voltage and thinner chips. We believe that increased brightness will continue to be necessary to develop new applications and market opportunities for LEDs, and may eventually lead to products marketed for commercial lighting applications. LED products represented 58%, 65% and 63% of our revenue for the fiscal years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively.

#### *Materials Products*

We manufacture SiC wafers for sale to corporate customers that use the wafers in manufacturing products for optoelectronic and power device applications. Corporate, government and university programs also buy wafers for research and development directed to optoelectronic, microwave and high power devices. Our SiC wafer products may be sold as a bare wafer or customized by adding epitaxial films of SiC or GaN materials, depending upon the nature of the customer’s needs. Since the company’s inception in 1987, we have worked continuously to improve the quality of our SiC wafers while also increasing wafer diameter. In October 1999, we introduced our first three-inch wafer and we have recently expanded our product line of three-inch wafers, which are better suited for the manufacture of power devices. We currently sell wafers to Osram and Infineon Technologies AG, or Infineon, for the production of LED and power products, respectively.

Single crystalline SiC has characteristics that are similar to diamond, including properties relating to color, hardness and brilliance. We manufacture SiC crystals in near colorless form for use in gemstone applications. We sell SiC in bulk crystal form to Charles & Colvard, or C&C; a company founded to produce and market gemstone products made from SiC crystals. C&C cuts and facets the SiC crystals to fabricate gemstones targeted at customers who desire alternative colorless, affordable, high-quality jewelry. Sales of gemstone crystals have re-emerged as a stronger product line in the second half of fiscal 2002, due to heavier demand from C&C. Future demand for this product is dependent on C&C’s ability to cut, facet and effectively market its gemstone products. Our SiC wafer products are marketed through executive sales while materials used for gemstone applications are exclusively sold to C&C. Wafer and other material products represented 13%, 14% and 26% of our revenue for the fiscal years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively.

#### *Power Devices*

In fiscal 2002, we announced the commercial release of the first products in our planned line of SiC-based power devices. Our initial products are 600-volt Schottky diodes offered in limited quantities at 1, 4, 6 and 10 amp ratings. During the first quarter of fiscal 2003, we have released a 20 amp device. We are marketing these products to manufacturers of power conditioning and power switching equipment as potential replacements for silicon-based power devices in certain applications. SiC-based power devices have the potential to handle significantly higher power densities than existing silicon-based devices and can operate at significantly higher voltages with superior switching capabilities, yielding power savings due to higher efficiency. Potential applications include power factor correction and switch mode power supplies typically used in telecommunications and computer servers, and heavy industrial uses. Other applications include industrial motor controls, high frequency power supplies and medical applications.

Revenue growth from these devices is dependent on the results of customer evaluations of the Schottky diode device and whether the products are designed into customer applications. We believe that revenue growth will be slow initially because our technology is not a “drop in” replacement and is currently much more expensive than silicon devices. In addition, with the slowdown of the global economy, we believe many companies have reduced their research and development budgets, which has impacted our growth. Finally, our Schottky devices are a new technology, and it will take time to penetrate existing markets. Power devices represented less than 1% of revenue for the fiscal years ended June 30, 2002, June 24, 2001 and June 25, 2000.

### *RF and Microwave Transistors*

During fiscal year 2002, we offered a new 10-watt transistor product made from SiC to customers in prototype quantities. We believe that these products can be used in a variety of power amplifier applications, including wireless infrastructure, home-based subscriber units, digital broadcast and military broadband radio applications. Revenue growth from sales of these devices is dependent on the results of customer evaluations of SiC RF products, further improvements in device performance, further expansion of our SiC RF product family, and whether the products are designed into customer applications.

### ***The Cree Microwave Segment:***

#### *RF and Microwave Transistors*

We believe that silicon bipolar and LDMOS technology is complementary to our SiC and GaN-based microwave devices. Cree Microwave produces bipolar and LDMOS devices made from silicon. These products enable us to provide an array of power amplifier semiconductor devices designed to meet a broad spectrum of the wireless infrastructure markets now and in the future. Cree Microwave offers products for use in a range of systems. These systems include Advanced Mobile Phone Services, or AMPS, Time Division Multiple Access, or TDMA, Code Division Multiple Access, or CDMA, Global System for Mobile Communications, or GSM, Universal Mobile Telephone Service, or UMTS and Enhanced Data Rates for GSM Evolution, or EDGE systems. Cree Microwave is one of only a few major manufacturers of LDMOS RF devices.

The market for cellular communications services has grown substantially during the past decade due to decreasing prices for wireless handsets, increasing competition among service providers and a greater availability of high quality services. In recent quarters, the cellular communications market has been declining due to the global economic slowdown, which has caused carriers to reduce infrastructure spending. However, we believe that significant long-term market opportunities exist.

A typical wireless communication system comprises a geographic region containing a number of cells, each of which contains a base station. The cells are networked to form a service provider's coverage area. Each base station houses the equipment that sends telephone calls to and from the switching office of the local wire line telephone company and transmits and receives calls to the wireless users within the cell. Base stations may be configured as single carrier or multi-carrier designs.

Digital systems, which convert voice transmission into bits of electronic information, enable data transmission among other things. The four dominant digital transmission modulation formats for cellular networks include GSM, TDMA, CDMA and EDGE systems and operate in frequency ranges from 900 megahertz, or MHz, to 2400 MHz. These systems have a call capacity of three to eight times that of analog networks. The implementation of these digital networks has resulted in increased demand for network infrastructure equipment. Cree Microwave is able to produce both bipolar and LDMOS products that are used in the manufacture of power amplifiers for both analog and digital base stations. Cree Microwave produces the semiconductor content of a power amplifier, which is used in a base station to boost the power of a signal so that it can reach a wireless phone or other device within a designated geography.

During fiscal 2002, we developed an amplifier module that incorporates our LDMOS-based transistors and is designed to simplify the design and assembly of power amplifiers using the LDMOS products. We believe that this module product can deliver a lower system cost to our customer due to less costly packaging, a smaller design and relative ease of manufacture for our customer.

RF products represented 16% and 11% of our revenue for the fiscal years ended June 30, 2002 and June 24, 2001, respectively. The Cree Microwave business segment was acquired from Spectrian in December

2000. The majority of sales from this segment were to Spectrian during fiscal 2002 and 2001. The loss of or a decline in sales to this customer would have a material adverse effect on this segment.

## **Products Under Development**

### *The Cree Segment:*

#### *LEDs with Higher Output Power*

Cree Lighting, based in Goleta, California, is engaged in the development of new LED device technology, with the goal of developing higher efficiency LEDs to compete with incandescent and fluorescent lighting technology for conventional lighting markets. During fiscal 2002, we more than doubled the typical brightness of our LED products with the introduction of our XBright™ and MegaBright™ products. In order to compete with incandescent and fluorescent lighting technology for conventional lighting markets, the brightness of our products will need to increase significantly over the brightness of our products available today. We do not anticipate that our products can achieve the necessary level of brightness in a cost competitive product over the next few years; however, we believe we can achieve a greater level of brightness to enable interim illumination applications, such as miniature incandescent lighting replacements. One such interim step during fiscal 2002 was the introduction of our XBright™ 900 Power Chip LED. At 900 x 900 microns nominal gross die size, the XBright™ Power Chip is significantly larger than industry standard (300 x 300 microns) LEDs and is the first large area version of our XBright™ chip technology. These chips deliver more than 10 times the light output at a higher current than our standard XBright™ chips and we believe these high-power LEDs could help enable a new range of lighting applications. These chips will require our customers to develop new packages to support these higher-powered chips. The targeted application for these devices is the solid state illumination market.

#### *Blue and UV Laser Diodes*

We continue to focus on the development of blue and UV laser diodes. SiC has inherent attributes, including its natural cleavability and high thermal conductivity that make it an excellent substrate material for the development of such short wavelength laser diodes. The storage capacity of optical disk drives can be increased significantly by utilizing a laser diode capable of emitting shorter wavelength light. We have shipped sample UV laser diodes, fabricated from nitride materials deposited on SiC substrates, which have a shorter wavelength than that of the red or infrared lasers used in applications today. We believe that the shorter wavelength of UV light could potentially result in storage capacity for optical disk drives that is significantly greater than the capacity permitted by red light. We also believe that UV laser technology may be used in miniature optical devices for compact sized electronics, such as digital cameras. We have demonstrated a prototype UV laser with 3 milliwatts of power and a projected lifetime of 10,000 hours. We believe that this laser meets the current power requirement of a “read” laser; however, additional development is required to commercialize this product. We continue to work on developing a “read/write” UV laser, which will require approximately 30 milliwatts of continuous wave, or CW, power, and we are targeting our first product to be released for customer sampling during fiscal 2003. A consortium of DVD manufacturers is currently creating standards for blue and UV laser devices named the Blu-Ray Disc format. Once these standards are completed, we believe that the demand for diodes that meet the standards may increase.

#### *Power Devices*

We are developing additional prototype high power devices that we believe have many potential uses. Such devices could be employed in applications involving power conditioning as well as power switching. We intend to release higher voltage Schottky products within the next fiscal year, targeted for motor control and snubber applications. In fiscal 1999, we entered into a three-year project with Kansai Electric Power

Company, one of the largest power companies in the world, for the development of SiC-based devices for use in power transmission networks. This project was completed during fiscal 2002. During this project we demonstrated record results with a 6 kV MOSFET (metal-oxide-semiconductor field effect transistor) and a 5.5 kV junction field effect transistor that had on-resistances that were 1/25th and 1/65th lower, respectively, of the theoretical limit for an equivalent silicon device. Additionally, high voltage SiC PIN diodes were demonstrated with blocking voltages up to 19 kV, a 50% increase over our previous record and almost double what is commercially available in silicon. We continue to work on higher power devices such as Schottky and PIN diodes as well as power switches. However, we are not planning to release PIN diodes or power switches suitable for power transmission in the near term.

#### *RF and Microwave Devices*

We are currently developing additional SiC-based transistors that operate at radio and microwave frequencies. We believe these devices will have applications in future generation wireless base stations, solid-state broadcast systems, wide bandwidth military radio, and radar search and detection equipment. These SiC-based devices are targeted for frequencies from 30 MHz to 4 GHz. We believe that future SiC transistors in development, with higher power density than current silicon and GaAs-based devices, may allow wireless systems to operate across a wider band and use fewer transistors per base station, resulting in less complex circuitry, higher linearity, better efficiency and lower cost.

We are also developing GaN-based microwave transistors on SiC substrates that are targeted for higher gain and/or higher frequency applications including cellular base stations and solid-state radar systems. In December 2001, we reported CW performance for GaN of 108 watts at 2 GHz, which we believe to be the highest publicly reported CW power output for a single device at this frequency. This demonstrates its potential for infrastructure applications. We developed GaN MMICs that demonstrated 24 watts of power at 16 GHz. This power level is higher than that achieved with equivalent GaAs-based devices. We do not anticipate that a commercial device capable of emitting power at this level will be available in the near term.

#### ***The Cree Microwave Segment:***

##### *RF and Microwave Devices*

We continue to enhance the capabilities of our silicon-based LDMOS products and are working towards the release of next generation devices that we believe will allow for more linearity and increased power and be comparable to the best in class products of our competitors. We are targeting these products to be available in fiscal 2003. We are also continuing to develop additional module devices to meet advanced needs of our customers. The module configuration allows us to produce more of the circuit for the power transistor and the product is more competitively priced than our regular LDMOS devices because the module configuration features a lower cost package compared with the traditional ceramic package used for discrete devices. We are targeting these products to be produced in commercial volumes in fiscal 2003. Additionally we are working with certain customers on advanced modulation products.

#### **Financial Information About Segments and Geographic Areas of Customers and Assets**

For financial information about business segments, please see Note 2, "Summary of Significant Accounting Policies and Other Matters" to our consolidated financial statements included in Item 8 of this report. For financial information about the geographical areas of customers, please see Note 2, "Summary of Significant Accounting Policies and Other Matters" to our consolidated financial statements included in Item 8 of this report. All of our long-lived assets are currently maintained in the United States.

## **Government Contract Funding**

We derive a portion of our revenue from funding from research contracts with the U.S. Government. For the fiscal years ended June 30, 2002, June 24, 2001 and June 25, 2000, government funding represented 12%, 10% and 11% of total revenue, respectively. These contracts typically cover work performed over several months up to three years. These contracts may be modified or terminated at the convenience of the government. Therefore, these programs may be subject to government budgetary fluctuations. The contracts generally provide that we may elect to retain title to inventions made in the course of research, with the government obtaining a nonexclusive license to practice such inventions for government purposes.

## **Research and Development**

We invest significant resources in research and development aimed at improving our semiconductor materials and developing new device and production technology. Our core SiC materials research is directed to improving the quality and diameter of our SiC substrates. We are also working to improve the quality of the SiC and nitride epitaxial materials we grow to produce devices and to improve device yields by reducing variability in our processes. These efforts are in addition to on-going projects focused on brighter LEDs, higher power, higher linearity RF and microwave devices, UV laser devices and higher power diodes and switches discussed above.

We spent \$51.2 million in fiscal 2002, \$38.4 million in fiscal 2001 and \$20.0 million in fiscal 2000 for direct expenditures relating to research and development activities. Off-setting these expenditures were \$19.5 million in fiscal 2002, \$19.0 million in fiscal 2001 and \$12.7 million in fiscal 2000 of U.S. Government funding for direct and indirect research and development expenses. In addition, certain customers have also sponsored research activities related to the development of new products. Customers contributed \$9.0 million in fiscal 2002, \$11.9 million in fiscal 2001 and \$5.5 million in fiscal 2000 towards our product research and development activities.

## **Sales and Marketing**

We actively market our LED, wafer and power products through targeted promotions, telemarketing, select advertising and attendance at trade shows. We have a small direct sales force and senior management actively works with customers around the world. We believe that this approach is preferable in view of our current customer base and product mix, particularly since the production of lamp and display products incorporating LED chips is concentrated among a relatively small number of LED packaging manufacturers. Additionally, the sales team has been expanded in fiscal 2002 to include sales offices in Hong Kong and Japan.

In June 2002, we opened an office in Tokyo, Japan, through our subsidiary Cree Japan, Inc., to bring our technology and engineering support closer to the Japanese customer base. In connection with the opening of our new office, Sumitomo Corporation, or Sumitomo, was named as our strategic partner to distribute our products in Japan. Sumitomo has exclusive distribution rights in Japan for our nitride LED chip products and SiC wafer products for a minimum of three years. Our personnel in Japan will work with and support the sales activities of the Sumitomo team dedicated to our product line.

We also use sales representatives to market our LED products in Hong Kong, China, Taiwan and South Korea. However, as a result of the introduction of many new products during fiscal 2002, we perceived the need for more frequent interaction with our customers. As a result, we opened a Southeast Asian sales office in Kowloon, Hong Kong, through our subsidiary Cree Asia-Pacific, Inc., to facilitate business transactions and act as the liaison between our Asia Pacific customers and our U.S. corporate office. Territorial responsibilities for the Cree-Asia Pacific sales office include Hong Kong, China, Taiwan and Malaysia. In addition, the Hong Kong sales office oversees the day-to-day administration of our sales agents in Hong Kong and Taiwan as well as assisting our direct customers in the region.

We sell SiC crystal materials for use in gemstone applications directly to C&C under an exclusive supply agreement. We are using both direct sales and sales representative arrangements to market RF products for Cree Microwave, including a new distributor agreement signed with Arrow Manufacturing in fiscal 2002.

### **Customers**

During fiscal 2002, revenues from four customers, Osram, Spectrian, Sumitomo (which represents sales to several Japanese customers) and the U.S. Government, each accounted for more than 10% of total revenue. During fiscal 2002, we signed new supply agreements with Osram and Sumitomo, which extend into fiscal 2003. Spectrian is a customer of the Cree Microwave segment. During fiscal 2001, revenues from three customers, Osram, Sumitomo and Spectrian, each accounted for more than 10% of total revenue. For the year ended June 25, 2000, revenue from Osram, Sumitomo, C&C and the U.S. Government each accounted for more than 10% of total revenue. For financial information about foreign and domestic sales, please see Note 2, "Summary of Significant Accounting Policies and Other Matters" to our consolidated financial statements included in Item 8 of this report.

### **Backlog**

As of June 30, 2002, we had a backlog believed to be firm of approximately \$138.7 million consisting of approximately \$86.9 million of product orders and \$51.8 million under research contracts signed with the U.S. Government, for which a portion of the contracted funds have not yet been appropriated. This compares to a firm backlog as of June 24, 2001, of approximately \$86.5 million consisting of approximately \$69.9 million of product orders and \$16.6 million under research contracts signed with the U.S. Government, a portion which had not yet been funded through appropriations. Backlog could be adversely affected if the U.S. Government exercises its rights to terminate the government contracts or does not appropriate and allocate all of the funding contemplated by the contracts. We believe the entire backlog could be filled during fiscal 2003, with the exception of approximately \$9.7 million of product orders and \$23.9 million in U.S. Government funded contracts. The reported backlog amounts include \$16.2 million ordered from Spectrian under their supply agreement. If we are not able to produce LDMOS 8 products that meet qualification specifications, this amount of revenue may be reduced or may not be realized at all.

### **Manufacturing**

Our SiC products are manufactured in a seven-part process, which include: SiC crystal growth, wafer slicing, polishing, epitaxial deposition, fabrication, testing and packaging. SiC crystals are grown using a high temperature process designed to produce uniform crystals in a single crystalline form. Crystals used for gemstones exit the manufacturing process at this stage. Crystals used for other products are then sliced into wafers. The wafers are polished and then processed using our epitaxial deposition processes, which require that we grow thin layers of SiC, GaN or other materials on the polished wafer, depending on the nature of the device under production. SiC wafer products may leave the manufacturing process either after polishing or epitaxy. Following epitaxy, LED, power and RF chips are fabricated in a clean room environment. The final step includes testing and sawing prior to shipment to the customer. Power chips are then forwarded to a third party where they are assembled into industry standard packages and returned to us prior to shipment to our customers. SiC RF transistors are currently packaged and tested in our Durham, North Carolina facility. However, we believe that this process will be transferred to the Cree Microwave facility in Sunnyvale, California during fiscal 2003. In manufacturing our products, we depend substantially on our custom-manufactured equipment and systems, some of which are manufactured internally and some of which we acquire from third parties and customize ourselves.

Cree Microwave produces both silicon LDMOS and silicon bipolar junction transistor, or BJT, structures at its wafer fabrication facility in Sunnyvale, California. Both product families use silicon wafers

that are acquired from third parties and the devices are fabricated in a clean room environment. The clean room steps employ multiple stages of photolithography, diffusion, thin film metal deposition and both wet and dry etch process in the manufacturing cycle. Finished wafers are electrically tested and may be shipped to customers at this point. Transistor die from wafers, which continue in the manufacturing process, are assembled into thermally conductive packages or modules and tested prior to shipment to customers.

### **Sources of Raw Materials**

We depend on a limited number of suppliers for certain raw materials, components and equipment used in our products, including certain key materials and equipment used in our crystal growth, wafering, polishing, epitaxial deposition, device fabrication and device assembly processes. We generally purchase these limited source items pursuant to purchase orders and have limited guaranteed supply arrangements with our suppliers. In addition, the availability of these materials, components and equipment to us is dependent in part on our ability to provide our suppliers with accurate forecasts of our future requirements. We endeavor to maintain ongoing communication with our suppliers to guard against interruptions in supply and, to date, generally have been able to obtain adequate supplies in a timely manner from our existing sources. However, any interruption in the supply of these key materials, components or equipment could have a significant adverse effect on our operations.

### **Competition**

The semiconductor industry is intensely competitive and is characterized by rapid technological change, price erosion and substantial foreign competition. We believe that our Cree segment currently enjoys a favorable position in the existing markets for SiC-based products and materials. We also believe that our Cree Microwave segment can become competitive in the market for silicon-based LDMOS devices if it succeeds in qualifying its most recently introduced LDMOS devices for volume production. However, we face actual and potential competition from a number of established domestic and international compound semiconductor companies. Many of these companies have greater engineering, manufacturing, marketing and financial resources than we have.

Our primary competition for our optoelectronic products comes from companies that manufacture and or sell nitride based LED chips. We consider Nichia Corporation, or Nichia, Toyoda Gosei Co. Ltd., or Toyoda, and Lumileds Lighting LLC, a joint venture between Agilent Technologies and Philips Lighting to be our primary competitors. These companies currently market LED products made using nitride materials on sapphire substrates, and Nichia markets short wavelength nitride-based laser diodes. In addition, American Xtal Technology, Epistar, Arima, UEC and other Asian based companies in recent years have begun production of UV, blue and green LEDs, all on sapphire substrates. We attempt to closely monitor the progress of Taiwanese competitors. We believe that these new competitors have had some success in securing new business over the last few quarters and could potentially become significant competitors in the future. Historically, some of our existing competitors have been more successful in the market for outdoor display applications because, prior to the release of our MegaBright™ and XBright™ products, some sapphire devices were brighter than our LEDs. We believe our new MegaBright™ and XBright™ devices will enable us to compete successfully in this market.

We believe our approach to manufacturing UV; blue and green LEDs using SiC substrates enables us to offer a cost-effective chip design. Our customers' desired product attributes for nitride based LEDs are generally price and the brightness of the devices for the intended applications. At times other factors such as size or forward voltage of the device are also competitive factors. Osram, which licensed certain LED technology from us in 1995, is currently producing LEDs using nitride materials on SiC substrates. Shin-Etsu Handotai Co. Ltd. also licensed certain LED technology from us in 1996 but never began commercial production under this license.



The market for SiC wafers also is becoming more competitive, as other companies in recent years have begun to offer SiC wafer products or announced plans to do so, including Sterling Semiconductors, II-VI, Sixon and other small manufacturers. To our knowledge, none of these competitors are currently offering SiC wafers for use in device production, as their materials are generally not considered to have production level quality. Our power devices, which are currently available in limited quantities, compete with similar devices offered by Infineon.

The markets served by Cree Microwave's LDMOS and bipolar products are competitive. Motorola Incorporated, or Motorola, Infineon, which recently acquired LDMOS capabilities from Telefonaktiebolaget LM Ericsson, and Royal Philips Electronic NV, or Phillips, currently manufacture competing products. Currently, we believe Motorola dominates the marketplace with over 80% market share due to superior performance and pricing. Cree Microwave is targeting to release a new line of improved LDMOS products during the first quarter of fiscal 2003 that is intended to be comparable with the performance of Motorola parts at a competitive price.

### **Patents and Proprietary Rights**

We seek to protect our proprietary technology by applying for patents where appropriate and in other cases by preserving the technology and related know-how and information as trade secrets. We have also from time to time acquired, through license grants or assignments, rights to patents on inventions originally developed by others. At June 30, 2002, we owned or held exclusive rights licensed under a total of 133 issued U.S. patents, subject in some cases to nonexclusive license rights held by third parties. These patents expire between 2007 and 2020. Two of these patents are jointly owned with a third party. Twenty-six of these patents relate primarily to our Cree Microwave segment. In addition, we own or hold exclusive license rights under corresponding patents and patent applications in various foreign countries.

Among the patent licenses we hold are exclusive licenses granted by North Carolina State University, or NCSU, to U.S. and corresponding foreign patents and patent applications that relate to SiC materials and device technology and to GaN growth technology. These licenses include rights under patents and patent applications relating to processes for growing single crystal SiC and low defect GaN materials. The licenses are worldwide, exclusive licenses to manufacture, use and sell products and processes covered by the claims of patents issued on applications filed by NCSU relating to the licensed inventions. The U.S. Government holds a non-exclusive license to practice certain of the inventions for government purposes. The licenses relating to the growth of bulk single crystal SiC and to other SiC materials and device technology are fully-paid, while the licenses relating to growth of low defect GaN materials require us to pay NCSU royalties on sales of products made using the licensed processes.

The patents we have licensed from NCSU relating to bulk SiC growth expire beginning in 2007, and we may face increased competition in the market for SiC materials as these patents expire. In addition, in the event our licenses to the U.S. patents owned by NCSU relating to SiC growth were to be terminated under the terms of our license agreement, we could potentially be enjoined from practicing the patented process. In that event the business of our entire Cree segment could be disrupted since the segment is critically dependent on our ability to manufacture bulk single crystal SiC material. Similarly, if our license to the patents relating to growth of low defect GaN materials were to be terminated, it could have a material adverse effect on our ability to produce GaN-based laser diodes or other products manufactured using the patented process.

We have also entered into license agreements with the licensing agencies of other universities, and with other companies, under which we have obtained exclusive or non-exclusive rights to practice inventions claimed in various patents and applications issued or pending in the U.S. and other foreign countries. We do not believe the financial obligations under these agreements, or the loss of the licensed rights under any of these agreements, would have a material adverse effect on our business, financial condition or results of

operation. One of these license agreements includes license rights granted to our Cree Lighting subsidiary by the Trustees of Boston University, or Boston University, under certain U.S. patents and corresponding foreign patents and patent applications which relate to the manufacture of certain GaN-based structures on sapphire and other substrates. The license agreement with Boston University grants Cree Lighting an exclusive, worldwide royalty-bearing license under these patents and patent applications, subject to royalty payments and other obligations under the license agreement. As described in Item 3 “Legal Proceedings”, at page 27, at June 30, 2002, Cree Lighting and Boston University are parties to pending litigation in which they have alleged that Nichia and its subsidiary, Nichia America Corporation, are infringing one of the licensed patents. Termination of the license to this patent would end Cree Lighting’s right to assert the patent against future infringements.

For proprietary technology which is not patented or otherwise published, we seek to protect the technology and related know-how and information as trade secrets and to maintain it in confidence through appropriate non-disclosure agreements with employees and others to whom the information is disclosed. There can be no assurance that these agreements will provide meaningful protection against unauthorized disclosure or use of our confidential information or that our proprietary technology and know-how will not otherwise become known or independently discovered by others. We also rely upon other intellectual property rights such as trademarks and copyright where appropriate. We have registered “Cree” and the Cree logo as a trademark for certain products in the U.S. We have also applied for registration of several trademarks for our products in the U.S. and other countries.

Because of rapid technological developments in the semiconductor industry, the intellectual property position of any semiconductor materials or device manufacturer, including Cree is subject to uncertainties and may involve complex legal and factual issues. There can be no assurance that patents will be issued on any of the pending applications owned or licensed to us or that claims allowed in any patents issued or licensed to us will not be contested or invalidated. There is likewise no assurance that patent rights owned or exclusively licensed to us will provide significant commercial protection since issuance of a patent does not prevent other companies from using alternative, non-infringing technology. Further, we earn a material amount of our revenues in overseas markets. While we hold and have applied for patent protection for certain of our technologies in these markets, there can be no assurance that we will obtain protection in all commercially significant foreign markets or that our intellectual property rights will provide adequate protection in all such markets.

Frequent claims and litigation involving patents and intellectual property rights are common in the semiconductor industry. As of June 30, 2002, we were parties to complex intellectual property litigation in the United States and Japan with one of our competitors in the LED business, as described in Item 3 “Legal Proceedings”, at page 27. We may become parties to other litigation in the future to enforce our intellectual property rights or to defend against claims of infringement. Such litigation can be protracted and costly and divert the attention of key personnel. There can be no assurance that third parties will not attempt to assert infringement claims against us with respect to our current or future products. We from time to time receive correspondence asserting that our products or processes are or may be infringing patents or other intellectual property rights of others. Our practice is to investigate such claims to determine whether the assertions have merit and, if so, we take appropriate steps to seek to obtain a license or to avoid the infringement. However, we cannot predict whether past or future assertions of infringement may result in litigation or the extent to which such assertions may require us to seek a license under the rights asserted or whether a license would be available or available on acceptable terms. Likewise, we cannot predict the occurrence of future assertions of infringement that may prevent us from selling products, result in litigation or require us to pay damage awards.

## **Environmental Regulation**

The Company is subject to a variety of federal, state and local provisions enacted or adopted regulating the discharge of materials into the environment or otherwise relating to the protection of the environment. These include statutory and regulatory provisions under which we are responsible for the management of hazardous materials we use and the disposition of hazardous wastes resulting from our manufacturing processes. Failure to comply with such provisions, whether intentional or inadvertent, could result in fines and other liabilities to the government or third parties, injunctions requiring us to suspend or curtail operations or other remedies, and could have a material adverse effect on our business.

## **Employees**

As of June 30, 2002, we employed 893 people, including 678 in manufacturing operations, 146 in research and development, and 69 in sales and general administration. None of our employees are represented by a labor union or subject to collective bargaining agreements.

## **Certain Business Risks and Uncertainties**

Described below are various risks and uncertainties that may affect our business. These risks and uncertainties are not the only ones we face. Additional risks and uncertainties not presently known to us, that we currently deem immaterial or that are similar to those faced by other companies in our industry or business in general may also affect our business. If any of the risks described below actually occurs, our business, financial condition or results of future operations could be materially and adversely affected.

### **Our operating results and margins may fluctuate significantly.**

Although we experienced significant revenue and earnings growth in past years, we may not be able to sustain such growth or maintain our margins, and we may experience significant fluctuations in our revenue, earnings and margins in the future. For example, historically, the prices of our LEDs have declined based on market trends. We have attempted to maintain our margins by constantly developing improved or new products, which command higher prices or lower the cost of LEDs. If we are unable to do so, our margins will decline. Our operating results and margins may vary significantly in the future due to many factors, including the following:

- our ability to develop, manufacture and deliver products in a timely and cost-effective manner;
- variations in the amount of usable product produced during manufacturing (our “yield”);
- our ability to improve yields and reduce costs in order to allow lower product pricing without margin reductions;
- our ability to ramp up production for our new LED products;
- our ability to produce higher brightness and more efficient LED products that satisfy customer design requirements;
- our ability to develop new products that have specifications which meet the evolving needs of our customers, including smaller and thinner chips with lower forward voltage;
- our ability to complete customer product qualifications for our LDMOS 8 products and ramp up production of those products;
- changes in demand for our products and our customers’ products;
- changes in competitive landscape such as high volume and low pricing from Asian competitors;
- declining average sales prices for our products;

- changes in the mix of products we sell;
- changes in manufacturing capacity and variations in the utilization of that capacity; and
- damage to our manufacturing facility resulting from fire, flood, or otherwise as we only have one site for SiC production.

These or other factors could adversely affect our future operating results and margins. If our future operating results or margins are below the expectations of stock market analysts or our investors, our stock price may decline.

**If we experience poor production yields, our margins could decline and our operating results may suffer.**

Our SiC material products and our LED, power and RF device products are manufactured using technologies that are highly complex. We manufacture our SiC wafer products from bulk SiC crystals, and we use these SiC wafers to manufacture our LED products and our SiC-based RF and power semiconductors. Our Cree Microwave subsidiary manufactures its RF semiconductors on silicon wafers purchased from others. During our manufacturing process, each wafer is processed to contain numerous “die,” which are the individual semiconductor devices, and the RF power devices are further processed by incorporating them into a package for sale as a packaged component. The number of usable crystals, wafers, die and packaged components that result from our production processes can fluctuate as a result of many factors, including but not limited to the following:

- impurities in the materials used;
- contamination of the manufacturing environment;
- equipment failure, power outages or variations in the manufacturing process;
- losses from broken wafers or human errors; and
- defects in packaging.

We refer to the proportion of usable product produced at each manufacturing step relative to the gross number that could be constructed from the materials used as our manufacturing “yield.” Since many of our manufacturing costs are fixed, if our yields decrease, our margins could decline and our operating results would be adversely affected. In the past, we have experienced difficulties in achieving acceptable yields on new products, which has adversely affected our operating results. We may experience similar problems in the future and we cannot predict when they may occur or their severity. In some instances, we may offer products for future delivery at prices based on planned yield improvements. Reduced yields or failure to achieve planned yield improvements could significantly affect our future margins and operating results.

**Our business and our ability to produce our products may be impaired by claims we infringe intellectual property of others.**

Vigorous protection and pursuit of intellectual property rights characterize the semiconductor industry. These traits have resulted in significant and often protracted and expensive litigation. Litigation to determine the validity of patents or claims by third parties of infringement of patents or other intellectual property rights could result in significant expense and divert the efforts of our technical personnel and management, even if the litigation results in a determination favorable to us. In the event of an adverse result in such litigation, we could be required to:

- pay substantial damages;
- indemnify our customers;

- stop the manufacture, use and sale of products found to be infringing;
- discontinue the use of processes found to be infringing;
- expend significant resources to develop non-infringing products and processes; and/or
- obtain a license to use third party technology

Where we consider it necessary or desirable, we may seek licenses under patents or other intellectual property rights. However, we cannot be certain that licenses will be available or that we would find the terms of licenses offered acceptable or commercially reasonable. Failure to obtain a necessary license could cause us to incur substantial liabilities and costs and to suspend the manufacture of products. In addition, if adverse results in litigation made it necessary for us to seek a license or to develop non-infringing products or processes, there is no assurance we would be successful in developing such products or processes or in negotiating licenses upon reasonable terms or at all. Our results of operations, financial condition and business could be harmed if such problems were not resolved in a timely manner.

Our distributor in Japan is presently a party to patent litigation in Japan brought by Nichia, in which the plaintiff claims that certain of our LED products infringe Japanese patents it owns. The complaints in the proceedings seek injunctive relief that would prohibit our distributor from further sales of these products in Japan. The district court ruled in our favor in both lawsuits, but Nichia has appealed these rulings. An adverse result in either of these cases would impair our ability to sell the particular LED products at issue in Japan and could cause customers not to purchase other LED products from us in Japan and elsewhere. Subject to contractual limitations, we have an obligation to defend and indemnify our distributor for patent infringement claims.

We have also initiated patent infringement litigation in the United States District Court for the Eastern District of North Carolina against Nichia and one of its subsidiaries, asserting patent infringement with respect to certain Nichia nitride-based semiconductor products, including laser diode products. Nichia has responded with counterclaims alleging, among other things, patent infringement claims against us based on four U.S. patents directed to nitride semiconductor technology. In addition, Nichia alleges trade secret misappropriation and related claims against Cree Lighting and a former Nichia researcher who is now employed by Cree Lighting on a part-time basis and Cree. The court has directed that the claims against Cree Lighting be transferred to the United States District Court for the Central District of California. The court has orally granted our motion for summary judgment in which we requested dismissal of Nichia's trade secret and related claims against Cree. An adverse result under Nichia's patent infringement counterclaims, which remain in the case, may impair our ability to sell our LED and laser diode products and could include a substantial damage award against us.

We also have been named as a defendant to a counterclaim of Nichia in a lawsuit pending in the U.S. District Court for the Eastern District of Pennsylvania. The complaint in the underlying action, which was brought by Rohm Co., Ltd., or Rohm against Nichia Corporation and Nichia America Corporation, alleges that Nichia is infringing certain U.S. patents owned by Rohm. Nichia's counterclaim alleges that Rohm and we violated antitrust laws by conspiring to exclude Nichia from the U.S. market for high brightness LEDs. The counterclaim seeks actual and treble damages, attorneys' fees and court costs. We have moved to dismiss the counterclaim for lack of personal jurisdiction.

Our Cree Lighting subsidiary has also initiated litigation, now pending in the United States District Court for the Eastern District of North Carolina against Nichia and one of its subsidiaries asserting patent infringement with respect to gallium nitride-based semiconductor technology useful in manufacturing certain LEDs and laser diode devices. The lawsuit seeks damages and an injunction against infringement.

We believe the claims asserted against our products in the Japanese cases and the claims asserted against us in the U.S. cases are without merit, and we intend to vigorously defend against the charges. However, we cannot be certain that we will be successful, and litigation may require us to spend a substantial amount of time and money and could distract management from our day-to-day operations. Litigation costs to date in these cases have been substantial, and variability in these costs could adversely affect our financial results. If any of these cases were decided against us, the result would have a material adverse effect on our operations and financial condition.

**There are limitations on our ability to protect our intellectual property.**

Our intellectual property position is based in part on patents owned by us and patents exclusively licensed to us by NCSU, Boston University and others. The licensed patents include patents relating to the SiC crystal growth process that is central to our SiC materials and device business. We intend to continue to file patent applications in the future, where appropriate, and to pursue such applications with U.S. and foreign patent authorities. However, we cannot be sure that patents will be issued on such applications or that our existing or future patents will not be successfully contested by third parties. Also, since issuance of a valid patent does not prevent other companies from using alternative, non-infringing technology, we cannot be sure that any of our patents (or patents issued to others and licensed to us) will provide significant commercial protection.

In addition to patent protection, we also rely on trade secrets and other non-patented proprietary information relating to our product development and manufacturing activities. We try to protect this information through appropriate efforts to maintain its secrecy, including requiring employees and third parties to sign confidentiality agreements. We cannot be sure that these efforts will be successful or that the confidentiality agreements will not be breached. We also can not be sure that we would have adequate remedies for any breach of such agreements or other misappropriation of our trade secrets, or that our trade secrets and proprietary know-how will not otherwise become known or be independently discovered by others.

Where necessary, we may initiate litigation to enforce our patent or other intellectual property rights, but there is no assurance that we will be successful in any such litigation. Moreover, litigation may require us to spend a substantial amount of time and money and could distract management from our day-to-day operations.

**If we are unable to produce adequate quantities of our MegaBright™ and XBright™ LED products and improve our yields, our operating results may suffer.**

We believe that achieving higher volume production and lower production costs for our MegaBright™ and XBright™ LED products will be important to our future operating results. We must reduce costs of these products to avoid margin reductions from the lower selling prices we may offer due to our competitive environment and/or to satisfy prior contractual commitments. Achieving greater volumes and lower costs requires improved production yields for these products. We recently redesigned our XBright™ LED product to address certain difficulties in packaging the devices identified by some customers following the introduction of the product, and we are planning to manufacture the redesigned products in volume. We may encounter manufacturing difficulties as we ramp up our capacity to make these products. Our failure to produce adequate quantities and improve the yields of these products could have a material adverse effect on our business, results of operations and financial condition. In addition, our customers may encounter difficulties with their manufacturing processes using our XBright™ devices, which could increase product returns and impact customer demand, each of which would have a material adverse effect on our business, results of operations and financial condition.

**Our operating results are substantially dependent on the development of new products based on our core SiC technology.**

Our future success will depend on our ability to develop new SiC solutions for existing and new markets. We must introduce new products in a timely and cost-effective manner, and we must secure production orders from our customers.

The development of new SiC products is a highly complex process, and we have historically experienced delays in completing the development and introduction of new products. Products currently under development include larger high quality substrates and epitaxy, high power RF and microwave devices, power devices, blue laser diodes and higher brightness LED products. The successful development and introduction of these products depends on a number of factors, including the following:

- achievement of technology breakthroughs required to make commercially viable devices;
- the accuracy of our predictions of market requirements and evolving standards;
- acceptance of our new product designs;
- the availability of qualified development personnel;
- our timely completion of product designs and development;
- our ability to develop repeatable processes to manufacture new products in sufficient quantities for commercial sales;
- our customers' ability to develop applications incorporating our products; and
- acceptance of our customers' products by the market.

If any of these or other factors become problematic, we may not be able to develop and introduce these new products in a timely or cost-efficient manner.

**We face risks of reduced revenue under our contract with Spectrian if we cannot complete product qualification on a timely basis or ramp up production of our LDMOS 8 products.**

Revenues of our Cree Microwave segment are dependent on our amended Supply Agreement with Spectrian. If we are unable to complete the full product qualification process and ramp up production of our recently released LDMOS 8 products adequately, Spectrian may reduce the amount it purchases during the applicable quarter under the agreement, subject to the satisfaction of certain conditions. Consequently, our results of operations could be adversely affected by further delays in qualifying our LDMOS 8 products. In addition, if we are unable to supply other products that meet or exceed the specifications of certain competitive parts designated by Spectrian, Spectrian may purchase those products from other vendors. In that case, the purchased quantities will be deducted from the minimum quantities required to be purchased from us under the Supply Agreement. The resulting reduction in revenue could have an adverse effect on our results of operations.

**We depend on a few large customers.**

Historically, a substantial portion of our revenue has come from large purchases by a small number of customers. For example, for fiscal 2002 our top five customers (excluding government contracts and including Sumitomo, which represents several Japanese customers) accounted for 64% of our total revenue. Accordingly, our future operating results depend on the success of our largest customers and on our success in selling large quantities of our products to them. The concentration of our revenues with a few large customers makes us particularly dependent on factors affecting those customers. For example, if demand for

their products decreases, they may limit or stop purchasing our products and our operating results will suffer. If we lose a large customer and fail to add new customers to replace lost revenue, our operating results may not recover.

**When customers provide only limited advance notice of firm orders, our business and results of operations may be adversely affected by changes in customer demand.**

We sell to our largest LED customer based on a rolling forecast of which only a limited period reflects firm orders. Any change in this customer's demand or forecast could have a material adverse impact on our business as the timing and quantities of our production may not match demand or our overall demand may decline. For example, we may be left with additional inventory on hand or we may not have sufficient capacity to satisfy all of our contractual commitments, which could have adverse consequences under our existing contracts.

Recently, we have experienced a trend towards smaller customers gaining design wins from our larger customers for finished products incorporating our LEDs. While in the short term, this trend may lead to increased sales to smaller customers and an increase in the portion of our revenue that they represent, the long term effects of this trend are uncertain. In addition, smaller customers typically do not commit up front to purchase a specified volume over a long period of time, which reduces our ability to predict and maintain a steady stream of orders and revenue as sales to smaller customers increase as a percentage of revenue.

**The markets in which we operate are highly competitive.**

The markets for our LED, laser and RF and microwave power semiconductor products are highly competitive. New firms have begun offering UV, blue and green LEDs. In the RF power semiconductor field, the products manufactured by Cree Microwave compete with products offered by substantially larger competitors which have dominated the market to date based on product quality and pricing. The market for SiC wafers is also becoming competitive as other firms have in recent years begun offering SiC wafer products or announced plans to do so. We also expect significant competition for products we are currently developing, such as those for use in microwave communications and power switching.

We expect competition to increase. This could mean lower prices for our products, reduced demand for our products and a corresponding reduction in our ability to recover development, engineering and manufacturing costs. Or competitors could invent disruptive technology that may make our products obsolete. Any of these developments could have an adverse effect on our business, results of operations and financial condition.

**We face significant challenges managing our growth.**

We have experienced a period of significant growth that has challenged our management and other resources. We have grown from 248 employees on June 28, 1998 to 893 employees on June 30, 2002 and from revenues of \$44.0 million for the fiscal year ended June 28, 1998 to \$155.4 million for the fiscal year ended June 30, 2002. To manage our growth effectively, we must continue to:

- implement and improve operating systems, which are effective and efficient;
- maintain adequate manufacturing facilities and equipment to meet customer demand;
- improve the skills and capabilities of our current management team;
- add experienced senior level managers; and
- attract and retain qualified people with experience in engineering, design and technical marketing support.



We will spend substantial amounts of money in supporting our growth and may have additional unexpected costs. Our systems, procedures or controls may not be adequate to support our operations, and we may not be able to expand quickly enough to exploit potential market opportunities. Our future operating results will also depend on expanding sales and marketing, research and development, and administrative support. If we cannot attract qualified people or manage growth effectively, our business operating results and financial condition could be adversely affected.

**Performance of our investments in other companies could negatively affect our financial condition.**

From time to time, we have made investments in public and private companies that engage in complementary businesses. Should the value of these investments decline, the related write-down in value could have a material adverse effect on our financial condition as reflected in our balance sheets. In addition, if the decline in value is determined to be “other than temporary”, the related write-down could have a material adverse effect on our reported net income. For example, in the fourth quarter of fiscal 2002 we recorded a non-operating charge of \$30.1 million (pre-tax) relating to the declines in the value of equity investments determined to be “other than temporary” as a result of continued depressed market conditions. Each of these investments is subject to the risks inherent in the business of the company in which we have invested and to trends affecting the equity markets as a whole. Our private company investments are subject to additional risks relating to the limitations on transferability of our interests due to the lack of a public market and to other transfer restrictions. Our public company investments are subject to market risks and also can be subject to contractual limitations on transferability. As a result, we may not be able to reduce the size of our positions or liquidate our investments when we deem appropriate to limit our downside risk.

**Our operating results could be adversely affected if we encounter difficulty transitioning production to a larger wafer size.**

We are in the process of gradually shifting production of some products from two-inch wafers, to two and one quarter and three-inch wafers. We must first qualify our production processes on systems designed to accommodate the larger wafer size, and some of our existing production equipment must be refitted for the larger wafer size. Delays in this process could have an adverse effect on our business. In addition, in the past we have experienced lower yields for a period of time following a transition to a larger wafer size until use of the larger wafer is fully integrated in production and we begin to achieve production efficiency. We anticipate that we will experience similar temporary yield reductions during the transition to the two and one quarter and three-inch wafers, and we have factored this into our plan for production capacity. If this transition phase takes longer than we expect or if we are unable to attain expected yield improvements, our operating results may be adversely affected.

**We rely on a few key suppliers.**

We depend on a limited number of suppliers for certain raw materials, components and equipment used in manufacturing our products, including key materials and equipment used in critical stages of our manufacturing processes. We generally purchase these limited source items with purchase orders, and we have no guaranteed supply arrangements with such suppliers. If we were to lose such key suppliers, our manufacturing operations could be interrupted or hampered significantly.

**If government agencies or other customers discontinue or curtail their funding for our research and development programs our business may suffer.**

In the past, government agencies and other customers have funded a significant portion of our research and development activities. Government contracts are subject to the risk that the government agency may not appropriate and allocate all funding contemplated by the contract. In addition, our government contracts generally permit the contracting authority to terminate the contracts for the convenience of the government,

and the full value of the contracts would not be realized if they are prematurely terminated. If government and customer funding is discontinued or reduced, our ability to develop or enhance products could be limited, and our business, results of operations and financial condition could be adversely affected.

**If our products fail to perform or meet customer requirements, we could incur significant additional costs.**

The manufacture of our products involves highly complex processes. Our customers specify quality, performance and reliability standards that we must meet. If our products do not meet these standards, we may be required to replace or rework the products. In some cases our products may contain undetected defects or flaws that only become evident after shipment. We have experienced product quality, performance or reliability problems from time to time. Defects or failures may occur in the future. If failures or defects occur, we could:

- lose revenue;
- incur increased costs, such as warranty expense and costs associated with customer support;
- experience delays, cancellations or rescheduling of orders for our products;
- experience increased product returns;
- write-down existing inventory; or
- experience product returns.

**We are subject to risks from international sales**

Sales to customers located outside the U.S. accounted for about 65%, 69% and 69% of our revenue in fiscal 2002, 2001 and 2000, respectively. We expect that revenue from international sales will continue to be a significant part of our total revenue. International sales are subject to a variety of risks, including risks arising from currency fluctuations, trading restrictions, tariffs, trade barriers and taxes. Also, U.S. Government export controls could restrict or prohibit the exportation of products with defense applications. Because all of our foreign sales are denominated in U.S. dollars, our products become less price competitive in countries with currencies that are low or are declining in value against the U.S. dollar. Also, if we experience substantial changes in the U.S. dollar currency exchange as compared to the Japanese yen, our sales opportunities may be reduced as our primary competitors may offer more favorable pricing. Also, we cannot be sure that our international customers will continue to place orders denominated in U.S. dollars. If they do not, our reported revenue and earnings will be subject to foreign exchange fluctuations.

**If we fail to integrate acquisitions successfully, our business will be harmed.**

We completed two strategic acquisitions during calendar year 2000. We will continue to evaluate strategic opportunities available to us, and we may pursue other product, technology or business acquisitions. Such acquisitions can present many types of risks, including the following:

- we may fail to successfully integrate the operations and personnel of newly acquired companies with our existing business;
- we may experience difficulties integrating our financial and operating systems;
- our ongoing business may be disrupted or receive insufficient management attention;
- we may not cost-effectively and rapidly incorporate acquired technology;
- we may not be able to recognize cost savings or other financial benefits we anticipated;
- acquired businesses may fail to meet our performance expectations;

- we may lose key employees of acquired businesses;
- we may not be able to retain the existing customers of newly acquired operations;
- our corporate culture may clash with that of the acquired businesses; and
- we may incur undiscovered liabilities associated with acquired businesses that are not covered by indemnification we may obtain from the seller.

We may not successfully address these risks or other problems that arise from our recent or future acquisitions. In addition, in connection with future acquisitions, we may issue equity securities that could dilute the percentage ownership of our existing shareholders, we may incur debt and we may be required to amortize expenses related to intangible assets that may negatively affect our results or operations.

**We depend on design trends in mobile phones to drive a large percentage of LED demand.**

Our results of operations could be adversely affected by reduced customer demand for LED products for use in wireless handsets. We derive a significant portion of our LED product revenue from sales to customers who use our LED products in wireless handsets, and customer demand is dependent upon trends in the wireless market. We believe the growth for the global market for wireless handsets has slowed and may be declining. As a result, our ability to maintain or increase our LED product revenue depends on the number of models into which customers design our products. Also, design cycles in the handset industry are short, and demand is volatile, which makes production planning difficult to forecast.

**Item 2. *Properties***

We own our facilities in Durham, North Carolina where the business for our Cree segment is conducted. In November 1997, we acquired our present manufacturing facility, a 30-acre industrial site in Durham, North Carolina, which originally consisted of a 139,000 square foot production building and 33,000 square feet of service and warehouse buildings. In fiscal 2000 and fiscal 2002, we completed two expansions that increased the size of these facilities by 42,000 square feet and 147,000 square feet, respectively. During fiscal 1999 we purchased approximately 80 acres of undeveloped land near our production facilities for potential expansion purposes. We have installed a small electrical substation on this site for use in transmitting power to our production facilities but have not otherwise developed the land. During fiscal 2000, we purchased a 120,000 square foot building on 17.5 acres of land near our existing production site. We subsequently upfitted approximately two-thirds of the building for use as meeting rooms and administrative offices and as an employee services center.

We lease a separate building in Durham, North Carolina that was recently used by our Cree segment for production of SiC-based RF and microwave devices and related research and development. We have relocated these operations to our main production site and no longer use the space. This lease expires in September 2002 and will not be renewed.

We lease through our Cree Japan subsidiary, a sales and marketing office in Tokyo, Japan that is used to support our Japan distributor's sales of Cree segment products. This three-year lease agreement expires in June 2005. We also contract, through our Cree Asia-Pacific subsidiary, office space in Kowloon, Hong Kong that is used in our Cree segment to provide sales and marketing support in Southeast Asia. The agreement for use of this space expires in February 2003 unless renewed by the parties.

The Cree Microwave facility is approximately 49,600 square feet of administrative and manufacturing space located in Sunnyvale, California. We sublease the premises from Spectrian through our Cree Microwave subsidiary, which entered into the sublease agreement with Spectrian in December 2000 in connection with our acquisition of the Cree Microwave business. Spectrian leased the facility from its landlord in November 1996 for a 15-year term under lease terms that included three options to extend the

lease for up to an additional fifteen years. Under the sublease between Cree Microwave and Spectrian, if Spectrian exercises its option to extend the term of its master lease with its landlord, Cree Microwave may also exercise an option to extend the sublease. We have guaranteed the obligations of our subsidiary under the sublease.

Cree Lighting leases two facilities in Goleta, California for our Cree segment. One facility, which covers 35,840 square feet, has a five-year lease that was signed in August 2000 with an option to extend the lease for another five-year period. This facility is used for research and development and administration. Cree has guaranteed the obligations of its subsidiary under this lease. Cree Lighting has sub-leased 10,217 square feet of this facility to a third party. This two-year sub-lease agreement was entered into in October 2000 and was terminated in July 2002. A new two-year sub-lease for 10,217 square feet with a new tenant was entered into in July 2002 and will expire in July 2004. Cree Lighting also leases an additional facility on a month to month basis that is used for research and development. We have given notice to terminate this lease in August 2002.

### **Item 3. Legal Proceedings**

#### **Foreign Legal Proceedings**

*Nichia Corporation v. Sumitomo Corporation:* In December 1999, one of our distributors, Sumitomo, was named in a lawsuit filed by Nichia in Japan in the Tokyo District Court. The complaint in the proceeding was directed to our standard brightness LED products and alleged that these products infringe a Japanese patent owned by Nichia, Japanese Patent No. 2,918,139. The suit sought a permanent injunction against further distribution of the products in Japan. We intervened in the proceeding and filed a response denying the allegations of infringement. In May 2001 the Tokyo District Court ruled in favor of Cree and Sumitomo, finding no infringement, and dismissed the complaint. Nichia has appealed the ruling to the Tokyo High Court.

In April 2000, Nichia commenced two additional lawsuits against Sumitomo in Tokyo District Court in which it alleged that our high brightness LED products infringe a second Japanese patent owned by Nichia, Japanese Patent No. 2,778,405. The suits sought preliminary and permanent injunctions against further distribution of the products in Japan. We intervened in the proceeding and filed responses denying the allegations of infringement. In October 2001, following an adverse ruling in a separate case on the validity of the patent, Nichia dismissed the complaint seeking a preliminary injunction, leaving the complaint for a permanent injunction pending. In December 2001 the Tokyo District Court ruled in favor of Cree and Sumitomo in the remaining lawsuit, finding no infringement, and dismissed the complaint. Nichia has appealed the ruling to the Tokyo High Court.

*Rohm Co., Ltd. v Nichia Corporation:* In July 2001, Rohm Co., Ltd., or Rohm, filed a complaint against Nichia in the Tokyo District Court. Rohm seeks a ruling that sales of its products that incorporate our standard brightness LED products do not infringe the patent that was the subject of Nichia's December 1999 lawsuit, Japanese Patent No. 2,918,139. We intervened in this proceeding in December 2001 to assist in showing that our standard brightness LED products do not infringe the patent. The case remains pending before the district court.

#### **Domestic Legal Proceedings**

*North Carolina State University and Cree, Inc. v. Nichia Corporation and others:* On September 22, 2000, NCSU and Cree commenced a patent infringement lawsuit against Nichia and its subsidiary, Nichia America Corporation, or Nichia America, in the U.S. District Court for the Eastern District of North Carolina. The complaint seeks enforcement of a patent, U.S. Patent No. 6,051,849, relating to GaN-based semiconductors manufactured using lateral epitaxial overgrowth technology, which permits the growth of

high quality GaN-based materials useful in manufacturing certain laser diodes and other devices. The patent was issued to NCSU in April 2000 and is licensed to Cree on an exclusive basis under an agreement executed in June 1999.

In their answer to the complaint, Nichia and Nichia America denied infringement and asserted a counterclaim seeking a declaratory judgment that the subject patent is invalid and not infringed. Nichia further alleged in its counterclaim that we are infringing four of its U.S. patents relating to nitride semiconductor technology, U.S. Patent Nos. 5,306,662; 5,578,839; 5,747,832; and 5,767,581. Nichia also asserted misappropriation of trade secrets and related claims against Cree and a former Nichia researcher now employed by one of our subsidiaries, Cree Lighting, on a part-time basis. In addition, as subsequently amended, Nichia's counterclaim named Cree Lighting as a counterclaim defendant on trade secret and related claims and asserted claims under the Computer Fraud and Abuse Act against the Cree Lighting employee.

We have replied to the patent infringement claims of Nichia's amended counterclaim, denying any infringement and asserting a claim seeking a declaratory judgment that the four Nichia patents at issue are invalid, unenforceable and not infringed. The Cree Lighting employee and we have also replied to the trade secret and related claims in the amended counterclaim, denying any liability. We included with our reply a claim for damages in which we have alleged that Nichia's actions in bringing the counterclaim for patent infringement were not taken for any legitimate purpose and constitute unfair competition in violation of North Carolina law.

In response to Nichia's amended counterclaim, the Cree Lighting employee named as a counterclaim co-defendant also moved to dismiss the claims against him under the Computer Fraud and Abuse Act. The court granted the motion in April 2002 and dismissed the claims, finding that Nichia had failed to state claims upon which relief could be granted. Cree Lighting also moved to dismiss, or in the alternative to transfer, Nichia's claims against it for lack of proper venue. In March 2002 the court found that it lacked venue over the claims Nichia had asserted against Cree Lighting and directed that the claims be transferred to the U.S. District Court for the Central District of California.

In December 2000 Nichia America filed a motion for summary judgment seeking dismissal of the patent infringement claims Cree and NCSU have asserted. In support of the motion Nichia argued that the relevant claims of the patent, U.S. Patent No. 6,051,849, which relate to certain lateral epitaxial overgrowth technology, were invalid as a matter of law on grounds of indefiniteness. The North Carolina district court denied the motion April 2002, and the claims NCSU and we asserted under this patent remain pending.

In January 2002, Cree and the Cree Lighting employee named as a counterclaim co-defendant moved for summary judgment dismissing Nichia's trade secret misappropriation and related claims. The motion sought dismissal on the ground that Nichia had failed to specify any trade secrets that would support the claims. At a hearing in July 2002, the North Carolina district court orally informed counsel that the court was granting the motion. Although a written order confirming the ruling has not yet been entered, we understand that the trade secret misappropriated claims against Cree and the Cree Lighting employee, and at least some of the related non-patent claims, have been or will be dismissed upon entry of a written order confirming the court's oral ruling.

Also in January 2002, Nichia moved to strike certain of our defenses to its patent infringement claims and to preclude us from obtaining or using any evidence concerning those defenses. Nichia alleged in support of the motion that the defenses were based upon information improperly disclosed by the Cree Lighting employee and counterclaim co-defendant. Nichia filed an amended motion to strike in May 2002 in which it sought the same relief. At a hearing in July 2002, the court advised counsel orally that the motion to strike was denied. As a result our patent infringement defenses Nichia challenged remain available to us to prove in future proceedings in the case.

Although there can be no assurances of success, we believe the counterclaims asserted in the North Carolina case are without merit and we intend to defend against them vigorously.

*Trustees of Boston University and Cree Lighting Company v. Nichia Corporation and others:* On May 3, 2001, Boston University and Cree Lighting commenced a patent infringement lawsuit against Nichia and Nichia America in the U.S. District Court for the Northern District of California. The defendants moved to transfer the case to the U.S. District Court for the Eastern District of North Carolina, and the case was transferred to the North Carolina district court in October 2001.

In their complaint Boston University and Cree Lighting allege that Nichia and Nichia America infringe a patent, U.S. Patent No. 5,686,738, relating to GaN-based semiconductor technology useful in manufacturing certain LED and other semiconductor devices. The patent was issued to Boston University in 1997 and is licensed to Cree Lighting under a March 2001 agreement. In the complaint, Cree Lighting and Boston University allege that the defendants are infringing the patent by, among other things, importing, selling and offering for sale in the United States certain GaN-based light emitting devices covered by one or more claims of the patent. The complaint seeks damages and an injunction against infringement.

*Rohm Co. Ltd, v. Nichia Corporation and others:* In November 2001, we were served with pleadings in which Cree was named as a defendant to a counterclaim of Nichia and Nichia America in a lawsuit pending in the U.S. District Court for the Eastern District of Pennsylvania. The complaint in the underlying action, which was brought by Rohm against Nichia and Nichia America, alleges that Nichia is infringing certain U.S. patents owned by Rohm. Nichia's counterclaim, as amended in December 2001, names both Rohm and us as counterclaim defendants and alleges that we violated antitrust laws by conspiring with Rohm to exclude Nichia from the U.S. market for high brightness LEDs. The counterclaim seeks actual and treble damages, attorneys' fees and court costs. We have moved to dismiss the counterclaim for lack of personal jurisdiction. Rohm has separately moved to dismiss certain counts of the counterclaims, including those asserted against us, for failure to state a claim on which relief can be granted. Both motions remain pending.

Although there can be no assurances of success, we believe the claims asserted in the Pennsylvania case are without merit and we intend to defend against them vigorously.

*Other Litigation:* We are also a party to certain other pending litigation arising in the normal course of business. While we cannot predict the final outcome of such litigation with certainty, we believe, based on consultation with legal counsel, that the outcome of such other matters would not materially affect our financial condition or results of operations.

***Item 4. Submission of Matters to a Vote of Security Holders***

No matters were submitted to a vote of security holders during the fourth quarter of fiscal 2002.

## PART II

### **Item 5. Market Price for Registrant's Common Equity and Related Stockholder Matters**

*Common Stock Market Information.* Our common stock is traded in the Nasdaq National Market and is quoted under the symbol "CREE". The following table sets forth, for the quarters indicated the high and low sales prices as reported by Nasdaq. Quotations represent interdealer prices without an adjustment for retail markups, markdowns or commissions and may not represent actual transactions.

	FY 2002		FY 2001*	
	High	Low	High	Low
First Quarter . . . . .	\$27.500	\$14.090	\$81.719	\$42.375
Second Quarter . . . . .	29.730	13.761	64.125	27.750
Third Quarter . . . . .	33.320	12.400	40.500	14.870
Fourth Quarter . . . . .	14.340	10.350	36.650	12.210

\*As adjusted for the two-for-one split effective on December 1, 2000.

*Holders and Dividends.* There were approximately 718 holders of record of our common stock as of August 1, 2002.

We have never paid cash dividends on our common stock and do not anticipate that we will do so in the foreseeable future. There are no contractual restrictions in place that currently materially limit, or are likely in the future to materially limit, us from paying dividends on our common stock, but applicable state law may limit the payment of dividends. Our present policy is to retain earnings, if any, to provide funds for the operation and expansion of our business. There were no sales of unregistered securities during fiscal 2002.

Equity Compensation Plan information will be provided under Item 12.

**Item 6. Selected Financial Data**

The consolidated statement of operations data set forth below with respect to the years ended June 30, 2002, June 24, 2001 and June 25, 2000 and the consolidated balance sheet data at June 30, 2002 and June 24, 2001 are derived from, and are qualified by reference to, the audited consolidated financial statements included elsewhere in this report and should be read in conjunction with those financial statements and notes thereto. The consolidated statement of operations data for the years ended June 27, 1999 and June 28, 1998 and the consolidated balance sheet data at June 25, 2000, June 27, 1999 and June 28, 1998 are derived from audited consolidated financial statements not included herein. All consolidated statement of operations and consolidated balance sheet data shown below are adjusted to reflect the acquisition of Nitres, now known as Cree Lighting, effective May 1, 2000. This transaction was accounted for under the “pooling of interests” method. We acquired the business comprising the Cree Microwave segment in December 2000. This transaction was accounted for under the purchase method. All share amounts have been restated to reflect our two-for-one stock splits effective July 26, 1999 and December 1, 2000.

**Selected Consolidated Financial Data  
(In thousands, except per share data)**

	Years Ended				
	June 30, 2002	June 24, 2001	June 25, 2000	June 27, 1999	June 28, 1998
<b>Statement of Operations Data:</b>					
Product revenue, net . . . . .	\$ 136,230	\$159,533	\$ 96,742	\$ 53,424	\$34,891
Contract revenue, net . . . . .	19,204	17,694	11,820	8,977	9,071
Total revenue . . . . .	155,434	177,227	108,562	62,401	43,962
Net (loss) income . . . . .	\$(101,723)	\$ 27,843	\$ 30,520	\$ 12,448	\$ 6,243
Net (loss) income per share, basic . . . . .	\$ (1.40)	\$ 0.39	\$ 0.46	\$ 0.21	\$ 0.11
Net (loss) income per share, diluted . . . . .	\$ (1.40)	\$ 0.37	\$ 0.43	\$ 0.20	\$ 0.11
<b>Weighted average shares outstanding:</b>					
Basic . . . . .	72,718	72,243	65,930	58,030	55,452
Diluted . . . . .	72,718	75,735	70,434	60,864	57,974
	As of				
	June 30, 2002	June 24, 2001	June 25, 2000	June 27, 1999	June 28, 1998
<b>Balance Sheet Data:</b>					
Working capital . . . . .	\$ 151,851	\$244,178	\$265,957	\$ 59,889	\$28,265
Total assets . . . . .	504,195	615,123	486,202	145,933	74,379
Long-term obligations . . . . .	—	—	—	4,650	11,046
Shareholders' equity . . . . .	\$ 482,104	\$589,097	\$463,142	\$131,003	\$55,905



## **Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations***

All statements, trend analysis and other information contained in the following discussion relative to markets for our products and trends in revenue, gross margins, and anticipated expense levels, as well as other statements, including words such as “may,” “will,” “anticipate,” “believe,” “plan,” “estimate,” “expect,” and “intend” and other similar expressions constitute forward-looking statements. These forward-looking statements are subject to business, economic and other risks and uncertainties, both known and unknown, and our actual results of operations may differ materially from those contained in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in “Certain Business Risks and Uncertainties” in Item 1 of this report, as well as other risks and uncertainties referenced in this report.

### **Business Overview**

We are the world leaders in developing and manufacturing compound semiconductor materials and electronic devices made from SiC and a leading developer and manufacturer of optoelectronic and electronic devices made from GaN and related materials on SiC substrates. We derive the largest portion of our revenue from the sale of near ultra-violet, or UV, blue and green light emitting diodes or LEDs. We currently offer LEDs at three brightness levels:

- XBright™ UV, blue and green products;
- mid-brightness UV, blue and green products, which include MegaBright™, UltraBright™ and high brightness InGaN devices; and
- standard brightness blue products.

Our LED devices are utilized by end users as a lighting source for wireless handsets, automotive dashboard lighting, indicator lamps, miniature white lights, indoor and outdoor full color displays and signs, traffic signals and other lighting applications. We recognize product revenue at the time of shipment in accordance with the terms of the relevant contract. When our inventory is maintained at a consigned location, revenue is recognized when our customer pulls products for their use. LED products represented 58% of our revenue in fiscal 2002 and 65% in fiscal 2001.

During fiscal 2002 and fiscal 2001, approximately 16% and 11%, respectively, of our revenue came from the sales of RF and microwave devices from our Cree Microwave segment. These RF power transistors are the semiconductor content for power amplifiers that are used in base stations for cellular networks. We also derive revenue from the sale of advanced materials made from SiC that are used for manufacturing LEDs and power devices by our customers, or for research and development for new semiconductor applications. Sales of SiC material products represented 13% of our revenue in fiscal 2002 and approximately 14% during fiscal 2001. We received no significant revenues from sales of power devices or SiC based RF devices in fiscal 2002 or fiscal 2001.

The balance of our revenue, 12% for fiscal 2002 and 10% in fiscal 2001 is derived from contract funding. Under various programs, U.S. Government entities further the development of our technology by funding our research and development efforts. Contract revenue includes funding for direct research and development costs and a portion of our general and administrative expenses and other operating expenses for contracts under which we expect funding to exceed direct costs over the life of the contract. For contracts under which we anticipate that direct costs will exceed amounts to be funded over the life of the contract, we report direct costs as research and development expenses with related reimbursements recorded as an offset to those expenses.

## **Fiscal 2002 Overview**

We completed the introduction of our MegaBright™ LED line during fiscal 2002 with the commercial release of three new products: the MegaBright™ UV device, the traffic signal green device and the true green device used for display signs and other lighting applications. The MegaBright™ blue device was released in the fourth quarter of fiscal 2001. The UV device offers an alternative path to white light compared to the MegaBright™ blue LED. Some customers prefer a blue LED covered with a yellow-emitting phosphor to create white light. Other customers believe the UV LED with red, green and blue-emitting phosphors provides a preferable white light emission. Combining a red, green and blue LED, or a blue and yellow LED, in an appropriate package are other means of creating white light solid state lamps. A traffic signal made of green LEDs offers lower power consumption at 6-12 watts versus 85-150 watts for an incandescent bulb in certain cases. Consequently, municipalities and other government organizations are choosing to install LED traffic signals due to reduced energy consumption resulting in lower electricity bills and reduced maintenance costs due to the longer lifetimes of LEDs. Applications for the true green device target full color indoor and outdoor video displays including sports stadiums and large advertising panels. The use of blue and green LEDs in full-color outdoor signs is a well-established market, and one of the primary applications for nitride LEDs. The MegaBright™ product line was an important revenue stream for fiscal 2002 and has replaced some demand for our older high brightness products. Our high brightness product line had the biggest percentage decline in revenue compared to fiscal 2001. For fiscal 2003, we will combine results for our MegaBright™, UltraBright™ and high brightness devices for reporting purposes and reflect these sales as our mid-brightness products. During the fourth quarter of fiscal 2002, our mid-brightness chips comprised 88% of LED sales.

We also introduced the XBright™ family of LEDs during fiscal 2002. This new product family delivers to our customers increased brightness by approximately 40 percent over the MegaBright™ family of LEDs. Target applications for the XBright™ devices include miniature white lights, traffic signals and video screens. The XBright™ LED technology incorporates a flip chip design and utilizes the optical benefits of SiC while maintaining the vertical structure advantages of a single top contact. This allows for a standard size chip similar to our other devices. We offer a complete product family of XBright™ LEDs: UV, blue, traffic green and true green. During the fourth quarter of fiscal 2002, we continued to work through packaging difficulties encountered by some of our customers in using our XBright™ products. As a result, XBright™ LEDs comprised only 1% of LED revenue in the quarter. We modified the chip after its initial introduction in response to customer packaging suggestions, and we target to increase the sales volume of this product in the first half of fiscal 2003. Customer interest in the product remains strong, as we believe the XBright™ chip is the brightest (which is defined as the optical power output from a chip at 20 milliamps of drive current based on our internal measurement) nitride LED currently available in the marketplace.

Shipments of our standard brightness devices remained stable in fiscal 2002 in comparison to fiscal 2001 and were supported by automotive and indicator light designs. During the fourth quarter of fiscal 2002, standard brightness products were approximately 11% of LED revenue.

Revenue from Cree Microwave was \$24.8 million during fiscal 2002. Our biggest challenge for Cree Microwave will be to diversify our Spectrian-concentrated business. However, due to the weak economic environment for microwave devices and the long qualification process for our products, we believe that this diversification will develop over many quarters. In the near term, our goal is to complete qualification of the new laterally diffused metal oxide semiconductor, or LDMOS 8 products during the first quarter of fiscal 2003. If we fail to attain this goal, revenue from this segment will likely decline in future quarters. Our Supply Agreement with Spectrian, Cree Microwave's largest customer, allows the customer to reduce its purchase obligations significantly.

Overall, for fiscal 2002, materials revenue declined 19% over the prior year due to a 57% reduction in gemstone sales and a 6% decrease in wafer sales. Sales of material for use in gemstones were lower in the

current year as Charles & Colvard, or C&C, our sole customer for such materials, had built up inventory in fiscal 2001 as their sales slowed. During fiscal 2002, wafer volume for our material sales increased 8% while average sales prices declined 12% year over year due to greater sales to volume customers using our product for commercial applications.

Government contract revenue increased 9% in fiscal 2002 over the prior year as we received several new contract awards during fiscal 2002. Our government contract backlog exceeds \$51.0 million as of June 30, 2002, and we target contract revenue to increase during fiscal 2003 due to these new awards, subject to the government's ability to terminate or reduce funding under the contracts.

During the past year, we utilized a greater proportion of our equipment and infrastructure to perform research and development work to support the commercialization of new products as reflected in the introduction of our MegaBright™ and XBright™ products. We believe that, over the next several quarters, this production capacity will be required to support the growth in demand generated by our customers' recent design wins incorporating our products. During fiscal 2003, we target to increase our throughput, subject to the acceptance of our products by our customers and market conditions. As volume throughput rises, our cost of LED chips and unit wafer costs are anticipated to decline as fixed costs are spread over more units.

### **Critical Accounting Policies.**

The following discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. In preparing our financial statements, we must make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities at the date of our financial statements. Actual results may differ from these estimates under different assumptions or conditions.

Critical accounting policies include those policies that are reflective of significant judgments and uncertainties, which potentially could produce materially different results under different assumptions and conditions. We believe that our critical accounting policies are limited to those described below.

*Valuation of Long-Lived Assets, Intangible Assets and Goodwill.* We have approximately \$330.3 million of long-lived assets as of June 30, 2002, including approximately \$211.7 million related to fixed assets and \$64.2 million in long-term investments held to maturity. In addition to the original cost of these assets, their recorded value is impacted by a number of our policy elections, including estimated useful lives, salvage values and in 2002, impairment charges. In accordance with SFAS 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed of", or SFAS 121, we record impairment charges on long-lived assets used in operations when events and circumstances indicate that the assets have been impaired. In making these determinations, the Company utilizes certain assumptions, including, but not limited to: (i) estimations of the fair market value of the assets, and (ii) estimations of future cash flows expected to be generated by these assets, which are based on additional assumptions such as asset utilization, length of service the asset will be used in the Company's operations and estimated salvage values. During 2002, we determined certain property and equipment was impaired under SFAS 121 and as a result, we recorded impairment charges of \$19.0 million.

In addition, during the third quarter of 2002, we completed an impairment analysis of the intangible assets and goodwill related to the acquisition of Cree Microwave. This analysis was performed due to significant changes in business conditions at the operating segment. First, Cree Microwave amended its supply agreement with Spectrian effective March 31, 2002, which resulted in a significant reduction in quarterly revenue expectations. In addition, Cree Microwave's outlook for acquiring additional customers in the near term weakened due to the deteriorating economic conditions and long product qualification cycles. Also, many of the products that Spectrian indicated it would purchase in the future have not yet been released

to production. Under the amended supply agreement, if Cree Microwave is not able to produce LDMOS 8 devices qualified for Spectrian's applications in a timely manner, revenue from Spectrian may be significantly reduced after the June 2002 quarter. As a result of this impairment analysis, the remaining balance of intangible assets and goodwill of \$76.5 million was deemed fully impaired and was written off.

*Accounting for Marketable and Non-Marketable Equity Securities.* We classify our marketable securities that are not trading or "held-to-maturity" securities as "available-for-sale". We carry these investments at fair value, based on quoted market prices, and unrealized gains and losses, net of taxes, are included in accumulated other comprehensive income, which is reflected as a separate component of shareholders' equity. Realized gains and losses are recognized when realized upon sale or disposition or when declines in value are deemed to be other than temporary in accordance with SFAS 115 "Accounting for Certain Debt and Equity Securities". We have a policy in place to review our equity holdings on a regular basis to evaluate whether or not each security has experienced an "other-than-temporary" decline in fair value. Our policy requires, among other things, a review of each of the companies' cash position, earnings/revenue outlook, stock price performance, liquidity, ability to raise capital and management/ownership. Based on this review, if we believe that an "other-than-temporary" decline exists in the value of one of our marketable equity securities, it is our policy to write down these equity investments to the market value. The related write-down will then be recorded as an investment loss on our consolidated statements of operations. During 2002, we recorded an "other-than-temporary" investment loss of \$22.0 million related to our available-for-sale marketable securities based primarily on sustained reductions in stock price performance.

We also make strategic investments in the equity of privately held companies. Since we do not have the ability to exercise significant influence over the operations of these companies, these investment balances are carried at cost and accounted for using the cost method of accounting. Since the shares of stock we received in these investments are not publicly traded, there is no established market for these securities. We have a policy in place to review the fair value of these investments on a regular basis to evaluate the carrying value of such investments. This policy includes, but is not limited to, reviewing each of the companies' cash position, financing needs, earnings/revenue outlook, operational performance, management/ownership changes, and competition. The evaluation process is based on information that we request from the privately held companies. This information is not subject to the same disclosure regulations as U.S. public companies, and as such, the basis for these evaluations is subject to the timing and the accuracy of the data received from these companies. If we believe that the carrying value of an investment is at an amount in excess of fair value, it is our policy to record a write-down of the investment. This write-down is estimated based on the information described above, and it is recorded as an investment loss on our consolidated statements of operations. During 2002, we recorded a write-down on these investments of \$20.4 million, representing our best estimate of "other-than-temporary" declines in value based on a review of those factors described above. Estimating the fair value of non-marketable investments in early-stage technology companies is inherently subjective and may contribute to significant volatility in our reported results of operations.

*Inventories.* Inventories are stated at the lower of cost or market, cost being determined using the first-in, first-out method. We evaluate our ending inventories for excess quantities, impairment of value and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand based upon input received from our customers, sales team and management estimates. We generally reserve for inventories on hand that are greater than twelve months old, unless there is an identified need for the inventory. In addition, we write off inventories that are considered obsolete based upon changes in customer demand, manufacturing process changes that result in existing inventory obsolescence or new product introductions, which eliminate demand for existing products. Remaining inventory balances are adjusted to approximate the lower of our manufacturing cost or market value. If future demand or market conditions are less favorable than our projections, additional inventory write-downs may be required and would be reflected in cost of sales in the period the revision is made. We evaluate the adequacy of these reserves quarterly. In the third quarter of fiscal 2002, we recorded a \$4.5 million reserve at our Cree Microwave segment for non-LDMOS and older LDMOS devices as result of contract negotiations with Spectrian that identified these

devices as obsolete. In the fourth quarter of fiscal 2002, we recorded inventory write-downs of \$690,000 related to our initial shipments of the XBright™ family of products due to a packaging issue identified by some of our customers.

*Revenue Recognition and Accounts Receivable.* Revenue on product sales is recognized when persuasive evidence of an arrangement exists, such as when a purchase order or contract is received from the customer, the price is fixed, title to the goods has changed and there is a reasonable assurance of collection of the sales proceeds. We obtain written purchase authorizations from our customers for a specified amount of product at a specified price and consider delivery to have occurred at the time of shipment. In some cases our inventory is maintained at a consigned location, in that situation, revenue is recognized as our customer pulls inventory for their use. We provide our customers with a limited right of return. Revenue is recognized at shipment or when product is pulled from consigned inventory, and we record a reserve for sales returns. We make estimates of potential future product returns related to current period product revenue. We analyze historical returns, current economic trends and changes in customer demand and acceptance of our products when evaluating the adequacy of the allowance for sales returns. Significant judgments and estimates made by management are used in connection with establishing the allowance for sales returns. Material differences may result in the amount and timing of our revenue for any period if management made different judgments or utilized different estimates. The allowance for sales returns at June 30, 2002 was \$455,000.

*Accruals for Liabilities and Warranties.* At times, we must make estimates for the amount of costs that have been incurred but not yet billed for general services, including legal and accounting fees, costs pertaining to our self-funded medical insurance, warranty costs at Cree Microwave and other expenses. Many of these expenses are estimated based on historical experience or averages and information gained directly from the service providers. Material differences may result in the amount and timing of our expenses for any period if management made different judgments or utilized different estimates.

*Valuation of Deferred Tax Assets.* As of June 30, 2002, the Company had \$28.5 million recorded as deferred tax assets. These assets were recorded as a result of tax benefits associated with the \$143.9 million of significant charges taken in fiscal 2002. These charges were recorded for the write-off of property and equipment, the impairment of goodwill and intangible assets at Cree Microwave and other charges resulting from the downturn in business and the “other than temporary” charges taken on our investments. We did not record a reserve against these deferred tax assets as we target a return to profitable operations over the next several periods and target being able to use the deferred tax assets in their entirety.

The above listing is not intended to be a comprehensive list of all of our accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles, with no need for management’s judgement in its application. There are also areas in which management’s judgement in selecting any available alternative would not produce a materially different result. See our audited consolidated financial statements and notes thereto included in this Annual Report on Form 10-K which contain a discussion of our accounting policies and other disclosures required by accounting principles generally accepted in the United States.

## Results of Operations

The following table shows our consolidated statement of operations data expressed as a percentage of total revenue for the periods indicated:

	Years Ended		
	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>
Revenue:			
Product revenue, net . . . . .	87.6%	90.0%	89.1%
Contract revenue, net . . . . .	<u>12.4</u>	<u>10.0</u>	<u>10.9</u>
Total revenue . . . . .	100.0	100.0	100.0
Cost of Revenue:			
Product revenue, net . . . . .	50.3	43.3	40.0
Contract revenue, net . . . . .	<u>8.9</u>	<u>7.3</u>	<u>8.2</u>
Total cost of revenue . . . . .	<u>59.2</u>	<u>50.6</u>	<u>48.2</u>
Gross margin . . . . .	40.8	49.4	51.8
Operating expenses:			
Research and development . . . . .	18.0	7.3	6.5
Sales, general and administrative . . . . .	16.5	10.2	10.2
Intangible asset amortization . . . . .	4.4	2.6	—
In-process research and development costs . . . . .	—	9.8	—
Other expense . . . . .	<u>62.6</u>	<u>—</u>	<u>1.2</u>
(Loss) income from operations . . . . .	(60.7)	19.5	33.9
Other non-operating (expense) income . . . . .	(26.9)	—	0.6
Interest income, net . . . . .	<u>3.7</u>	<u>8.8</u>	<u>8.6</u>
(Loss) income before income taxes . . . . .	(83.9)	28.3	43.1
Income tax (benefit) expense . . . . .	<u>(18.5)</u>	<u>12.6</u>	<u>15.0</u>
Net (loss) income . . . . .	<u>(65.4)%</u>	<u>15.7%</u>	<u>28.1%</u>

### Fiscal Years Ended June 30, 2002 and June 24, 2001

*Revenue.* Revenue declined 12% to \$155.4 million in fiscal 2002 from \$177.2 million in fiscal 2001. This decrease was attributable to lower product revenue, which declined 15% to \$136.2 million in fiscal 2002 from \$159.5 million in fiscal 2001. Excluding results of Cree Microwave, due to its mid-year acquisition in fiscal 2001, revenue for fiscal 2002 would have decreased 17% over the prior year comparative results. Much of the decrease in revenue from our traditional business resulted from lower average selling prices for our LED and SiC wafer products.

Average LED sales prices declined 24% for the twelve months ended June 2002 compared to the prior year. This decrease was related to contractual volume discounts given to customers and increasing price competitiveness in the marketplace due to weakness in the worldwide economy. We believe that the overall demand for nitride LEDs declined during our fiscal 2002. However, our overall market share has recently increased as a result of our lower pricing and the introduction of higher brightness products. For fiscal 2002, our LED chip volume increased 5% over prior year shipments. The introduction of the MegaBright™ UV, blue, and green products in fiscal 2002 has generated new design wins for our customers. The MegaBright™ product is approximately two times brighter than our previous generation devices and is similar to the brightness that is currently offered by our primary competitors. Prior to the introduction of the MegaBright™ product line, our products were not as bright as those offered by our competition. The MegaBright™ product line was not fully introduced until February 2002, when our green devices were released. These products have replaced some existing demand for our previous generation high brightness devices; however, due to

the product's higher performance, it has also generated new demand, particularly in the mobile handset market. We believe that volume shipments of the MegaBright™ product will increase in fiscal 2003 due to new design wins primarily in the mobile handset market. Several large wireless phone manufacturers have recently introduced new products that feature a blue backlight of the keypad and, at times, a blue color for the display. In addition, newer designs now offer white backlighting for full color screens that require white LEDs. We believe that our products are featured in several of these models of phones, and blue and white backlit phones have grown significantly as a percentage of handsets currently offered by major manufacturers. We also believe that the blue and white LEDs have replaced a portion of the yellow-green LEDs that have traditionally backlit mobile handsets. Our products will also target new automotive designs in fiscal 2003 as well as other consumer product applications.

During fiscal 2002, we also introduced our new XBright™ families of LEDs, including UV, blue and green devices. These products offer approximately 40% higher brightness than our MegaBright™ products, and we believe they are currently the highest brightness UV, blue and green products available in the market place. We completed the introduction of these devices in the second half of fiscal 2002. These devices did not contribute significantly to revenue in fiscal 2002, as we continue to work with customers to optimize our chip design in packaged solutions. We are targeting these products to be more significant to revenue in fiscal 2003 for high brightness applications such as display signs, traffic signals and lighting applications.

Shipments of our standard brightness products were flat in fiscal 2002 in comparison to the prior year due to stable demand for automotive and indicator light applications. We target that our LED revenue may grow significantly in our first quarter of fiscal 2003 as compared to the fourth quarter of fiscal 2002, due to increased volume shipments. We also believe that average sales prices for LEDs will decline in fiscal 2003. However, we are targeting unit shipments to grow at a faster rate than average sales price declines, and as a result, we target higher revenue in fiscal 2003 over fiscal 2002. LED revenue visibility beyond the first quarter of fiscal 2003 is limited due to short lead times given to us by customers. In addition, we must complete additional improvements to our chip design and performance in order to succeed with our LED revenue targets for fiscal 2003.

Revenue from Cree Microwave increased 29% to \$24.8 million in fiscal 2002 from \$19.2 million in fiscal 2001. The increase in revenue represents an additional six months of sales for the segment due to our mid-year acquisition of Cree Microwave from Spectrian in fiscal 2001. Our average quarterly revenue in fiscal 2002 was lower than fiscal 2001 due to the current market environment for wireless infrastructure spending. Product mix shifted to LDMOS during fiscal 2002, which comprised 54% of microwave revenue, an increase of 13% from fiscal 2001. Revenue attributable to bipolar devices was 45% and 1% related to other products during fiscal 2002. Over 90% of Cree Microwave revenues were derived from shipments to Spectrian in fiscal 2002 as well as fiscal 2001. Overall, our average sales prices for this business segment were fairly stable with quarterly average volume being reduced in fiscal 2002 as compared to fiscal 2001. Cree Microwave continues to work with Spectrian to qualify and deliver new LDMOS 8 products for next generation wireless base station applications. If we are unable to deliver qualified LDMOS 8 products to Spectrian on a timely basis, the amount of our contractual supply agreement with Spectrian may be reduced significantly. Specifically, until we complete the qualification of LDMOS 8 parts and the parts are accepted by Spectrian, we anticipate minimal revenue from this segment of our business. If our revenue is reduced substantially, it could have an adverse effect on our results of operations for this segment of business. We continue to work on new customer design wins; however, due to long product qualification cycles in the RF industry, progress in this area will require a longer time commitment. As a result of continued weakness in market conditions for wireless infrastructure spending, combined with a reduced supply agreement with Spectrian that calls for a remaining \$16.3 million of revenue through June 2003, we target revenue from this segment to decline in fiscal 2003 from fiscal 2002.

Overall, for fiscal 2002, materials revenue declined 19% over the prior year due to a 57% reduction in gemstone sales and a 6% decrease in wafer sales. SiC wafer sales decreased 6% from the prior year due to

lower pricing for wafers sold to corporate and research communities, including certain customers using our wafers for commercial production. Wafer units sold increased 8%, while average sales prices declined 12% due to a higher mix of volume sales related to wafers used in commercial production. For fiscal 2003, we target wafer sales revenue to be even with fiscal 2002 results. Sales of gemstone products declined 57% during fiscal 2002 as compared to fiscal 2001. During the fourth quarter of fiscal 2002, we experienced a modest recovery in revenue from C&C and target revenue improvement from this customer during fiscal 2003.

Contract revenue received from U.S. Government agencies and non-governmental customers increased 9% during fiscal 2002 compared to fiscal 2001, due to additional contract awards. We anticipate that contract revenue will increase during fiscal 2003 as a result of new contract awards received in the second half of fiscal 2002.

*Gross Profit.* Gross profit decreased 28% to \$63.4 million in fiscal 2002 from \$87.5 million in fiscal 2001. Compared to the prior year, gross margins declined from 49% to 41% of revenue. In fiscal 2002, gross profit included a \$5.1 million charge relating to an inventory write-off and other related costs that were recorded as a part of the downsizing of Cree Microwave's operations. Without this adjustment, gross profit and gross margin for fiscal 2002 would have been \$68.5 million and 44%, respectively. Lower margins resulted from a combination of lower revenue and reduced profitability for LED and wafer products and lower profitability at Cree Microwave related to weak demand for RF devices. LED margins declined due to average sales prices decreasing at a faster rate than average costs. During fiscal 2002, LED average sales prices declined 24%, which was in line with our plans, while costs were only 16% lower. LED costs did not decline as quickly as revenue due to reduced worldwide demand for UV, blue and green LED products, which put pressure on average sales prices and lowered our factory throughput. Because a significant portion of our factory cost is fixed, lower throughput typically results in higher costs per unit produced. In addition, our LED costs per unit were higher due to inefficiencies typically associated with new product introductions as we released both the MegaBright™ and XBright™ family of products during the year. In our fourth quarter of fiscal 2002, we had product returns and inventory write-downs that netted to a \$948,000 reduction in gross profit related to packaging issues identified by some customers after the release of the XBright™ family of products. We have redesigned our XBright™ chips and are planning to manufacture the products in volume in the first half of fiscal 2003. Despite the lower throughput of volume and new product inefficiencies, we were still able to reduce LED costs by 16% due to improved yield, cost cutting measures and other efficiencies.

Gross margins at Cree Microwave were 19% during fiscal 2002 and were impacted by the \$5.1 million write-off of inventory discussed above. Excluding this write down, gross margin would have been 40% of revenue for the Cree Microwave segment compared to 44% in fiscal 2001. Low factory throughput due to reduced sales volumes and the qualification of LDMOS 8 has significantly impacted our cost per unit. Our greatest opportunity to improve margins would be in yield improvements and the achievement of greater throughput levels in our factory.

For fiscal 2003, we target gross margins to improve slightly as a result of higher throughput in our Durham, North Carolina facility as well as improved yields due to higher anticipated volume. Depending on our success with the introduction of the LDMOS 8 devices at Cree Microwave, our margins for that segment may increase, remain stable or may decline.

*Research and Development.* Research and development expenses increased 116% in fiscal 2002 to \$28.0 million from \$13.0 million in fiscal 2001. The increase in research and development spending supported our MegaBright™ and XBright™ product lines; our large chip LED devices as well as new higher brightness LED research programs. In addition, we funded development of our next generation LDMOS, SiC and GaN microwave devices, our Schottky diode power program and our UV lasers. While research and development spending increased, customer support of certain programs decreased, thereby further increasing



costs. Finally, the mid-year acquisition of Cree Microwave during fiscal 2001 also contributed to the higher spending variance. Without the impact of Cree Microwave, research and development spending would have increased 99% over the prior year. We believe our research and development during fiscal 2002 is critical to our future revenue growth. For example, we target that more than 70% of our revenue goal for fiscal 2003 will be met with technology developed in fiscal 2002. We believe that internal funding for the development of new products will stabilize during fiscal 2003.

*Sales, General and Administrative.* Sales, general and administrative expenses increased 41% in fiscal 2002 to \$25.6 million from \$18.1 million in fiscal 2001. The increase in expenses was due mostly to costs associated with ongoing intellectual property litigation. In addition, costs were higher due to the mid year acquisition of Cree Microwave during fiscal 2001, higher premiums for directors' and officers' insurance and greater spending to support the growth of the business. Without the impact of Cree Microwave, sales and general and administrative expenses would have increased by 38% year over year. For fiscal 2003, we target that sales, general and administrative costs to remain stable depending on developments in our ongoing patent litigation.

*Intangible Asset Amortization and In-Process Research and Development Costs.* Intangible asset amortization increased 49% to \$6.8 million during fiscal 2002 from \$4.5 million during fiscal 2001. Nine months of intangible asset amortization was included in fiscal 2002 and six months of amortization was included in fiscal 2001 resulting from the acquisition of Cree Microwave in December 2000. Intangible asset amortization ceased during the fourth quarter of fiscal 2002. An analysis of goodwill and other intangible assets indicated that the carrying values of such assets had been fully impaired under Statement of Financial Accounting Standards No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of" (SFAS 121) (see "Other Expense"). Prior to the write-off of goodwill and intangible assets, we were amortizing these assets over periods ranging from five to ten years.

As a result of the acquisition of Cree Microwave in December 2000, we recorded a charge of \$17.4 million in the third quarter of fiscal 2001 associated with acquired in-process research and development costs.

*Other Expense.* Other expense increased to \$97.2 million during fiscal 2002 from \$62,000 in fiscal 2001. This charge was primarily made up of a \$76.5 million charge for goodwill and intangible assets relating to Cree Microwave in response to several impairment indicators. Cree Microwave amended its supply agreement with Spectrian in the third quarter of fiscal 2002, which reduced quarterly revenue expectations. Also, many of the products that Spectrian indicated that it would purchase in the future have not yet been released to production. Under the amended supply agreement with Spectrian, if Cree Microwave is not able to produce LDMOS 8 devices in a timely manner, revenue from Spectrian may be significantly reduced after the June 2002 quarter. In addition, the outlook for acquiring additional customers in the near term has decreased due to the weakened economy and the long qualification cycles. Due to the change in outlook for business at Cree Microwave and the reduction in expected revenue per quarter, we performed an asset impairment analysis under SFAS 121. As a result of this analysis, the full amount of goodwill and intangible assets of \$76.5 million was written off and recorded as other expense on our consolidated statements of operations. Also included in other expense was \$875,000 related to severance payments and other expenses related to the downsizing in the Cree Microwave business. In addition, a \$19.0 million write-off of property and equipment was recorded to reflect changes in technology that resulted in their obsolescence.

*Other Non-Operating (Loss) Income.* Other non-operating (loss) income was a loss of \$41.8 million in fiscal 2002 compared to \$82,000 of income in fiscal 2001. The fiscal 2002 loss was attributable to a \$42.4 million write-down of investments made in publicly traded and privately held equity securities. For publicly traded securities, we reclassified other comprehensive losses from equity to non-operating losses in our consolidated statements of operations and recorded additional write-downs for the "other-than-temporary"

declines in the market value of these investments as the stock market has sustained significant declines in value. In the case of privately held investments, many of the companies were experiencing deteriorating financial conditions and/or an inability to raise additional capital, which represented significant indicators of value impairment. The fiscal 2002 other non-operating loss was partially offset by a \$558,000 gain on the sale of marketable securities during the second quarter of fiscal 2002.

During fiscal 2001, a \$4.6 million write-down was taken to establish a reserve for investments made in privately held companies that were considered to have an “other than temporary” impairment to value. In addition, we made a one-time pledge of a charitable contribution of \$1.2 million to the University of California at Santa Barbara to endow a Cree chair in solid state lighting and displays and for other uses. Finally, a \$100,000 charge was recorded related to one-time charges for expenses incurred for the acquisition of Nitres. These charges were offset by a \$6.0 million gain on the sale of marketable securities during the year.

*Interest Income, net.* Interest income, net has decreased 64% to \$5.7 million in fiscal 2002 from \$15.7 million in fiscal 2001 due to significantly lower interest rates available in fiscal 2002. In addition, slightly lower cash amounts were available as \$20.3 million was used to repurchase our own stock during fiscal 2002.

*Income Tax (Benefit) Expense.* Income tax (benefit) expense for fiscal 2002 was a benefit of \$28.7 million compared to an expense of \$22.3 million in fiscal 2001. The fiscal 2002 income tax benefit resulted from significant charges of \$143.9 million taken during the year. These charges included the write-off of property and equipment due to changes in technology, the impairment of goodwill and intangible assets at Cree Microwave and other charges relating to the downturn in business, and an “other than temporary” decline in fair value of marketable and privately held securities. Our effective tax rate during fiscal 2002 was 22% compared to 33% in fiscal 2001. At June 30, 2002, we also maintained \$28.5 million of deferred tax assets that were not reserved for by us as we target to return to profitable operations over the next several periods and target being able to use the assets in their entirety.

The minimum amount of future taxable income that will be required to realize existing deferred tax assets is approximately \$66 million, \$20 million of which will need to occur within the next 20 years to offset existing net operating losses. The new tax act, “The Job Creation and Workers’ Assistance Act of 2002” will allow us to recover past alternative minimum tax that has been paid. This amount has been recorded as a tax receivable. The new legislation also allows us more favorable depreciation. Historically, reported taxable income has been significantly lower than income reported for financial reporting purposes. The primary reasons for this difference are the timing differences for depreciation, stock option deductions for tax purposes, other tax planning strategies, and impairment charges expensed for financial accounting purposes, which are not tax deductible.

### **Fiscal Years Ended June 24, 2001 and June 25, 2000**

*Revenue.* Revenue grew 63% to \$177.2 million in fiscal 2001 from \$108.6 million in fiscal 2000. This increase was attributable to higher product revenue, which rose 65% to \$159.5 million in fiscal 2001 from \$96.7 million in fiscal 2000. Without the acquisition of Cree Microwave in December 2000, revenue for fiscal 2001 would have increased 46% over the prior year comparative results. Much of the increase in revenue from our traditional business resulted from demand for our LED and SiC wafer products. LED chip volume increased 104% over units delivered in the prior year. The largest increase occurred as a result of the introduction of our UltraBright™ product line in fiscal 2001. During fiscal 2000 only our high brightness and standard brightness product lines were available for sale. Our standard brightness products also increased 65% in fiscal 2001 in terms of units shipped over the prior year due to strong demand for automotive and indicator light applications. Average LED sales prices declined 18% for the twelve months ended June 2001 compared to the prior year average due to expected contractual volume discounts given to customers.

SiC wafer sales increased 71% over the prior year due to demand from corporate and research customers, including certain customers using our wafers for commercial production. Wafer units sold increased 107%, while average sales prices declined 16% due to a higher mix of volume sales related to wafers used in commercial production. Sales of gemstone products declined 63% during fiscal year 2001 as compared to fiscal 2000 due to inventory reduction efforts at C&C.

Revenue from Cree Microwave was \$19.2 million for fiscal 2001. This represents six months of sales for the unit as it was acquired in December 2000 and accounted for using the purchase method of accounting. Since we acquired Cree Microwave in December 2000, there were no sales for this unit in fiscal 2000.

Contract revenue received from U.S. Government agencies and non-governmental customers increased 50% during fiscal 2001 compared to fiscal 2000, due to additional contract awards. Seven new contract awards were received during fiscal 2001.

*Gross Profit.* Gross profit increased 56% to \$87.5 million in fiscal 2001 from \$56.2 million in fiscal 2000. Compared to the prior year, gross margins declined from 52% to 49% of revenue. Lower margins resulted from a combination of reduced profitability for LED devices and the acquisition of Cree Microwave. LED margins declined due to average sales prices decreasing at a faster rate than average costs. During fiscal 2001 average LED costs declined 11% while average sales prices were reduced 18%. LED costs did not decline as quickly as revenue due to lower yields as a result of new product introductions and chip modifications made to our products in the second half of the year. In addition, factory throughput was reduced during the fourth quarter of fiscal 2001, which resulted in higher costs per chip. The margins for Cree Microwave averaged 44% as a percentage of revenue due to the competitive environment for LDMOS chips. Cree Microwave was 11% of total revenue in fiscal 2001.

*Research and Development.* Research and development expenses increased 84% in fiscal 2001 to \$13.0 million from \$7.1 million in fiscal 2000. Much of this increase resulted from the acquisition of Cree Microwave, as well as greater investment made for research in the RF and microwave, power and optoelectronic programs. Without the acquisition of Cree Microwave, research and development expenses would have increased 62% over the prior year.

*Sales, General and Administrative.* Sales, general and administrative expenses increased 63% in fiscal 2001 to \$18.1 million from \$11.1 million in fiscal 2000. This increase in expenses is due to the acquisition of Cree Microwave and greater spending to support the overall growth of the business, as well as costs associated with ongoing intellectual property litigation. Without the acquisition of Cree Microwave, sales, general and administrative expenses would have increased 44% over the prior year.

*Intangible Asset Amortization and In-Process Research and Development Costs.* The purchase of Cree Microwave generated goodwill and other intangible assets, which will be amortized over periods ranging from five to ten years. In addition, as a result of the acquisition of Cree Microwave, we recorded a one-time charge of \$17.4 million in the third quarter of fiscal 2001 associated with acquired in-process research and development costs.

*Other Expense.* Other expense decreased 95% to \$62,000 during fiscal 2001 from \$1.3 million in fiscal 2000. The decrease was attributable to fewer fixed asset disposals.

*Other Non-Operating Income.* Other non-operating income decreased 88% to \$82,000 in fiscal 2001 from \$656,000 in fiscal 2000. This decrease was attributable to a \$4.6 million write down taken in the fourth quarter of fiscal 2001 to establish a reserve for investments made in private companies that was considered to be an "other-than-temporary" decline in fair value. In addition, we made a one-time pledge of a charitable contribution of \$1.2 million to the University of California at Santa Barbara to endow a Cree chair in solid state lighting and displays, and for other uses, in the first quarter of fiscal 2001. Finally, a \$100,000 charge

was recorded related to one-time charges for expenses incurred for the acquisition of Nitres. These charges were offset by a \$6.0 million gain on the sale of investment securities during the year. During fiscal 2000, a \$4.1 million gain was recognized on the sale of securities. This gain combined with one-time proceeds from an insurance recovery of \$400,000, more than offset a \$3.8 million one-time charge for expenses incurred with the acquisition of Nitres.

*Interest Income, net.* Interest income, net has increased 67% to \$15.7 million in fiscal 2001 from \$9.4 million in fiscal 2000 due to higher average cash balances being available in fiscal 2001 as a result of the public stock offering completed in January 2000. Higher interest rates in fiscal 2001 also contributed to increased interest income.

*Income Tax Expense.* Income tax expense for fiscal 2001 was \$22.3 million compared to \$16.3 million in fiscal 2000. This increase resulted from increased profitability during fiscal 2001 over fiscal 2000, as adjusted for the cost of in-process research and development which is non-deductible in the current period for tax purposes. Our effective tax rate during fiscal 2001 was 33% compared to 35% in fiscal 2000.

### **Liquidity and Capital Resources**

We have funded our operations to date through sales of equity, bank borrowings and from product and contract gross profits. As of June 30, 2002, we had working capital of \$151.8 million, including \$106.1 million in cash, cash equivalents and short-term investments held to maturity. As of June 30, 2002, we invested \$64.2 million in long term securities held to maturity in order to receive a higher interest rate on our cash. Operating activities generated \$39.1 million in fiscal 2002 compared with \$74.8 million generated during fiscal 2001. This decrease was primarily attributable to a \$31.2 million increase in deferred income tax assets that was generated from the \$143.9 million in pretax charges taken in fiscal 2002. Depreciation and amortization increased by \$13.0 million in fiscal 2002, due to new equipment purchased primarily in fiscal 2001. Tax benefits from stock options were also \$4.3 million lower in fiscal 2002. These inflows of cash were partly offset by a \$2.8 million increase in inventory due to increased shipments anticipated for early fiscal 2003 and inventory being maintained at an offsite location, and a \$3.8 million increase to prepaid expenses mostly for higher insurance premiums.

Cash used by investing activities in fiscal 2002 was \$116.9 million. Net investments of \$51.8 million were made in securities held to maturity and \$13.8 million was invested in available for sale securities. \$41.7 million was invested in property and equipment and in additional deposits for property and equipment. The majority of the increase in spending was due to new equipment additions to increase manufacturing capacity in our epitaxy, clean room and package and test areas. Finally, \$9.1 million was invested in other long-term assets during fiscal 2002 and reflects strategic investments made in private companies.

Cash used in financing activities included common stock repurchases of 1.49 million shares of our common stock on the open market for \$20.3 million or an average cost of \$13.63 per share. This was partially offset by the receipt of \$7.2 million for the exercise of stock options and shares issued under our employee stock purchase program.

We target approximately \$50.0-60.0 million in capital spending for fiscal 2003. We anticipate that the majority of the expenditures will be made for new equipment and will be funded by cash from operations. We may also issue additional shares of common stock for the acquisition of complementary businesses or other significant assets. From time to time, we evaluate potential acquisitions of and investments in complementary businesses and anticipate continuing to make such evaluations.

## **Item 7A. *Quantitative and Qualitative Disclosures about Market Risk***

### **Quantitative Disclosures:**

As of June 30, 2002, we maintain investments in equity securities that are treated for accounting purposes under SFAS 115 as “available-for-sale” securities. These investments are normally carried at fair market value based upon the quoted market price of that investment at the end of the reporting period, with net unrealized gains or losses excluded from earnings and reported as a separate component of shareholder’s equity. It is our policy to write down these equity investments to their market value and record the related write-down as an investment loss on our consolidated statements of operations when the investment has an “other-than-temporary” decline in value. At June 30, 2002, we believe that an “other-than-temporary” decline existed in our marketable equity securities and we recorded an “other-than-temporary” investment loss of \$22.0 million related to our available for sale marketable securities. These investments are subject to market risk of equity price changes. Management views these stock holdings as an investment; therefore, the shares are accounted for as “available for sale” securities under SFAS 115. The fair market value of these investments as of June 30, 2002, using the closing sale price as of June 28, 2002, was \$6.0 million. These equity securities are held for purposes other than trading. Our equity portfolio consists of securities with characteristics that most closely match the Nasdaq National Market. The Nasdaq Composite Index has shown a 72% decline over the past two years, therefore if there was a 72% adverse change in the market prices, our portfolio would decrease in value by \$4.3 million.

An adverse movement of equity market prices would also have an impact on our portfolio of non-marketable strategic equity securities, although the impact cannot be directly quantified. Such a movement and the related underlying economic conditions would negatively affect the prospects of the companies we invest in, their ability to raise additional capital and the likelihood of our being able to realize our investments through liquidity events such as initial public offerings, mergers and private sales. At June 30, 2002, our non-marketable strategic equity securities had a carrying amount of \$16.0 million.

We have invested some of the proceeds from our January 2000 public offering into high-grade corporate debt, commercial paper, government securities and other investments at fixed interest rates that vary by security. At June 30, 2002, the Company had \$157.6 million invested in these securities. We currently have no debt outstanding.

### **Qualitative Disclosures:**

Our investments in publicly traded equity securities are subject to the market risk of equity price changes. While we cannot predict or manage the future market price for such stock, management continues to evaluate our investment position on an on-going basis.

**Item 8. *Financial Statements and Supplementary Data***

**Index to Consolidated Financial Statements**

	<u>Page</u>
Report of Independent Auditors .....	45
Consolidated Balance Sheets as of June 30, 2002 and June 24, 2001 .....	46
Consolidated Statements of Operations for the years ended June 30, 2002, June 24, 2001 and June 25, 2000 .....	47
Consolidated Statements of Cash Flow for the years ended June 30, 2002, June 24, 2001 and June 25, 2000 .....	48
Consolidated Statements of Shareholders' Equity for the years ended June 30, 2002, June 24, 2001 and June 25, 2000 .....	49
Notes to Consolidated Financial Statements .....	50

## REPORT OF INDEPENDENT AUDITORS

Board of Directors and Shareholders  
Cree, Inc.

We have audited the accompanying consolidated balance sheets of Cree, Inc. as of June 30, 2002 and June 24, 2001, and the related consolidated statements of operations, shareholders' equity and cash flows for each of the three years in the period ended June 30, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Cree, Inc. at June 30, 2002 and June 24, 2001, and the consolidated results of its operations and its cash flows for each of the three years in the period ended June 30, 2002, in conformity with accounting principles generally accepted in the United States.



Raleigh, North Carolina  
July 24, 2002

**CREE, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
(In thousands, except per share amounts)

	<u>June 30, 2002</u>	<u>June 24, 2001</u>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ 73,744	\$164,562
Short-term investments held to maturity .....	32,396	36,965
Marketable securities available for sale .....	6,008	6,675
Accounts receivable, net .....	34,592	34,850
Interest receivable .....	2,083	1,270
Inventories, net .....	17,966	15,202
Deferred income taxes .....	1,122	4,172
Prepaid expenses and other current assets .....	5,994	2,220
Total current assets .....	<u>173,905</u>	<u>265,916</u>
Property and equipment, net .....	211,685	226,920
Goodwill and intangible assets, net .....	—	83,282
Long-term investments held to maturity .....	64,225	7,971
Deferred income taxes .....	27,365	—
Patent and license rights, net .....	4,251	3,246
Other assets .....	22,764	27,788
Total assets .....	<u>\$504,195</u>	<u>\$615,123</u>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable, trade .....	\$ 13,075	\$ 14,147
Accrued salaries and wages .....	4,010	2,435
Other accrued expenses .....	4,969	5,156
Total current liabilities .....	<u>22,054</u>	<u>21,738</u>
Long term liabilities:		
Deferred income taxes .....	—	3,850
Other long-term liabilities .....	37	438
Total long-term liabilities .....	<u>37</u>	<u>4,288</u>
Shareholders' equity:		
Preferred stock, par value \$0.01; 3,000 shares authorized at June 30, 2002 and June 24, 2001; none issued and outstanding .....	—	—
Common stock, par value \$0.00125; 200,000 shares authorized at June 30, 2002 and June 24, 2001; 72,729 and 72,907 shares issued and outstanding at June 30, 2002 and June 24, 2001, respectively .....	90	91
Additional paid-in-capital .....	508,432	518,781
Deferred compensation .....	(696)	(1,211)
(Accumulated deficit) retained earnings .....	(25,722)	76,001
Accumulated other comprehensive loss, net of tax .....	—	(4,565)
Total shareholders' equity .....	<u>482,104</u>	<u>589,097</u>
Total liabilities and shareholders' equity .....	<u>\$504,195</u>	<u>\$615,123</u>

The accompanying notes are an integral part of the consolidated financial statements.



**CREE, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(In thousands, except per share amounts)

	Year Ended		
	June 30, 2002	June 24, 2001	June 25, 2000
Revenue:			
Product revenue, net . . . . .	\$ 136,230	\$159,533	\$ 96,742
Contract revenue, net . . . . .	19,204	17,694	11,820
Total revenue . . . . .	<u>155,434</u>	<u>177,227</u>	<u>108,562</u>
Cost of revenue:			
Product revenue, net . . . . .	78,249	76,734	43,399
Contract revenue, net . . . . .	13,827	12,967	8,963
Total cost of revenue . . . . .	<u>92,076</u>	<u>89,701</u>	<u>52,362</u>
Gross profit . . . . .	63,358	87,526	56,200
Operating expenses:			
Research and development . . . . .	28,026	12,980	7,054
Sales, general and administrative . . . . .	25,618	18,111	11,091
Intangible asset amortization . . . . .	6,765	4,537	—
In-process research and development costs . . . . .	—	17,400	—
Impairment charges and other expense . . . . .	97,223	62	1,305
(Loss) income from operations . . . . .	<u>(94,274)</u>	<u>34,436</u>	<u>36,750</u>
Other non-operating (expense) income . . . . .	(41,848)	82	656
Interest income, net . . . . .	5,708	15,668	9,400
(Loss) income before income taxes . . . . .	<u>(130,414)</u>	<u>50,186</u>	<u>46,806</u>
Income tax (benefit) expense . . . . .	(28,691)	22,343	16,286
Net (loss) income . . . . .	<u><u>\$(101,723)</u></u>	<u><u>\$ 27,843</u></u>	<u><u>\$ 30,520</u></u>
(Loss) earnings per share:			
Basic . . . . .	<u>\$ (1.40)</u>	<u>\$ 0.39</u>	<u>\$ 0.46</u>
Diluted . . . . .	<u>\$ (1.40)</u>	<u>\$ 0.37</u>	<u>\$ 0.43</u>
Shares used in per share calculation:			
Basic . . . . .	<u>72,718</u>	<u>72,243</u>	<u>65,930</u>
Diluted . . . . .	<u>72,718</u>	<u>75,735</u>	<u>70,434</u>

The accompanying notes are an integral part of the consolidated financial statements.

**CREE, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOW**  
(In thousands)

	Year Ended		
	June 30, 2002	June 24, 2001	June 25, 2000
Operating activities:			
Net (loss) income	\$(101,723)	\$ 27,843	\$ 30,520
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation and amortization	32,400	21,948	10,803
Loss on retirement of property and equipment and patents	18,298	134	1,256
Amortization of patent rights	293	194	145
Amortization of intangible assets	6,796	4,537	—
Amortization of premium on securities held to maturity	157	—	—
Write-off of goodwill and other intangible assets	76,488	—	—
Acquired in-process research & development	—	17,400	—
Write-down of long-term investments	20,377	4,600	—
Purchase of marketable trading securities	(1,546)	(17,498)	(1,786)
Proceeds from sale of marketable trading securities	2,104	23,498	2,280
Gain on marketable trading securities	(558)	(6,000)	(494)
Loss (gain) on available for sale securities	22,028	—	(3,567)
Deferred income taxes	(31,200)	13,514	(11,617)
Income tax benefits from stock option exercises	2,712	7,022	27,336
Amortization of deferred compensation	515	544	980
Changes in operating assets and liabilities:			
Accounts and interest receivable	(555)	(18,432)	(91)
Inventories	(2,764)	(2,035)	(5,334)
Prepaid expenses and other current assets	(3,773)	(735)	(263)
Other long-term assets	(833)	—	—
Accounts payable, trade	(1,073)	(924)	6,447
Accrued expenses and other liabilities	987	(842)	6,356
Net cash provided by operating activities	<u>39,130</u>	<u>74,768</u>	<u>62,971</u>
Investing activities:			
Purchase of available for sale securities	(13,761)	—	(12,500)
Proceeds from sale of available for sale securities	—	—	6,291
Costs associated with the acquisition of Cree Microwave	—	(1,946)	—
Purchase of securities held to maturity	(118,807)	(7,971)	(195,883)
Proceeds from maturities of securities held to maturity	66,965	147,461	11,457
Purchase of and deposits for property and equipment	(41,635)	(106,194)	(78,047)
Proceeds from sale of property and equipment	721	123	—
Purchase of patent rights	(1,318)	(1,150)	(727)
Increase in other long-term assets	(9,051)	(26,910)	(5,141)
Net cash (used in) provided by investing activities	<u>(116,886)</u>	<u>3,413</u>	<u>(274,550)</u>
Financing activities:			
Net repayment of long-term debt	—	—	(47)
Net proceeds from issuance of common stock	7,235	10,346	272,924
Net proceeds from sale of put options	—	2,860	—
Repurchase of common stock	(20,297)	(30,668)	—
Net cash (used in) provided by financing activities	<u>(13,062)</u>	<u>(17,462)</u>	<u>272,877</u>
Net (decrease) increase in cash and cash equivalents	(90,818)	60,719	61,298
Cash and cash equivalents:			
Beginning of year	164,562	103,843	42,545
End of year	<u>\$ 73,744</u>	<u>\$ 164,562</u>	<u>\$ 103,843</u>
Supplemental disclosure of cash flow information:			
Cash paid for interest, net of amounts capitalized	\$ —	\$ —	\$ 13
Cash paid for income taxes	<u>\$ 1,901</u>	<u>\$ 1,492</u>	<u>\$ 272</u>
Non-cash investing and financing activities:			
Deferred compensation	<u>\$ 515</u>	<u>\$ 544</u>	<u>\$ 1,768</u>
Conversion of note payable to common stock	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 431</u>
Issuance of common stock in connection with the acquisition of Cree Microwave	<u>\$ —</u>	<u>\$ 113,717</u>	<u>\$ —</u>

The accompanying notes are an integral part of the consolidated financial statements.

**CREE, INC.**  
**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**  
**YEARS ENDED JUNE 30, 2002, JUNE 24, 2001 AND JUNE 25, 2000**  
(In thousands)

	Common Stock Par Value	Additional Paid-in Capital	Deferred Compensation	(Accumulated Deficit) Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
<b>Balance at June 27, 1999</b> .....	\$77	\$113,268	\$ (967)	\$ 17,638	\$ 987	\$ 131,003
Common stock options and warrants exercised for cash, 954 shares ...	3	6,750				6,753
Employees granted stock options, 137 shares .....		785	(785)			—
Employees granted stock, 171 shares		983	(983)			—
Common stock warrants granted, 16 shares .....		31				31
Loan converted to common stock, 169 shares .....		431				431
Issuance of common stock for cash, 3,289 shares .....	8	266,132				266,140
Income tax benefits from stock option exercises .....		27,336				27,336
Amortization of deferred compensation .....			980			980
Net income .....				30,520		30,520
Unrealized loss on securities available for sale, net of tax of \$27 .....					(52)	(52)
Comprehensive income .....						30,468
<b>Balance at June 25, 2000</b> .....	88	415,716	(1,755)	48,158	935	463,142
Common stock options and warrants exercised for cash, 870 shares ...	2	7,368				7,370
Issuance of common stock for cash, 113 shares .....		2,976				2,976
Issuance of common stock in connection with purchase business combination, 2,657 shares .....	3	113,505				113,508
Purchase and retirement of 1,850 treasury shares .....	(2)	(30,666)				(30,668)
Income tax benefits from stock option exercises .....		7,022				7,022
Amortization of deferred compensation .....			544			544
Premium Received Put Option buy back .....		2,860				2,860
Net income .....				27,843		27,843
Unrealized loss on securities available for sale, net of tax of \$3,667 .....					(5,500)	(5,500)
Comprehensive income .....						22,343
<b>Balance at June 24, 2001</b> .....	91	518,781	(1,211)	76,001	(4,565)	589,097
Common stock options exercised for cash, 1,053 shares .....	1	4,229				4,230
Issuance of common stock for cash, 245 shares .....		3,005				3,005
Purchase and retirement of 1,489 treasury shares .....	(2)	(20,295)				(20,297)
Income tax benefits from stock option exercises .....		2,712				2,712
Amortization of deferred compensation .....			515			515
Net loss .....				(101,723)		(101,723)
Unrealized losses on securities available for sale, net of taxes of \$3,174 .....					(11,253)	(11,253)
Losses on available for sale securities reclassified from other comprehensive income, net of taxes of \$6,210 due to an other than temporary decline in value ..					15,818	15,818
Comprehensive loss .....						(97,158)
<b>Balance at June 30, 2002</b> .....	<u>\$90</u>	<u>\$508,432</u>	<u>\$ (696)</u>	<u>\$ (25,722)</u>	<u>\$ —</u>	<u>\$ 482,104</u>

The accompanying notes are an integral part of the consolidated financial statements.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**June 30, 2002**

**1. Nature of Business**

Cree, Inc., the “Company,” or “Cree,” a North Carolina corporation, develops, manufactures, and markets silicon carbide (“SiC”) and gallium nitride (“GaN”) based semiconductor materials and devices as well as radio frequency (“RF”) and microwave devices made from silicon. Revenues are primarily derived from the sale of near ultra-violet, (“UV”), blue and green light emitting diodes (“LEDs”), SiC based materials and RF and microwave devices. The Company markets its UV, blue and green LED chip products principally to customers who incorporate them into packaged lamps for resale to original equipment manufacturers. The Company also sells SiC material products primarily to corporate, government, and university research laboratories. RF and microwave devices are sold primarily to power amplifier manufacturers. In addition, the Company is engaged in a variety of research programs related to the advancement of SiC and GaN process technology and the development of electronic and optoelectronic devices that take advantage of these materials’ unique physical and electronic properties. The Company has historically recovered the costs of a significant portion of its research and development efforts from revenues on contracts with agencies of the U.S. Federal government.

**2. Summary of Significant Accounting Policies and Other Matters**

*Principles of Consolidation*

The consolidated financial statements include the accounts of Cree, Inc., and its wholly-owned subsidiaries, Cree Microwave, Inc. (“Cree Microwave”), Cree Lighting Company (“Cree Lighting”), Cree Research FSC, Inc. (“FSC”), Cree Funding, LLC (“Cree Funding”), Cree Employee Services Corporation, Cree Technologies, Inc., CI Holdings, Limited, Cree Asia-Pacific, Inc and Cree Japan, Inc. All material intercompany accounts and transactions have been eliminated in consolidation.

*Business Combination*

On December 29, 2000, the Company completed the acquisition of the Cree Microwave division (formerly known as UltraRF) of Spectrian Corporation, or Spectrian, through the purchase of assets of the business by Cree’s wholly owned subsidiary, Cree Microwave, Inc. in a business combination accounted for using the purchase method. Under the terms of the Asset Purchase Agreement, Cree Microwave acquired substantially all of the net assets of the business from Spectrian in exchange for a total of 2,656,917 shares of Cree common stock valued at \$113.5 million. Of the total shares issued, 191,094 shares were placed in escrow and proceeds from the sale of such shares were retained in escrow to secure Spectrian’s representations, warranties and covenants under the Asset Purchase Agreement. Under the terms of the escrow arrangement, one-half of the funds were released to Spectrian in June 2001 and the balance was released in December 2001 because no claims were made against the escrowed assets. The results of operations of Cree Microwave have been included in the consolidated results of the Company since the date of acquisition.

In connection with the acquisition of the Cree Microwave business, the Company recognized a one-time charge of \$17.4 million during fiscal 2001 representing the write-off of the appraised value of certain acquired in-process research and development costs as of the acquisition date.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

*Pro Forma Summary Data*

The following pro forma summary data for the twelve months ended June 24, 2001 presents the consolidated results of operations as if the acquisition of Cree Microwave made during 2001 had occurred as of June 26, 2000. These pro forma results have been prepared for comparative purposes only and do not purport to be indicative of what would have occurred had the acquisition been made as of June 26, 2000 or of results that may occur in the future.

	<u>Year Ended June 24, 2001 (in 000's except per share data)</u>
Pro forma revenue .....	\$194,357
Pro forma net income .....	42,065
Pro forma basic net income per share .....	\$ 0.58
Pro forma diluted net income per share .....	\$ 0.56

On May 1, 2000, the Company acquired Nitres, Inc. ("Nitres") in a business combination accounted for as a pooling of interests. Nitres, became a wholly owned subsidiary (Cree Lighting Company) of the Company through the exchange of 3,695,492 shares of the Company's common stock for all of the outstanding stock of Nitres. In addition, the Company assumed outstanding stock options and warrants, which after adjustment for the exchange represented a total of 304,446 options and warrants to purchase shares of Cree's common stock. The accompanying consolidated financial statements for fiscal 2000 are based on the assumption that the companies were combined for the full year. All prior period consolidated financial statements have been restated to include the results of operations, financial position and cash flows of Nitres, as though Nitres had been a part of the Company for all periods presented.

*Reconciliation of Previously Reported Operations—Selected Financial Data*

The following table reflects the summarized results of operations of the separate companies for the nine months ended March 26, 2000, the nearest practical reporting period prior to the business combination on May 1, 2000. In addition, a reconciliation of the amounts of net sales and net income previously reported with restated amounts is included.

	<u>Nine months ended March 26, 2000 (in 000's)</u>
	<u>(Unaudited)</u>
Net sales and other revenue:	
As previously reported by Cree, Inc. ....	\$72,342
Nitres, Inc. ....	2,887
Elimination of intercompany transactions .....	<u>(27)</u>
As restated .....	<u>\$75,202</u>
Net income (loss):	
As previously reported by Cree, Inc. ....	\$19,575
Nitres, Inc. ....	(392)
Elimination of intercompany transactions .....	<u>(20)</u>
As restated .....	<u>\$19,163</u>

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

*Elimination of Prior Intercompany Transactions*

Prior to May 1, 2000, the Company and Nitres, in the normal course of business, entered into certain transactions for the purchase and sale of merchandise. These intercompany transactions have been eliminated in the accompanying restated consolidated financial statements.

*Business Segments*

The Company operates in two business segments, Cree and Cree Microwave. The Cree segment incorporates its proprietary technology to produce wide bandgap compound semiconductors using SiC and GaN. Products from this segment are sold for use in cellular handsets, automotive backlighting, indicator lamps, full color LED displays and other lighting applications as well as microwave and power applications. The Cree segment also sells SiC material products to corporate, government and university research laboratories and generates revenue from contracts with agencies of the U.S. Federal government.

The Cree Microwave segment designs, manufactures and markets a line of silicon-based laterally diffused metal oxide semiconductors, or LDMOS and bipolar radio frequency power semiconductors and modules, the critical component utilized in building power amplifiers for wireless infrastructure applications.

Summarized financial information concerning the reportable segments as of and for the years ended June 30, 2002 and June 24, 2001 is shown in the following table. The “Other” column represents amounts excluded from specific segments such as interest income and write-downs for investments made in publicly and privately held equity securities. In addition, the “Other” column also includes corporate assets such as cash and cash equivalents, short-term investments held to maturity, marketable securities, interest receivable and long-term investments held to maturity which have not been allocated to a specific segment.

<u>As of and for the Year Ended June 30, 2002 (in 000's)</u>	<u>Cree</u>	<u>Cree Microwave</u>	<u>Other</u>	<u>Total</u>
Revenue . . . . .	\$130,639	\$ 24,795	\$ —	\$ 155,434
Depreciation and amortization . . . . .	30,168	2,232	—	32,400
Loss before income taxes . . . . .	(4,891)	(89,384)	(36,139)	(130,414)
Assets . . . . .	\$289,921	\$ 19,187	\$195,087	\$ 504,195
<u>As of and for the Year Ended June 24, 2001 (in 000's)</u>	<u>Cree</u>	<u>Cree Microwave</u>	<u>Other</u>	<u>Total</u>
Revenue . . . . .	\$157,999	\$ 19,228	\$ —	\$ 177,227
Depreciation and amortization . . . . .	20,991	957	—	21,948
Income (loss) before income taxes . . . . .	51,743	(17,225)	15,668	50,186
Assets . . . . .	\$298,495	\$ 99,185	\$217,443	\$ 615,123

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

**Quarterly Results of Operations—Unaudited**

The following is a summary of the Company's consolidated quarterly results of operations for each of the fiscal years ended June 30, 2002 and June 24, 2001 (in thousands, except per share data).

	<u>September 23, 2001</u>	<u>December 23, 2001</u>	<u>March 24, 2002</u>	<u>June 30, 2002</u>	<u>Fiscal Year 2002</u>
Net revenue .....	\$43,166	\$ 41,092	\$ 33,376	\$ 37,800	\$ 155,434
Cost of revenue .....	23,262	21,717	24,999	22,098	92,076
Net income (loss) .....	\$ 6,460	\$(17,376)	\$(68,286)	\$(22,521)	\$(101,723)
Earnings (loss) per share:					
Basic .....	\$ 0.09	\$ (0.24)	\$ (0.94)	\$ (0.31)	\$ (1.40)
Diluted .....	\$ 0.09	\$ (0.24)	\$ (0.94)	\$ (0.31)	\$ (1.40)

	<u>September 24, 2000</u>	<u>December 24, 2000</u>	<u>March 25, 2001</u>	<u>June 24, 2001</u>	<u>Fiscal Year 2001</u>
Net revenue .....	\$37,642	\$41,494	\$53,365	\$44,726	\$177,227
Cost of revenue .....	17,076	19,420	27,668	25,537	89,701
Net income (loss) .....	\$12,655	\$13,861	\$ (5,182)	\$ 6,509	\$ 27,843
Earnings (loss) per share:					
Basic .....	\$ 0.18	\$ 0.19	\$ (0.07)	\$ 0.09	\$ 0.39
Diluted .....	\$ 0.17	\$ 0.18	\$ (0.07)	\$ 0.09	\$ 0.37

*Reclassifications*

Certain 2001 and 2000 amounts in the accompanying consolidated financial statements have been reclassified to conform to the 2002 presentation. These reclassifications had no effect on previously reported net income or shareholders' equity.

*Fiscal Year*

The Company's fiscal year is a 52 or 53-week period ending on the last Sunday in the month of June. Fiscal 2002 was a 53-week year that ended on June 30, 2002.

*Estimates*

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities, at June 30, 2002 and June 24, 2001, and the reported amounts of revenues and expenses during the years ended June 30, 2002, June 24, 2001 and June 25, 2000. Actual amounts could differ from those estimates.

*Revenue Recognition*

Revenue on product sales is recognized when persuasive evidence of an arrangement exists, such as when a purchase order or contract is received from the customer, the price is fixed, title of the goods has transferred and there is a reasonable assurance of collection of the sales proceeds. We obtain written purchase authorizations from our customers for a specified amount of product at a specified price and consider delivery to have occurred at the time of shipment. If inventory is maintained at a consigned location,

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

revenue is recognized when our customer pulls product for their use. We provide our customers with a limited right of return. Revenue is recognized at shipment, and we record a reserve for sales returns. Revenue from government contracts is recorded on the percentage-of-completion method as expenses per contract are incurred.

Contract revenue represents reimbursement by various U.S. Government entities to aid in the development of the Company's technology. The applicable contracts generally provide that the Company may elect to retain ownership of inventions made in performing the work, subject to a non-transferable, non-exclusive license retained by the government to practice the inventions for government purposes. Contract revenue includes funding of direct research and development costs and a portion of the Company's general and administrative expenses and other operating expenses for contracts under which funding is expected to exceed direct costs over the life of the contract. The specific reimbursement provisions of the contracts, including the portion of the Company's general and administrative expenses and other operating expenses that are reimbursed, vary by contract. Such reimbursements are recorded as contract revenue. For contracts under which the Company anticipates that direct costs will exceed amounts to be funded over the life of the contract (i.e., certain cost share arrangements), the Company reports direct costs as research and development expenses with related reimbursements recorded as an offset to those expenses.

*Cash and Cash Equivalents*

Cash and cash equivalents consist of unrestricted cash accounts and highly liquid investments with an original maturity of three months or less when purchased.

*Fair Value of Financial Instruments*

The carrying amounts of cash and cash equivalents, short-term and long-term investments, available for sale securities, accounts and interest receivable, accounts payable, debt, and other liabilities approximate fair values at June 30, 2002 and June 24, 2001.

*Investments*

Investments are accounted for in accordance with Statement of Financial Accounting Standards 115 "Accounting for Certain Investments in Debt and Equity Securities" ("SFAS 115"). This statement requires certain securities to be classified into three categories:

- (a) Securities Held-to-Maturity-Debt securities that the entity has the positive intent and ability to hold to maturity are reported at amortized cost.
- (b) Trading Securities-Debt and equity securities that are bought and held principally for the purpose of selling in the near term are reported at fair value, with unrealized gains and losses included in earnings.
- (c) Securities Available-for-Sale-Debt and equity securities not classified as either securities held-to-maturity or trading securities are reported at fair value with unrealized gains or losses excluded from earnings and reported as a separate component of shareholders' equity.

At June 30, 2002, the Company held marketable equity securities available-for-sale of two public companies. At June 30, 2002, the Company owned 356,000 common shares in the first public company at an average cost of \$40.10 per share, or a total cost of \$14.3 million. These shares were purchased through two



**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

transactions between May 1999 and April 2000. In June 2000, 162,600 shares were sold for \$6.3 million, with a gain on the sale recognized for \$3.6 million. The fair market value of the remaining shares held as of June 30, 2002 was \$1.9 million.

At June 30, 2002, the Company owned 691,000 common shares in the second public company at an average cost of \$19.91 per share, or a total cost of \$13.8 million. These shares were purchased between June 2001 and October 2001. The fair market value of these shares as of June 30, 2002 was \$4.1 million.

Management views these transactions as strategic investments and the shares are accounted for as “available-for-sale” securities under SFAS 115. The Company carries these investments at fair value, based on quoted market prices, and unrealized gains and losses, net of taxes, are included in accumulated other comprehensive income (loss), which is reflected as a separate component of shareholders’ equity. Realized gains and losses are recognized upon sale or when declines in value are deemed to be “other than temporary” on our consolidated statements of operations. The Company reviews equity holdings on a regular basis to evaluate whether or not each security has experienced an “other-than-temporary” decline in fair value. This policy requires, among other things, a review of each of the companies’ cash position, earnings/revenue outlook, stock price performance, liquidity, ability to raise capital and management/ownership. Based on this review, if the Company determines that an “other-than-temporary” decline exists in the value of one of our marketable equity securities, it is the Company’s policy to write-down these equity investments to the respective market value. The related write-down will then be recorded as an investment loss on the Company’s consolidated statements of operations. As of June 30, 2002, the Company believed that an “other-than-temporary” decline in market value had occurred in both of these marketable equity investments. Accordingly, the Company has written down these equity investments to their market values as of June 30, 2002 and recorded the unrealized losses previously recorded as comprehensive items as a non-operating loss on our consolidated statements of operations. The total amount of the charge to non-operating expenses in the consolidated statements of operations for the year ended June 30, 2002 relating to these investments was \$22.0 million. One of the companies the Company invested in funded a research and development project for custom LEDs and lasers. The amount of funding received by the Company was \$4.4 million; \$4.7 million and \$3.1 million for the fiscal years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively. The amount of the research and development funding received from the company was recorded as an offset to research and development expense. The Company does not anticipate additional funding from this company.

As of June 30, 2002, the Company’s short-term investments held to maturity included \$32.4 million in high-grade corporate bonds and other debt securities that mature within one year. As of June 24, 2001, the Company’s short-term investments held to maturity totaled \$36.9 million consisting of high-grade corporate bonds. The Company purchased these investments with a portion of the proceeds from its public stock offering in January 2000. The Company has the intent and ability to hold these securities until maturity; therefore, they are accounted for as “securities held-to-maturity” under SFAS 115. The securities are reported on the consolidated balance sheets at amortized cost, as a short-term investment with unpaid interest included in interest receivable.

As of June 30, 2002, the Company’s long-term investments held to maturity consisted of \$64.2 million in high-grade corporate bond holdings and other debt securities that mature after June 29, 2003. As of June 24, 2001, the Company’s long-term investments held to maturity consisted of \$7.9 million in high-grade corporate bond holdings. The Company purchased the corporate bonds with a portion of the proceeds from the public stock offering in January 2000. The Company has the intent and ability to hold these securities until maturity; therefore, they are accounted for as “securities held-to-maturity” under SFAS 115. The securities are reported on the consolidated balance sheets at amortized cost, as a long-term held to maturity

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

investment with unpaid interest included in interest receivable if interest is due in less than 12 months, and as a long-term other asset if interest is due in more than 12 months. These investments mature over periods ranging from 13 months to 2 years.

As of June 30, 2002, the Company maintained \$16.0 million of net investments in privately held companies, which are included in other assets on the consolidated balance sheet. Since the Company does not have the ability to exercise significant influence over the operations of these companies, these investment balances are carried at cost and accounted for using the cost method of accounting. Because the shares of stock the Company received in these investments are not publicly traded, there is no established market for these securities. The Company has a policy to review the fair value of these investments on a regular basis to evaluate the carrying value of such investments. This policy includes, but is not limited to, reviewing each of the companies' cash position, financing needs, earnings/revenue outlook, operational performance, management/ownership changes and competition. The evaluation process is based on information requested from the privately held companies by the Company. This information is not subject to the same disclosure regulations as U.S. public companies, and as such, the basis for these evaluations is subject to the timing and the accuracy of the data received from these companies. If the Company determines that the carrying value of an investment is at an amount in excess of fair value, it is the Company's policy to record a write-down of the investment. This write-down is estimated based on the information described above, and it is recorded as an investment loss on the Company's consolidated statements of operations. During fiscal 2002 and fiscal 2001, the Company recognized write-downs of these investments of \$20.4 million and \$4.6 million, respectively, representing the Company's best estimate of "other-than-temporary" declines in value. Two of the companies we invested in funded research and development projects. One of the projects was for brighter LEDs; the other project was for SiC RF transistors. The total amount of funding received by the Company was \$3.5 million, \$5.2 million and \$0 for the fiscal years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively. The amount of the research and development funding received from the companies was recorded as an offset to research and development expense. We anticipate \$500,000 of additional funding in fiscal 2003 under the remaining program.

During the first half of fiscal 2002, the Company purchased 150,000 common shares in a public company at an average cost of \$10.31 per share, or a total cost of \$1.5 million. These shares were purchased between September 2001 and October 2001. The Company sold all of these common shares in November 2001 and December 2001 at an average price of \$14.03 per share, or total proceeds of \$2.1 million. The sale of these marketable trading securities resulted in the Company recording a realized gain on the sale of stock of \$558,000. These securities were classified as trading securities due to the short time they were owned by the Company. During fiscal 2001, the Company purchased and sold marketable available-for-sale securities that resulted in the Company recording a realized gain on the sale of stock of \$6.0 million, using the specific identification method of cost determination for such investments.

*Inventories*

Inventories are stated at the lower of cost or market, with cost determined under the first-in, first-out (FIFO) method. It is the Company's policy to record a reserve against inventory once it has been determined that conditions exist which may not allow the Company to sell the inventory for its intended purpose, the inventory's value is determined to be less than cost, or it is obsolete. The charge for the inventory reserves is recorded in cost of revenue on the statement of operations. In the event the Company later sells inventory that had been covered by a specific inventory reserve, the sale is recorded at the actual selling price and the related cost of goods sold at the full inventory cost. The Company evaluates inventory levels quarterly

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

against sales forecasts on a part-by-part basis and evaluates its overall inventory risk. Reserves are adjusted to reflect inventory values in excess of forecasted sales as well as overall inventory risk assessed by management.

As of June 30, 2002, the Company maintained a \$2.3 million reserve for inventory. Of the total reserve amount, \$1.8 million is attributable to the Cree Microwave segment and \$477,000 is attributable to the Cree segment.

The majority of the reserve at Cree Microwave was recorded during the third quarter of fiscal 2002, due to information that was obtained during contract negotiations with Spectrian, its significant customer, regarding specific order needs over the next several quarters. Spectrian has purchased more than 90% of the products sold by Cree Microwave since it was acquired from Spectrian in December 2000. During these contract negotiations, Spectrian indicated that it would only purchase the latest generation LDMOS devices from Cree Microwave after the fourth quarter of fiscal 2002. As a result, the Company fully reserved for inventories of non-LDMOS and other older devices deemed unsaleable in the third quarter of fiscal 2002. The Company disposed of a portion of this inventory during the fourth quarter of fiscal 2002, and the remainder will be disposed of within the next twelve months.

In the fourth quarter of fiscal 2002, the Company had inventory write-downs of \$690,000 related to a packaging issue identified by some customers for the XBright™ family of products. At June 30, 2002, the Cree segment reserve consisted of \$477,000 for raw materials, LED and wafer finished goods inventory.

*Property and Equipment*

Property and equipment are recorded at cost and depreciated on a straight-line basis over the estimated useful lives of the assets, which range from three to forty years. Leasehold improvements are amortized over the lesser of the asset life or the life of the related lease. Expenditures for repairs and maintenance are charged to expense as incurred. The costs for major renewals and improvements are capitalized and depreciated over their estimated useful lives. The cost and related accumulated depreciation of the assets are removed from the accounts upon disposition and any resulting gain or loss is reflected in operations. During the years ended June 30, 2002, June 24, 2001 and June 25, 2000, the Company recorded \$19.0 million, \$100,000 and \$1.3 million, respectively, as losses on retirement or impairments of property and equipment reflected in other operating expense on the consolidated statements of operations.

During October 1999, the Company entered into two agreements with Charles and Colvard, or C&C, to sell crystal growth equipment manufactured by the Company to C&C at cost plus a reasonable overhead allocation. As a result of these transactions, the Company recognized \$227,000 in fiscal 2000 as "other operating income" for the overhead allocation portion of the sales price. In May 2000, the Company agreed to purchase all of the crystal growth equipment previously sold to C&C for a purchase price of \$5.0 million, which was less than the Company's direct cost to manufacture the equipment.

In the second quarter of fiscal 2000, the Company completed a 42,000 square foot facility expansion at its production site near Research Triangle Park, North Carolina. In the third quarter of fiscal 2000, the Company purchased a 120,000 square foot facility on 17.5 acres of land adjacent to the existing production site. The Company uses this facility for general and administrative purposes as well as for general employee services functions. The cost to acquire this facility was \$8.1 million. In addition, in fiscal 2002, the Company completed construction of a 147,000 square foot expansion of its main facility.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

During fiscal 2000, the Company changed its depreciation policy to reflect lower useful lives on new manufacturing equipment. The useful lives have been reduced from nine years to five years for all manufacturing equipment purchased since the beginning of fiscal year 2000. In management's estimate, this new policy was necessary due to the changes in estimated useful lives of new equipment caused by technology changes anticipated with the future development of larger diameter wafers. Management estimates that the change in policy reduced the Company's fiscal 2000 net income by \$889,000 or \$0.03 per share.

*Impairment of Property and Equipment*

In accordance with SFAS 121, the Company reviews long-lived assets for impairment based on changes in circumstances that indicate their carrying amounts may not be recoverable. During the year ended June 30, 2002, the Company recorded impairment charges for property and equipment totaling \$19.0 million related to assets to be disposed of, which is included as an other operating expense on the consolidated statements of operations. These impairment charges were due to technology decisions or changes resulting in the obsolescence of the assets. All of these assets were sold or disposed of by June 30, 2002.

*Patent and License Rights*

Patent rights reflect costs incurred to enhance and maintain the Company's intellectual property position. License rights reflect costs incurred to use the intellectual property of others. Both are amortized on a straight-line basis over the lesser of 20 years from the date of patent application or over the license period. The related amortization expense was \$293,000, \$194,000 and \$145,000 for the years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively. Total accumulated amortization for patents and license rights was approximately \$1.3 million and \$990,000 at June 30, 2002 and June 24, 2001, respectively.

*Goodwill and Intangible Assets*

During the third quarter of fiscal 2002, the Company determined that business conditions for its Cree Microwave segment had changed due to several factors. First, Cree Microwave amended its supply agreement with Spectrian effective March 31, 2002, which resulted in a significant reduction in quarterly revenue expectations. In addition, Cree Microwave's outlook for acquiring additional customers in the near term weakened due to the deteriorating economic conditions and long product qualification cycles. Also, many of the products that Spectrian initially indicated it would purchase in the future have not yet been released to production. Under the amended supply agreement, if Cree Microwave is not able to produce LDMOS 8 devices qualified for Spectrian's applications in a timely manner, revenue from Spectrian may be significantly reduced after the June 2002 quarter. If our revenue declines significantly, it would have an adverse effect on our results of operations from this segment of business. Based on these impairment indicators, the Company performed an asset impairment analysis in accordance with SFAS 121, "Accounting for the Impairment of Long-Lived Assets and Long-Lived Assets to be Disposed of". As a result of this analysis, the remaining balance of goodwill and intangible assets of \$76.5 million was deemed to be fully impaired, and was written off during the third quarter of fiscal 2002. This write-off was recorded as "other expense" on the consolidated statements of operations. See "Significant Sales Contracts" for further discussion of the Spectrian contract.

Prior to the impairment charge that was recorded during the third quarter of fiscal 2002, intangible assets included goodwill, current technology and workforce-in-place associated with the acquisition of Cree Microwave accounted for under the purchase method in December 2000. Goodwill was capitalized at \$81.5

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

million and represented the excess of cost over the fair value of assets acquired and was amortized using the straight-line method over ten years. Current technology and workforce-in-place represented assets have been assigned values of \$5.5 million and \$800,000, respectively. These intangibles were being amortized under the straight-line method over eight and five years, respectively. During the first three-quarters of fiscal 2002, prior to the impairment charge, the expense for intangible asset amortization was \$6.8 million. During fiscal 2001, the Company recorded \$4.5 million of intangible asset amortization.

*Research and Development*

The U.S. Government provides funding through research contracts for several of the Company's current research and development efforts. The contract funding may be based on either a cost-plus or a cost-share arrangement. The amount of funding under each contract is determined based on cost estimates that include direct costs, plus an allocation for research and development, general and administrative and the cost of capital expenses. Cost-plus funding is determined based on actual costs plus a set percentage margin. For the cost-share contracts, the actual costs are divided between the U.S. Government and the Company based on the terms of the contract. The government's cost share is then paid to the Company. Activities performed under these arrangements include research regarding SiC and GaN materials and devices. The contracts typically require the submission of a written report that documents the results of such research, as well as some material deliverables.

The revenue and expense classification for contract activities is based on the nature of the contract. For contracts where the Company anticipates that funding will exceed direct costs over the life of the contract, funding is reported as contract revenue and all direct costs are reported as costs of contract revenue. For contracts under which the Company anticipates that direct costs will exceed amounts to be funded over the life of the contract, costs are reported as research and development expenses and related funding as an offset of those expenses. The following table details information about contracts for which direct expenses exceeded funding by period as included in research and development expenses:

	Year Ended (in 000's)		
	June 30, 2002	June 24, 2001	June 25, 2000
Net research and development costs . . . . .	\$ 17	\$ 435	\$ 538
Government funding . . . . .	276	1,306	868
Total direct costs incurred . . . . .	\$293	\$1,741	\$1,406

Customers contributed \$9.0 million in fiscal 2002, \$11.9 million in fiscal 2001 and \$5.5 million in fiscal 2000 toward product research and development activities. In addition, customers are committed to spend an additional \$462,000 in fiscal 2003 for research and development activities.

*Credit Risk, Major Customers and Major Suppliers*

Financial instruments, which may subject the Company to a concentration of credit risk, consist principally of short-term and long-term investments, marketable securities, cash equivalents and accounts receivable. Short-term and long-term investments consist primarily of high-grade corporate debt, commercial paper, government securities and other investments at interest rates that vary by security. The Company's cash equivalents consist primarily of money market funds. Certain bank deposits may at times be in excess of the FDIC insurance limits.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

The Company sells its products to manufacturers and researchers worldwide and generally requires no collateral. The Company maintains reserves for potential credit losses, and such losses, in the aggregate, have generally been within management's expectations. The Company presently derives its contract revenue from contracts with the U.S. Government. Approximately 18% and 10% of the Company's accounts receivable balance at June 30, 2002 and June 24, 2001, respectively, was due from the U.S. Government. The Company had amounts due from Osram Opto Semiconductors GmbH, or Osram totaling 13% and 18%, of accounts receivable balances at June 30, 2002 and June 24, 2001, respectively. The Company had amounts due from Spectrian totaling 8% and 9% of accounts receivable balances at June 30, 2002 and June 24, 2001, respectively. The Company had amounts due from Sumitomo Corporation totaling 9% and 14% of accounts receivable balances at June 30, 2002 and June 24, 2001, respectively.

The Company has derived its product and contract revenue from sales in the United States, Malaysia, Other Asian countries, and Europe based on ship-to locations for our products as follows:

	Year ended		
	June 30, 2002	June 24, 2001	June 25, 2000
United States . . . . .	35%	31%	31%
Malaysia . . . . .	23%	17%	16%
Other Asian Countries . . . . .	34%	45%	48%
Europe . . . . .	8%	7%	5%

One customer accounted for 19%, 25%, and 26% of revenue for fiscal 2002, 2001, and 2000, respectively. A second customer accounted for 14%, 22%, and 25% of revenue for fiscal 2002, 2001, and 2000, respectively. A third customer accounted for 2%, 3%, and 15% of revenue for fiscal 2002, 2001, and 2000, respectively. A fourth customer accounted for 16%, 11%, and 0% of revenue fiscal 2002, 2001, and 2000, respectively. The U.S. Government accounted for 12%, 9%, and 11% of revenues during fiscal 2002, 2001, and 2000, respectively.

The Company depends on single or limited source suppliers for a number of raw materials and components used in its products. Any interruption in the supply of these key materials or components could have a significant adverse effect on the Company's operations.

Over 90% of Cree Microwave revenues were derived from shipments to Spectrian in fiscal 2002 as well as fiscal 2001. The Company's supply contract with Spectrian commits them to a minimum purchase level of \$16.3 million in fiscal 2003. If the Company is unable to deliver qualified LDMOS 8 products; the amount of the contractual supply agreement with Spectrian may be reduced significantly.

*(Loss) Earnings Per Share*

Basic (loss) earnings per common share is computed using the weighted average number of common stock shares outstanding. Diluted (loss) earnings per common share is computed using the weighted average number of common stock shares outstanding adjusted for the incremental shares attributed to outstanding options and warrants to purchase common stock, unless such incremental shares would be antidilutive.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

*Accounting for Stock Based Compensation*

In accordance with Accounting Principles Board Opinion No. 25, “Accounting for Stock Issued to Employees” (“APB 25”), no compensation expense is recorded for stock options or other stock-based awards that are granted to employees with an exercise price equal to or above the common stock price on the grant date.

In October 1995, the Financial Accounting Standards Board (“FASB”) issued Statement 123 “Accounting for Stock Based Compensation” (“SFAS 123”). SFAS 123 establishes fair value as the measurement basis for equity instruments issued in exchange for goods or services and stock-based compensation plans. Fair value may be measured using quoted market prices, option-pricing models or other reasonable estimation methods. SFAS 123 permits the Company to choose between adoption of the fair value based method or disclosing pro forma net (loss) income information. The Statement is effective for transactions entered into after December 31, 1995. The Company continues to account for stock-based compensation in accordance with APB 25, as amended, and provides the pro forma disclosures required by SFAS 123.

*Income Taxes*

Income taxes have been accounted for using the liability method in accordance with FASB Statements of Financial Accounting Standards 109 “Accounting for Income Taxes”. Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts.

*Contingencies*

The Company is involved in various legal proceedings related to the protection of its intellectual property. Although the final resolution of these matters cannot be determined, management’s opinion is that the final outcome of these matters will not have a material adverse effect on the Company’s consolidated financial position or results of operations.

**3. Accounts Receivable, Net**

The following is a summary of the components of accounts receivable, net:

	<u>Year Ended (in 000’s)</u>	
	<u>June 30, 2002</u>	<u>June 24, 2001</u>
Billed trade receivables . . . . .	\$32,708	\$31,982
Unbilled contract receivables . . . . .	2,339	3,218
	35,047	35,200
Allowance for sales returns . . . . .	(455)	(350)
Total accounts receivable, net . . . . .	<u>\$34,592</u>	<u>\$34,850</u>

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

The following table summarizes the changes in the Company's allowance for sales returns for the years ended June 30, 2002, June 24, 2001 and June 25, 2000:

	Year Ended (in 000's)		
	June 30, 2002	June 24, 2001	June 25, 2000
Balance at beginning of year . . . . .	\$350	\$250	\$175
Charges to cost and expenses . . . . .	105	100	75
Balance at end of year . . . . .	<u>\$455</u>	<u>\$350</u>	<u>\$250</u>

**4. Inventory, Net**

The following is a summary of inventory:

	Year Ended (in 000's)	
	June 30, 2002	June 24, 2001
Raw materials . . . . .	\$ 3,908	\$ 4,538
Work-in-progress . . . . .	6,629	6,206
Finished goods . . . . .	9,724	5,251
	20,261	15,995
Inventory reserve . . . . .	(2,295)	(793)
Total inventory, net . . . . .	<u>\$17,966</u>	<u>\$15,202</u>

The following table summarizes the changes in the Company's inventory reserve for the years ended June 30, 2002, June 24, 2001 and June 25, 2000:

	Year Ended (in 000's)		
	June 30, 2002	June 24, 2001	June 25, 2000
Balance at beginning of year . . . . .	\$ 793	\$ —	\$—
Charges to cost and expenses . . . . .	6,234	1,293	—
Disposals (write-offs to reserve) . . . . .	(4,732)	(500)	—
Balance at end of year . . . . .	<u>\$ 2,295</u>	<u>\$ 793</u>	<u>\$—</u>



**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

**5. Property and Equipment, Net**

The following is a summary of property and equipment:

	<u>Year Ended (in 000's)</u>	
	<u>June 30, 2002</u>	<u>June 24, 2001</u>
Office furnishings and safety systems . . . . .	\$ 5,170	\$ 3,755
Land and buildings . . . . .	93,148	61,804
Machinery and equipment . . . . .	149,723	131,110
Computer hardware and software . . . . .	5,810	3,865
Leasehold improvements . . . . .	5,735	4,106
	<u>259,586</u>	<u>204,640</u>
Accumulated depreciation . . . . .	(69,830)	(44,234)
	<u>189,756</u>	<u>160,406</u>
Construction in progress . . . . .	21,929	66,514
Property & Equipment, net . . . . .	<u>\$211,685</u>	<u>\$226,920</u>

Depreciation and amortization of property and equipment totaled \$32.4 million; \$21.9 million and \$10.8 million for the years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively.

**6. Accrued Expenses**

The following table reflects the components of other accrued expenses:

	<u>Year Ended (in 000's)</u>	
	<u>June 30, 2002</u>	<u>June 24, 2001</u>
Accrued legal fees . . . . .	\$1,806	\$1,356
Accrued taxes . . . . .	945	1,357
Deferred revenue . . . . .	741	91
Other accrued liabilities . . . . .	1,477	2,352
Total accrued expenses . . . . .	<u>\$4,969</u>	<u>\$5,156</u>

**7. Shareholders' Equity**

On January 18, 2001, Cree announced that its Board of Directors had authorized the repurchase of up to four million shares of its outstanding common stock through January 2002. Additionally, on March 22, 2001, Cree announced that its Board of Directors had increased the repurchase limits under the stock repurchase program announced in January 2001 to include an additional three million shares. In February 2002, the Board of Directors approved the renewal of this program through January 2003. During fiscal year ended June 30, 2002, the Company repurchased 1.5 million shares at an average price of \$13.63 per share with an aggregate value of approximately \$20.3 million. Since the inception of the stock repurchase program, Cree has repurchased 3.3 million shares of its common stock at an average price of \$15.26 per share, with an aggregate value of \$51.0 million.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

The Company intends to use available cash to finance purchases under the program. At the discretion of the Company's management, the repurchase program can be implemented through open market or privately negotiated transactions. The Company will determine the time and extent of repurchases based on its evaluation of market conditions and other factors.

On January 20, 2000, the Company completed a public offering of 6,578,000 shares of its common stock. The price received in the offering was \$42.56 per share. The Company received net aggregate proceeds of approximately \$266.1 million after deducting underwriting discounts and commissions and estimated offering costs. The net proceeds are being used primarily for manufacturing facility expansion and purchase of additional equipment, the acquisition of an additional facility, research and development, and general corporate purposes.

At June 27, 1999, the Articles of Incorporation of the Company authorized the Company to issue up to 30,000,000 shares of common stock, with a par value of \$0.005 per share, and 3,000,000 shares of preferred stock, with a par value of \$0.01 per share. The preferred stock may be issued in one or more classes or series with the number of shares, designation, relative rights, preferences, and limitations of each class or series to be determined by resolution of the Board of Directors. The Articles of Incorporation were amended, effective at the close of business on July 26, 1999, to effect a two-for-one split of the common stock. Effective November 14, 2000 the Articles of Incorporation were amended to increase the authorized number of common shares to 100,000,000, with a par value of \$0.0025. In addition, the Company split its stock again on December 1, 2000. As a result, as of December 1, 2000, the Articles of Incorporation authorize the Company to issue up to 200,000,000 shares of common stock, with a par value of \$0.00125 per share. The amendments did not change the number of authorized shares or other provisions relating to the preferred stock. On July 30, 1999 and December 1, 2000, the Company issued to each holder of record of common stock a certificate evidencing the additional shares of common stock resulting from the stock split. All references in this document to common stock and per common share data have been adjusted to reflect the two common stock splits.

On May 29, 2002, the Company's board of directors adopted a shareholder rights plan, pursuant to which stock purchase rights were distributed to shareholders at a rate of one right with respect to each share of common stock held of record as of June 10, 2002. The rights plan is designed to enhance the board's ability to prevent an acquirer from depriving shareholders of the long-term value of their investment and to protect shareholders against attempts to acquire the Company by means of unfair or abusive takeover tactics. The rights become exercisable based upon certain limited conditions related to acquisitions of stock, tender offers and certain business combinations involving the Company. The Company amended the Articles of Incorporation to designate 200,000 shares of preferred stock as "Series A Preferred Stock" in connection with the implementation of a shareholders' rights plan. At June 30, 2002, rights to purchase 100,000 shares of Preferred Stock had been distributed to shareholders.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

At June 30, 2002, the Company had reserved a total of 18,202,000 shares of its common stock and 100,000 shares of its Series A preferred stock for future issuance as follows:

	<u>Number of shares</u>
For exercise of outstanding common stock options .....	14,684,000
For future common stock option awards .....	3,355,000
For possible future issuance to employees under the Employee Stock Purchase Plan .....	163,000
Total common shares reserved .....	18,202,000
Series A Preferred Stock reserved for exercise of rights issued under shareholders' rights plan .....	100,000

**8. Employee Stock Purchase Plan**

The Company adopted an Employee Stock Purchase Plan (the "ESPP") on November 2, 1999. The ESPP provides employees of the Company, and its majority-owned subsidiaries, with an opportunity to purchase common stock through payroll deductions. The purchase price is set at 85% of the fair market value of common stock at the beginning of the participation period, or 85% of the price on the purchase date, whichever is lower. Contributions are limited to 15% of an employee's compensation. The participation periods have a 12 month duration, with new participation periods beginning in November and May of each year. Each participation period has two purchase dates, one in October and the other in April. The Board of Directors has reserved 600,000 shares of common stock for issuance under the ESPP. As of June 30, 2002, 437,305 shares of common stock had been purchased under the ESPP.

**9. Stock Options and Stock Warrants**

The Company has stock option plans to provide incentives to eligible employees, officers, and directors in the form of incentive stock options and non-qualified stock options. The Board of Directors determines the option price (not to be less than fair market value) at the date of grant. Options, particularly those assumed or exchanged as a result of acquisitions, have various vesting schedules and expiration dates. The majority of options vest and become exercisable over three to five years and have seven to ten year terms.

Stock option activity during the periods ending as indicated is as follows (in 000's, except per share data):

	June 30, 2002		June 24, 2001		June 25, 2000	
	Number Of Options	Weighted Average Price	Number Of Options	Weighted Average Price	Number Of Options	Weighted Average Price
Outstanding—beginning of year .....	13,522	\$26.93	8,180	\$13.55	7,226	\$ 4.07
Granted .....	3,375	\$20.48	6,566	\$41.41	3,506	\$25.73
Exercised .....	(1,054)	\$ 4.01	(797)	\$ 5.19	(2,150)	\$ 2.57
Forfeited .....	(1,159)	\$42.50	(427)	\$33.80	(402)	\$ 8.07
Outstanding—end of year .....	14,684	\$25.86	13,522	\$26.93	8,180	\$13.55
Exercisable—end of year .....	5,947	\$20.39	3,878	\$11.83	2,706	\$ 2.99

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

As permitted by SFAS 123, the Company has elected to follow APB 25 and related interpretations and amendments in accounting for its employee stock option plans. In connection with the options obtained through the acquisition of Nitres, the Company had deferred compensation of \$696,000, \$1.2 million, and \$1.8 million at June 30, 2002, June 24, 2001, and June 25, 2000, respectively. This amount represents the difference between the grant price and the deemed fair value of stock and stock options granted previously. Of this deferred compensation, \$515,000, \$501,000, and \$980,000 was amortized for the years ended June 30, 2002, June 24, 2001, and June 25, 2000, respectively.

Pro forma information regarding net income and earnings per share is required by SFAS 123 and has been determined as if the Company had accounted for its employee stock options under the fair value method of that Statement. The Company computes fair value for this purpose using the Black-Scholes pricing model. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. The Company's options have characteristics significantly different from traded options, and the input assumptions used in the model can materially affect the fair value estimate. The assumptions used in this model to estimate fair value and resulting values are as follows:

	<u>Stock Option Plans</u>			<u>ESPP</u>		
	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>
Expected dividend yield . . . . .	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Risk-free interest rate . . . . .	4.6%	5.4%	6.2%	2.2%	5.0%	5.6%
Expected volatility . . . . .	90.0%	90.0%	88.0%	90.0%	90.0%	88.0%
Expected life (in years) . . . . .	4.8	5.7	5.2	0.8	0.8	0.8
Weighted-average fair value per share . . . . .	\$14.52	\$31.51	\$24.99	\$6.50	\$16.73	\$12.67

For purposes of pro forma disclosures, the estimated fair value of the options is amortized to expense over the options' vesting period. The Company's pro forma information is as follows:

	<u>Year Ended (in 000's, except per share data)</u>		
	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>
Net (loss) income, as reported . . . . .	\$(101,723)	\$ 27,843	\$30,520
Basic (loss) earnings per share as reported . . . . .	\$ (1.40)	\$ 0.39	\$ 0.46
Diluted (loss) earnings per share as reported . . . . .	\$ (1.40)	\$ 0.37	\$ 0.43
Pro forma net (loss) income . . . . .	\$(162,305)	\$(21,737)	\$21,507
Pro forma basic net (loss) income per share . . . . .	\$ (2.23)	\$ (0.30)	\$ 0.33
Pro forma diluted net (loss) income per share . . . . .	\$ (2.23)	\$ (0.29)	\$ 0.31

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

Selected information regarding stock options as of June 30, 2002 follows (in 000's, except per share data):

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number of Options	Weighted-Average Remaining Life in Years	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
\$ 0.01-\$ 4.84 .....	2,856	5.4	\$ 3.35	2,445	\$ 3.40
\$ 6.16-\$12.49 .....	881	6.7	\$10.38	328	\$ 8.48
\$13.89-\$19.10 .....	2,127	7.0	\$16.85	712	\$18.30
\$20.24-\$33.50 .....	4,475	6.7	\$24.91	821	\$26.58
\$34.63-\$71.53 .....	4,345	8.1	\$49.17	1,641	\$45.91
	<u>14,684</u>	6.9	\$25.89	<u>5,947</u>	\$20.39

In connection with the Company's September 1995 private placement, the Company issued warrants to purchase 1.2 million shares of the Company's common stock. These warrants had a 5-year term and an exercise price of \$6.81 per share, which represents fair value on the date of grant. Warrants to purchase 462,000, and 54,000, shares of common stock were exercised during the fiscal years ended June 24, 2001, and June 25, 2000, respectively. As of June 24, 2001, all warrants issued under this private placement had been exercised. In conjunction with the Company's acquisition of Nitres in May 2000, the Company assumed outstanding warrants that had been previously issued by Nitres in February 2000. These warrants had a 7-year term and an exercise price of \$1.28 per share. During the year ended June 24, 2001, the remaining warrants to purchase 31,360 shares of the Company's common stock were exercised.

**10. Lease Commitments**

The Company currently leases six facilities. These facilities are comprised of both office and manufacturing space. The lease term for the first facility began in September 1995 and a renewal option was exercised in September 1999. The lease on this facility expires in September 2002. The lease for the second facility runs month to month with a 90-day termination clause, which has been exercised, and will terminate in August 2002. The third facility lease expires in approximately three years. The fourth facility has a remaining sub-lease term for approximately nine and one-half years. The lease for the fifth facility expires in June 2005. The lease for the sixth facility expires in February 2003. All of the remaining lease agreements provide for rental adjustments for increases in base rent (up to specific limits) property taxes and general property maintenance.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

Rent expense associated with these and other expired leases totaled \$1.7 million, \$1.2 million and \$420,000 for the years ended June 30, 2002, June 24, 2001, and June 25, 2000, respectively. Sublease income was \$224,000, \$166,000 and \$0 for the years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively. Future minimum rentals as of June 30, 2002 under these leases are as follows:

<u>Fiscal Years Ended</u>	<u>Minimum Rental Amount (in 000's)</u>
June 29, 2003 .....	\$ 1,732
June 27, 2004 .....	1,697
June 26, 2005 .....	1,697
June 25, 2006 .....	1,029
June 24, 2007 .....	907
Thereafter .....	<u>4,006</u>
Total .....	<u>\$11,068</u>

Income generated from subleases is targeted to be \$185,000 and \$191,000 for the fiscal years ended June 29, 2003 and June 27, 2004, respectively.

**11. Long-term Debt**

In December 1998, Cree Lighting (previously Nitres) received a \$431,000 bridge loan from a group of investors to finance its working capital needs. The bridge loan was made to Cree Lighting subject to conversion rights that would result in conversion to shares of Nitres common stock in the event of a financing or one year passing. In February 2000, the \$431,000 bridge loan was converted to shares of Nitres common stock, which were converted into 168,750 shares of the Company's common stock at the time of the Company's acquisition of Nitres in May 2000.

In November 1997, the Company entered into a term loan with a commercial bank for up to \$10.0 million to finance the purchase and upfit of the new main facility in Durham, North Carolina. Approximately \$3.0 million was disbursed under the loan to finance the initial purchase of the facility with the remaining proceeds disbursed on a monthly basis based on actual expenditures incurred. The loan, which was collateralized by the purchased property and subsequent upfits, accrued interest at a fixed rate of 8% and carried customary covenants, including the maintenance of a minimum tangible net worth and other requirements. On February 17, 1999, the entire \$10.0 million indebtedness was repaid with proceeds received from the public stock offering. Interest expense was \$0, \$0 and \$13,000 for the years ended June 30, 2002, June 24, 2001 and June 25, 2000, respectively.

**12. Income Taxes**

The Company accounts for its income taxes under the provisions of SFAS 109. Under the asset and liability method of SFAS 109, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. Under SFAS 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

The actual income tax expense for the years ended June 30, 2002, June 24, 2001, and June 25, 2000, differed from the amounts computed by applying the U.S. federal tax rate of 35% to pretax earnings as a result of the following:

	<u>Year Ended (in 000's)</u>		
	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>
Federal income tax provision at statutory rate . . . . .	\$(45,644)	\$ 17,565	\$ 16,382
State tax provision . . . . .	(3,009)	1,439	1,517
Increase (decrease) in income tax expense resulting from:			
Foreign sales corporation . . . . .	—	(2,108)	(1,682)
Investments . . . . .	20,562	—	—
Research and development . . . . .	(600)	(538)	(258)
Amortization . . . . .	—	(203)	—
In process research and development . . . . .	—	6,090	—
Non-deductible transaction costs . . . . .	—	—	327
Other . . . . .	—	98	—
Income tax (benefit) expense . . . . .	<u>\$(28,691)</u>	<u>\$22,343</u>	<u>\$16,286</u>

The following are the components of the provision for income taxes for the years ended June 30, 2002, June 24, 2001 and June 25, 2000:

	<u>Year Ended (in 000's)</u>		
	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>
Current:			
Federal . . . . .	\$ (2,200)	\$ 7,111	\$ 856
State . . . . .	—	832	200
	(2,200)	7,943	1,056
Deferred:			
Federal . . . . .	(23,482)	13,988	15,111
State . . . . .	(3,009)	412	119
	(26,491)	14,400	15,230
Net Provision . . . . .	<u>\$(28,691)</u>	<u>\$22,343</u>	<u>\$16,286</u>

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are as follows:

	<u>Year Ended (in 000's)</u>		
	<u>June 30, 2002</u>	<u>June 24, 2001</u>	<u>June 25, 2000</u>
Current deferred tax asset (liability):			
Compensation .....	\$ 522	\$ 491	\$ 268
Inventory .....	374	544	202
Bad debt .....	230	129	93
Marketable equity securities and other .....	(4)	3,008	(1,018)
Net current deferred tax asset (liability) .....	<u>1,122</u>	<u>4,172</u>	<u>(455)</u>
Non current deferred tax asset (liability):			
Alternative minimum tax .....	—	2,295	1,690
Net operating loss carryforwards .....	9,059	421	11,641
Research tax credits .....	2,869	2,369	785
Fixed assets .....	(12,763)	(7,925)	(6,060)
Goodwill .....	31,501	—	—
State tax credits and other .....	(3,301)	(1,010)	2,568
Net non current deferred tax asset (liability) .....	<u>27,365</u>	<u>(3,850)</u>	<u>10,624</u>
Net deferred tax asset .....	<u>\$ 28,487</u>	<u>\$ 322</u>	<u>\$10,169</u>

As of June 30, 2002, the Company has Federal net operating loss carryforwards of approximately \$20.0 million and state net economic loss carryovers of approximately \$26.0 million. The Federal net operating loss will begin to expire in 2021. The state net economic loss carryforward will expire beginning in 2011. Research and development tax credits begin to expire in 2011. State incentive tax credits begin to expire in 2004.

**13. Retirement Plan**

The Company maintains an employee benefit plan (the "Plan") pursuant to Section 401(k) of the Internal Revenue Code. Under the Plan, there is no fixed dollar amount of retirement benefits, and actual benefits received by employees will depend on the amount of each employee's account balance at the time of retirement. All employees are eligible to participate under the Plan on the first day of a new fiscal month after date of hire. The Pension Benefit Guaranty Corporation does not insure the Plan. The Company may, at its discretion, make contributions to the Plan. However, the Company did not make any contributions to the Plan during the years ended June 30, 2002, June 24, 2001 and June 25, 2000.



**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

**14. (Loss) Earnings Per Share**

The following computation reconciles the differences between the basic and diluted earnings per share presentations:

	Year Ended (in 000's, except per share data)		
	June 30, 2002	June 24, 2001	June 25, 2000
Basic:			
Net (loss) income .....	\$(101,723)	\$27,843	\$30,520
Weighted average common shares .....	72,718	72,243	65,930
Basic (loss) earnings per share .....	\$ (1.40)	\$ 0.39	\$ 0.46
Diluted:			
Net (loss) income .....	\$(101,723)	\$27,843	\$30,520
Weighted average common shares-basic .....	72,718	72,243	65,930
Dilutive effect of stock options & warrants .....	—	3,492	4,504
Weighted average common shares-diluted .....	72,718	75,735	70,434
Diluted (loss) earnings per share .....	\$ (1.40)	\$ 0.37	\$ 0.43

Potential common shares that would have the effect of increasing diluted earnings per share are considered to be antidilutive. In accordance with Statement of Financial Accounting Standards 128, "Earnings Per Share", and these shares were not included in calculating diluted earnings per share. For the year ended June 30, 2002, there were 10.4 million shares considered to be antidilutive. As of June 24, 2001 there were 6.4 million shares that were not included in calculating diluted earnings per share because their effect was antidilutive. As of June 25, 2000, there were no potential shares considered to be antidilutive.

**15. New Accounting Pronouncements**

In July 2001, the FASB issued Statement of Financial Accounting Standards 141, "Business Combinations," ("SFAS 141) and Statement of Financial Accounting Standards 142, "Goodwill and Other Intangible Assets" ("SFAS 142"). SFAS 141 requires that all business combinations be accounted for under the purchase method only and that certain acquired intangible assets in a business combination be recognized as assets apart from goodwill. SFAS 142 requires that ratable amortization of goodwill be replaced with periodic tests of the goodwill's impairment and that intangible assets other than goodwill be amortized over the useful life. SFAS 141 is effective for all business combinations initiated after June 30, 2001 and for all business combinations accounted for by the purchase method for which the date of acquisition is after June 30, 2001. The provisions of SFAS 142 will be effective for fiscal years beginning after December 15, 2001, and will be adopted by the Company in fiscal 2003. The Company does not expect the adoption of SFAS 141 and SFAS 142 to have a material impact on the Company's results of operations, financial position, or cash flows.

In August 2001, the FASB issued Statement of Financial Accounting Standards 143, "Accounting for Asset Retirement Obligations" ("SFAS 143"). SFAS 143 requires an entity to record a liability for an obligation associated with the retirement of an asset at the time that the liability is incurred. This is done by

**CREE, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**  
**June 30, 2002**

capitalizing the cost as part of the carrying value of the related asset and depreciating it over the remaining useful life of that asset. The standard is effective for financial statements for fiscal years beginning after June 15, 2002 and will be adopted by the Company in fiscal 2003. The Company does not expect the adoption of SFAS 143 to have a material impact on the Company's results of operations, financial position or cash flows.

In October 2001, the FASB issued Statement of Financial Accounting Standards 144, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of" ("SFAS"). SFAS 144 addresses how and when to measure impairment on long-lived assets and how to account for long-lived assets that an entity plans to dispose of either through sale, abandonment, exchange or distribution to owners. The new provisions supersede SFAS 121, which addressed asset impairment and certain provisions of APB Opinion 30 related to reporting the effects of the disposal of a business segment. This pronouncement requires expected future operating losses from discontinued operations to be recorded in the period in which the losses are incurred rather than the measurement date. Under SFAS 144, more dispositions may qualify for discontinued operations treatment in the income statement. The provisions of SFAS 144 are effective for financial statements issued for fiscal years beginning after December 15, 2001. The Company will adopt SFAS 144 in fiscal 2003. The Company does not expect the adoption of SFAS 144 to have a material impact on the Company's results of operations, financial position, or cash flows.

In April 2002, the FASB issued Statement of Financial Accounting Standards 145, "Rescission of FASB Statements No. 4, 44, and 62, Amendment of FASB Statement No. 13, and Technical Corrections" ("SFAS 145"). SFAS 145 requires gains and losses on extinguishments of debt to be classified as income or loss from continuing operations rather than as extraordinary items as previously required under Statement 4. Extraordinary treatment will be required for certain extinguishments as provided in APB 30. SFAS 145 also amends Statement 13 to require certain modifications to capital leases be treated as a sale-leaseback and modifies the accounting for sub-leases when the original lessee remains a secondary obligor (or guarantor). In addition, SFAS 145 rescinded Statement 44 addressing the accounting for intangible assets of motor carriers and made numerous technical corrections. SFAS 145 is effective for all fiscal years beginning after May 15, 2002 and will be adopted by the Company on July 1, 2003. The Company does not expect the adoption of SFAS 145 to have a material impact on the Company's results of operations, financial position, or cash flows.

In July 2002, the FASB issued Statement of Financial Accounting Standards 146, "Accounting for Costs Associated with Exit or Disposal Activities" ("SFAS 146"). SFAS 146, which nullified EITF Issue 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)", requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. Under Issue 94-3, a liability for an exit cost was recognized at the date of an entity's commitment to an exit plan. The provisions of this Statement are effective for exit or disposal activities that are initiated after December 31, 2002. The Company does not expect the adoption of SFAS 146 to have a material impact on the Company's results of operations, financial position, or cash flows.

**Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosures***

None.

### **PART III**

**Item 10. *Directors and Executive Officers of the Registrant***

**Item 11. *Executive Compensation***

**Item 12. *Security Ownership of Certain Beneficial Owners and Management***

**Item 13. *Certain Relationships and Related Transactions***

The information called for in items 10 through 13 is incorporated by reference from the Company's definitive proxy statement relating to its annual meeting of stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the end of fiscal 2002.

## PART IV

### Item 14. Exhibits, Financial Statement Schedules and Reports on Form 8-K

(a) (1) and (2) Financial statements and financial statement schedule—the financial statements and reports of independent auditors are filed as part of this report (see index to Consolidated Financial Statements at Part II Item 7 on page 39 of this Form 10-K). The financial statement schedules are not included in this item as they are either not applicable or are included as part of the consolidated financial statements.

(3) The following exhibits have been or are being filed herewith and are numbered in accordance with Item 601 of Regulation S-K:

<u>Exhibit No.</u>	<u>Description</u>
3.1	Articles of Incorporation, as amended
3.2	Bylaws, as amended (1)
4.1	Specimen Common Stock Certificate
4.2	Rights Agreement dated as of May 30, 2002 between the Company and American Stock Transfer & Trust Company, including the form of Rights Certificate and the Summary of Rights to Purchase Preferred Stock, attached thereto as Exhibits B and C, respectively (2)
10.1	Equity Compensation Plan, as amended and restated December 1, 2000 (3)*
10.2	Stock Option Plan for Non-Employee Directors (terminated as to future grants pursuant to Board action dated September 1, 1997) (4)*
10.3	Nitres, Inc. 1999 Stock Option/Issuance Plan* (terminated as to future grants following the acquisition of Nitres, Inc. by the Registrant effective May 1, 2000)
10.4	2001 Nonqualified Stock Option Plan*
10.5	Fiscal 2001 Stock Option Bonus Plan* (plan expired September 30, 2001)
10.6	Fiscal 2002 Stock Option Bonus Plan* (plan expires September 30, 2002)
10.7	Management Incentive Compensation Program—Fiscal Year 2001 Plan (3)*
10.8	Fiscal 2002 Management Incentive Plan (5)*
10.9	Employment Agreement, dated as of December 1, 2000, between the Company and M. Todd Tucker (6)*
10.10	License Agreement between the Company and North Carolina State University dated December 3, 1987 (7)
10.11	Amendment to License Agreement between the Company and North Carolina State University dated September 11, 1989 (7)
10.12	Sublease agreement, dated December 29, 2000, between Zoltar Acquisition Inc. (now Cree Microwave, Inc.) and Spectrian Corporation (8)
21.1	Subsidiaries of Registrant
23.1	Consent of Independent Auditors

(1) Incorporated by reference herein. Filed as an exhibit to the Company's Annual Report filed on Form 10-K with the Securities and Exchange Commission on August 27, 2001.

(2) Incorporated by reference herein. Filed as an exhibit to the Company's Registration Statement filed on Form 8-A with the Securities and Exchange Commission on May 30, 2002.

(3) Incorporated by reference herein. Filed as an exhibit to the Company's Quarterly Report filed on Form 10-Q with the Securities and Exchange Commission on February 2, 2001.

- (4) Incorporated by reference herein. Filed as an exhibit to the Company's Registration Statement filed on Form S-8, Registration No. 33-98958, and effective with the Securities and Exchange Commission on November 3, 1995.
- (5) Incorporated by reference herein. Filed as an exhibit to the Company's Quarterly Report filed on Form 10-Q with the Securities and Exchange Commission on February 5, 2002.
- (6) Incorporated by reference herein. Filed as an exhibit to the Company's Quarterly Report filed on Form 10-Q with the Securities and Exchange Commission on November 2, 2001.
- (7) Incorporated by reference herein. Filed as an exhibit to the Company's Registration Statement filed on Form SB-2, Registration No. 33-55998, and declared effective by the Securities and Exchange Commission on February 8, 1993.
- (8) Incorporated by reference herein. Filed as an exhibit to the Company's Current Report filed on Form 8-K with the Securities and Exchange Commission on January 12, 2001.
- \* Management Contract or Compensatory Plan

(b) Reports on Form 8-K.

On May 30, 2002 the Company filed a Form 8-K announcing a dividend distribution of one preferred stock purchase right for each outstanding share of the Company's common stock, \$.00125 par value to shareholders of record at the close of business on June 10, 2002.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: August 16, 2002

CREE, INC.

By:           /s/ CHARLES M. SWOBODA            
Charles M. Swoboda  
Chief Executive Officer

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>          /s/ F. NEAL HUNTER          </u> F. Neal Hunter	Chairman of the Board of Directors	August 16, 2002
<u>          /s/ CHARLES M. SWOBODA          </u> Charles M. Swoboda	Chief Executive Officer and Director	August 16, 2002
<u>          /s/ CYNTHIA B. MERRELL          </u> Cynthia B. Merrell	Chief Financial Officer and Chief Accounting Officer	August 16, 2002
<u>          /s/ JAMES E. DYKES          </u> James E. Dykes	Director	August 16, 2002
<u>          /s/ WILLIAM J. O'MEARA          </u> William J. O'Meara	Director	August 16, 2002
<u>          /s/ JOHN W. PALMOUR, PH.D.          </u> John W. Palmour, Ph.D.	Director	August 16, 2002
<u>          /s/ ROBERT J. POTTER, PH.D.          </u> Robert J. Potter, Ph.D.	Director	August 16, 2002
<u>          /s/ DOLPH W. VON ARX          </u> Dolph W. von Arx	Director	August 16, 2002

## Corporate Headquarters

Cree, Inc.  
4425 Silicon Drive  
Durham, NC 27703-8475  
Phone: (919) 313-5300  
Fax: (919) 313-5452  
<http://www.cree.com>

## Independent Auditors

Ernst & Young, LLP  
Raleigh, North Carolina

## Transfer Agent and Registrar

American Stock Transfer & Trust Company  
59 Maiden Lane, Plaza Level  
New York, NY 10038  
(800) 937-5449  
<http://www.amstock.com>

## Investor Relations

Frances A. Barsky  
(919) 313-5397  
e-mail: [fran\\_barsky@cree.com](mailto:fran_barsky@cree.com)  
Additional investor materials may be obtained  
without charge by contacting Investor Relations.

## Annual Meeting of Shareholders

The annual meeting of shareholders will be held on  
October 29, 2002 at 10 a.m., at the company's  
corporate headquarters located at 4425 Silicon Drive,  
Durham, North Carolina.

## Additional Information

The company's common stock is traded on the  
NASDAQ National Market System and is quoted  
under the symbol "CREE."

Cree and the Cree logo are registered trademarks, and Cree Microwave, XBright and MegaBright  
are trademarks, of Cree, Inc. Other trademarks mentioned are property of their respective owners.

## Executive Officers

F. Neal Hunter  
Chairman

Charles M. Swoboda  
President and  
Chief Executive Officer

Cynthia B. Merrell  
Chief Financial Officer and Treasurer

M. Todd Tucker  
Executive Vice President, Operations

John W. Palmour, Ph.D.  
Executive Vice President  
Director of Advanced Devices

## Board of Directors

F. Neal Hunter  
Chairman  
Cree, Inc.

James E. Dykes  
Retired President and  
Chief Executive Officer  
Signetics Company

William J. O'Meara  
Retired President and  
Chief Executive Officer  
C-Cube Microsystems, Inc.

John W. Palmour, Ph.D.  
Executive Vice President  
Director of Advanced Devices  
Cree, Inc.

Robert J. Potter, Ph.D.  
President and  
Chief Executive Officer  
R.J. Potter Company

Charles M. Swoboda  
President and  
Chief Executive Officer  
Cree, Inc.

Dolph W. von Arx  
Retired Chief Executive Officer  
Planters Lifesavers Company

*If essential, it is moving forward together,  
then success takes care of itself.  
- Henry Ford*



4425 Silicon Drive  
Durham, NC 27703