

SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

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

For the quarterly period ended December 27, 1998

Commission file number: 0-21154

CREE RESEARCH, INC.

(Exact name of registrant as specified in its charter)

North Carolina (State or other jurisdiction of incorporation or organization)	56-1572719 (I.R.S. Employer Identification No.)
---	---

4600 Silicon Drive Durham, North Carolina (Address of principal executive offices)	27703 (Zip Code)
--	---------------------

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

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. [X] Yes [] No

The number of shares outstanding of the registrant's common stock, par value \$0.005 per share, as of January 19, 1999 was 13,004,469.

CREE RESEARCH, INC.
FORM 10-Q

For the Quarter Ended December 27, 1998

INDEX

	Page No.
PART I. FINANCIAL INFORMATION	
Item 1. Financial Statements	
Consolidated Balance Sheets at December 27, 1998 (unaudited) and June 28, 1998	3
Consolidated Statements of Income for the three and six months ended December 27, 1998 and December 28, 1997 (unaudited)	4
Consolidated Statements of Cash Flow for the six months ended December 27, 1998 and December 28, 1997 (unaudited)	5
Notes to Consolidated Financial Statements (unaudited)	6
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	13
Item 3. Quantitative and Qualitative Disclosures About Market Risk	21
PART II. OTHER INFORMATION	
Item 4. Submission of Matters to a Vote of Security Holders	21

PART I - FINANCIAL INFORMATION

Item 1 - Financial Statements

CREE RESEARCH, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands)

	December 27, 1998	June 28, 1998
	-----	-----
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 12,769	\$ 17,680
Marketable securities	905	657
Accounts receivable, net	12,110	10,479
Inventories	3,402	2,543
Deferred income tax	264	1,952
Prepaid expenses and other current assets	691	1,347
	-----	-----
Total current assets	30,141	34,658
Property and equipment, net	44,972	36,476
Patent and license rights, net	1,641	1,525
Other assets	1,349	65
	-----	-----
Total assets	\$ 78,103	\$ 72,724
	=====	=====
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable, trade	\$ 4,097	\$ 5,595
Current maturities of long term debt	121	17
Accrued salaries and wages	550	391
Other accrued expenses	990	1,052
	-----	-----
Total current liabilities	5,758	7,055
Long term liabilities:		
Long term debt	9,879	8,650
Deferred income tax	2,477	2,154
	-----	-----
Total long term liabilities	12,356	10,804
Shareholders' equity:		
Preferred stock, par value \$0.01; 3,000 shares authorized at December 27, 1998 and 2,750 shares authorized at June 28, 1998; none issued and outstanding	--	--
Common stock, par value \$0.005; 30,000 shares authorized at December 27, 1998 and 14,500 shares authorized at June 28, 1998; shares issued and outstanding 12,920 and 12,989 at December 27, 1998 and June 28, 1998, respectively	65	65
Additional paid-in-capital	49,583	49,676
Retained earnings	10,341	5,124
	-----	-----
Total shareholders' equity	59,989	54,865

Total liabilities and shareholders' equity	=====	=====
	\$ 78,103	\$ 72,724
	=====	=====

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

-3-

CREE RESEARCH, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share data)
(Unaudited)

	Three Months Ended		Six Months Ended	
	December 27, 1998	December 28, 1997	December 27, 1998	December 28, 1997
	-----	-----	-----	-----
Revenue:				
Product revenue, net	\$12,805	\$ 8,164	\$23,525	\$16,369
Contract revenue, net	1,233	1,942	2,792	3,944
	-----	-----	-----	-----
Total revenue	14,038	10,106	26,317	20,313
Cost of revenue:				
Product revenue	6,377	4,946	11,792	10,365
Contract revenue	1,045	1,600	2,252	3,252
	-----	-----	-----	-----
Total cost of revenue	7,422	6,546	14,044	13,617
Gross profit	6,616	3,560	12,273	6,696
Operating expenses:				
Research and development	1,121	527	1,927	920
Sales, general and administrative	1,450	850	2,668	1,985
Other expense	298	390	567	390
	-----	-----	-----	-----
Income from operations	3,747	1,793	7,111	3,401
Interest income, net	20	169	135	332
	-----	-----	-----	-----
Income before income taxes	3,767	1,962	7,246	3,733
Income tax expenses	916	490	2,029	1,093
	-----	-----	-----	-----
Net income	\$ 2,851	\$ 1,472	\$ 5,217	\$ 2,640
	=====	=====	=====	=====
Earnings per share:				
Basic	\$0.22	\$0.12	\$0.41	\$0.21
	=====	=====	=====	=====
Diluted	\$0.21	\$0.11	\$0.39	\$0.20
	=====	=====	=====	=====

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

-4-

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

	Six Months Ended	
	December 27, 1998	December 28, 1997
	(Unaudited)	
Operating activities:		
Net income	\$5,217	\$2,640
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	2,341	2,067
Loss on disposal of property, equipment and patents	951	320
Amortization of patent rights	56	50
Amortization and write off of goodwill	--	86
Proceeds from sale of marketable trading securities	489	--
Purchase of marketable trading securities	(232)	(1,500)
Gain on marketable trading securities	(116)	--
Changes in operating assets and liabilities:		
Accounts receivable	(1,964)	(2,258)
Inventories	(859)	1,161
Prepaid expenses and other assets	1,004	148
Accounts payable, trade	(3,073)	(783)
Accrued expenses	420	889
	-----	-----
Net cash provided by operating activities	4,234	2,820
	-----	-----
Investing activities:		
Purchase of property and equipment	(10,380)	(5,704)
Proceeds from sale of property and equipment	189	340
Purchase of patent rights	(194)	(200)
	-----	-----
Net cash used in investing activities	(10,385)	(5,564)
	-----	-----
Financing activities:		
Proceeds from issuance of long-term debt	1,333	3,259
Net proceeds from issuance of common stock	2,527	2,139
Receipt of Section 16(b) common stock profits	594	--
Repurchase of common stock	(3,214)	--
	-----	-----
Net cash provided by financing activities	1,240	5,398
	-----	-----
Net (decrease) increase in cash and cash equivalents	(4,911)	2,654
Cash and cash equivalents:		
Beginning of period	17,680	10,448
	=====	=====
End of period	\$ 12,769	\$ 13,102
	=====	=====
Supplemental disclosure of cash flow information:		
Cash paid for interest, net amounts capitalized	\$ 275	\$ --
	=====	=====
Cash paid for income taxes	\$ 1,396	\$ 219
	=====	=====

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

Basis of Presentation

The consolidated balance sheet as of December 27, 1998, the consolidated statements of income for the three and six months ended December 27, 1998 and December 28, 1997, and the consolidated statements of cash flow for the six months ended December 27, 1998 and December 28, 1997 have been prepared by the Company and have not been audited. In the opinion of management, all normal and recurring adjustments necessary to present fairly the financial position, results of operations and cash flow at December 27, 1998, and all periods presented, have been made. The balance sheet at June 28, 1998 has been derived from the audited financial statements as of that date.

Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted. It is suggested that these condensed financial statements be read in conjunction with the financial statements and notes thereto included in the Company's fiscal 1998 Form 10-K. The results of operations for the period ended December 27, 1998 are not necessarily indicative of the operating results that may be attained for the entire fiscal year.

Accounting Policies

Fiscal Year

The Company's fiscal year is a 52 or 53 week period ending on the last Sunday in the month of June. Accordingly, all quarterly reporting reflects a 13 week period in fiscal 1999. In fiscal 1998, the Company changed its fiscal year from the twelve months ending June 30, to the 52 week period ending on the last Sunday in the month of June. The Company's current fiscal year will extend from June 29, 1998 to June 27, 1999.

Investments

Investments are accounted for in accordance with Statement of Financial Accounting Standards No. 115, "Accounting for Certain Investments in Debt and Equity Securities" ("SFAS No. 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 and losses excluded from earnings and reported as a separate component of stockholders' equity.

The Company's short-term investments are comprised of equity securities that are classified as trading securities, which are carried at their fair value based upon quoted market prices of those investments at December 27, 1998, with net realized and unrealized gains and losses included in net earnings.

As of December 27, 1998, short-term investments consist of common stock holdings in C3, Inc. ("C3"), the majority of which were purchased in November 1997 and September 1998. The Company's CEO has, through a binding agreement, promised to indemnify the Company for losses of up to \$450,000 for the net difference between the aggregate cash consideration paid by the Company for the shares of C3 common stock and the cash proceeds received by the Company upon the sale of C3 common stock. This indemnity covers losses that may result from the sale of shares purchased in November 1997 and September 1998 below the purchase price paid, offset by gains realized on shares acquired directly from C3 in January 1997 (see below). Payment of this obligation is due within ten days after receipt by the CEO of the Company's written demand made pursuant to a vote of the majority of the members of the Board of Directors other than the CEO. Realized losses on shares of C3 stock sold by the Company were \$254,000 and

\$46,000, for fiscal 1998 and 1999, respectively. At December 27, 1998, a net unrealized gain, including shares acquired directly from C3 (see below), of \$383,000 was recognized to bring the valuation of shares held to market. Therefore, approximately \$120,000 and \$116,000 of other income was recorded for the three and six months ended December 27, 1998, respectively. Approximately \$32,000 of net losses were recorded to other income (expense) in fiscal 1998. Since the net unrealized gain on shares held exceeded realized losses on shares sold, there was no receivable recorded from the CEO as of December 27, 1998.

In addition to the shares of C3 purchased in November 1997 and September 1998, the Company acquired 24,601 shares of C3 common stock in January 1997. These shares were issued pursuant to an option C3 granted to the Company in 1995. The option gave the Company the right to acquire, for an aggregate consideration of \$500, one percent of the outstanding common stock of C3. C3 retained the right to waive the consideration and issue the stock at any time, which it elected to do in January 1997. The shares issued pursuant to the option are restricted securities within the meaning of Rule 144 under the Securities Act of 1933, which permits the sale of such securities without registration if certain conditions are met. The shares first became eligible for sale under Rule 144 in the third quarter of fiscal 1998.

-7-

Long Term Debt

The Company obtained a term loan from a commercial bank of up to \$10,000,000 to finance the purchase and upfit of a production facility and service and warehouse buildings in November 1997. As of December 27, 1998 the entire \$10,000,000 loan was outstanding, including a current portion of \$121,000 and a long term amount of \$9,879,000. The loan, which is collateralized by the purchased property, accrues interest at a fixed rate of 8% and carries customary covenants, including the maintenance of a minimum tangible net worth and other requirements. Accrued interest is due monthly until May 1999, at which time the outstanding principal balance will be amortized over twenty years until 2011, when the loan balance becomes due.

During the three and six months ended December 27, 1998, the Company capitalized interest on funds used to construct property, plant and equipment in connection with the facility. Interest capitalized for the three and six months ended December 27, 1998 was \$34,000 and \$118,000, respectively.

Inventories

Inventories are stated at the lower of cost or market, with cost determined under the first-in, first-out (FIFO) method. Inventories consist of the following:

	December 27, 1998	June 28, 1998
	-----	-----
	(In thousands)	
Raw materials	\$ 1,338	\$ 999
Work-in-progress	1,220	752
Finished goods	844	792
	-----	-----
Total Inventory	\$ 3,402	\$ 2,543
	=====	=====

Research and Development Accounting Policy

The U.S. Government provides funding for several of the Company's current research and development efforts. The contract funding may be based on 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 cost of capital expenses. Cost-plus funding is determined based on actual costs plus a set percentage margin. For 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 silicon carbide and gallium nitride materials. The contracts typically require submission of a written report to document the results of such research.

-8-

The revenue and expense classification for contract activity is determined 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 exceed funding by period as included in research and development expenses:

	Three Months Ended		Six Months Ended	
	December 27, 1998	December 28, 1997	December 27, 1998	December 28, 1997
	-----	-----	-----	-----
	(In thousands)			
Net R&D costs	\$ -	\$ 161	\$ -	\$ 281
Government funding	-	311	-	598
	=====	=====	=====	=====
Total direct costs incurred	\$ -	\$ 472	\$ -	\$ 879
	=====	=====	=====	=====

As of December 27, 1998, all funding under contracts where the Company anticipates that direct costs will exceed amounts to be funded has been exhausted. Therefore, the Company anticipates that all future funding under existing contracts will be reflected as contract revenue while direct costs will be reported as contract cost of revenue.

Significant Sales Contract

In September 1996, the Company entered into a Purchase Agreement with Siemens AG ("Siemens"), pursuant to which Siemens agreed to purchase LED chips made with the Company's gallium nitride-on-silicon carbide technology. In April 1997 and December 1997, contract amendments were executed that provided for enhanced product specifications requested by Siemens and larger volume requirements, respectively.

In September 1998, the Company and Siemens further amended the contract to extend the Purchase Agreement with respect to shipments to be made on or after June 29, 1998. The third amendment obligates the Company to ship, and Siemens to purchase, stipulated quantities of both the conductive buffer and the new high brightness LED chips and silicon carbide wafers through fiscal 1999. The agreement also limits Siemens' right to defer shipments to 30% of scheduled quantities for items to be shipped in more than 24 weeks after initial notice and 10% of scheduled quantities for items to be shipped in more than 12 weeks after initial notice. In both cases, Siemens would be required to accept all product within 90 days of the original shipment date. Additionally, the amendment provides for higher per unit prices early in the contract with reductions in unit prices as the cumulative volume shipped increases.

In December 1998, the Company and Siemens further amended the contract to include greater quantities of conductive buffer LED chips to be shipped during fiscal 1999 and to extend the

-9-

contract for these shipments through September 1999. This amendment also provides for higher per unit prices early in the contract with reductions in

unit prices as the cumulative volume shipped increases. As was the case with the third amendment, these higher prices were negotiated by the Company to offset higher per unit costs expected earlier in the contract.

Income Taxes

The Company has established an estimated tax provision based upon an effective rate of 28%. The estimated tax rate was based on tax reduction strategies being implemented by the Company. The estimated effective rate was based upon projections of income for the fiscal year and the Company's ability to utilize remaining net operating loss carryforwards and other tax credits. However, the actual effective rate may vary depending upon actual pre-tax book income for the year or other factors.

Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between 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.

The actual income tax expense attributable to earnings for the six months ended December 27, 1998 differed from the amounts computed by applying the U.S. Federal tax rate of 35% to pretax earnings as a result of the following:

	Amount	Percent
	-----	-----
	(In thousands)	
Federal income tax provision at statutory rate	\$ 2,536	35.0%
State tax provision	174	2.4
Decrease in income tax expense resulting from:		
Foreign sales corporation	(306)	(4.2)
State tax incentives	(167)	(2.3)
Research and development credits	(85)	(1.2)
Change in valuation allowance	(123)	(1.7)
	-----	-----
Income tax expense	\$ 2,029	28.0%
	=====	=====

The following are the components of the provision for income taxes for the six months ended December 27, 1998 (in thousands):

-10-

Current:	
Federal	\$ 1,182
State	175

Total Current Portion	1,357
Deferred:	
Federal	782
State	(110)

Total Deferred Portion	672
Net Provision	\$ 2,029
	=====

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

December 27,	June 28,
1998	1998
-----	-----
(In thousands)	

Deferred tax assets:

Net operating loss carryforwards	\$ 948	\$1,304
Research tax credits	92	169
Compensation accruals	70	62
Inventory capitalization	130	120
Bad debt allowance	64	56
Alternative minimum tax	158	261
Foreign tax credit	153	270
State incentive credits	165	--
	-----	-----
Total gross deferred tax assets	1,780	2,242
Less valuation allowance	(167)	(290)
	-----	-----
Net deferred tax asset	1,613	1,952
Deferred tax liabilities:		
Property and equipment, due to depreciation	2,477	2,154
	-----	-----
Gross deferred tax liabilities	2,477	2,154
	-----	-----
Net deferred tax asset (liability)	\$ (864)	\$ (202)
	=====	=====

The net change in the total valuation allowance for the six months ended December 27, 1998 was \$123,000. The primary reason for the reduction in the valuation allowance for the six months ended December 27, 1998 was the implementation of tax strategies to utilize these assets. Realization of deferred tax assets associated with the NOL carryforwards is dependent upon the Company generating sufficient taxable income prior to their expiration. Although realization is not assured for the remaining deferred tax assets, management believes it is more likely than not that they will be realized through future taxable earnings. However, the net deferred tax assets could be reduced in the future if management's estimates of taxable income during the carryforward period are significantly reduced.

-11-

As of December 27, 1998, the Company has net operating loss carryforwards for federal purposes of \$3,493,000 and \$2,346,000 for state purposes. The carryforward expiration period is 2011 to 2013 for federal tax purposes and from 2000 to 2003 for state purposes. The Company anticipates that each of these carryforwards will be utilized by the end of the current fiscal year.

Earnings Per Share

The Company presents earnings per share in accordance with Statement of Financial Accounting Standards No. 128, "Earnings Per Share" ("SFAS 128"). SFAS 128 required the Company to change its method of computing, presenting and disclosing earnings per share information. All prior period data presented has been restated to conform to the provisions of SFAS 128.

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

	Three Months Ended		Six Months Ended	
	December 27, 1998	December 28, 1997	December 27, 1998	December 28, 1997
	-----	-----	-----	-----
	(In thousands, except per share amounts)			
Net income	\$ 2,851	\$ 1,472	\$ 5,217	\$ 2,640
Weighted average common shares	12,832	12,789	12,876	12,699
	-----	-----	-----	-----
Basic earnings per common share	\$ 0.22	\$ 0.12	\$ 0.41	\$ 0.21
	=====	=====	=====	=====
Net income	\$ 2,851	\$ 1,472	\$ 5,217	\$ 2,640
Diluted weighted average common				

shares:				
Common shares outstanding	12,832	12,789	12,876	12,699
Dilutive effect of stock options and warrants	1,002	847	665	823
	-----	-----	-----	-----
Total diluted weighted average common shares	13,834	13,636	13,541	13,552
	-----	-----	-----	-----
Diluted earnings per common share	\$ 0.21	\$ 0.11	\$0.39	\$ 0.20
	=====	=====	=====	=====

Potential common shares that would have the effect of increasing diluted income per share are considered to be antidilutive. In accordance with SFAS 128, these common shares were not included in calculating diluted income per share. As of December 27, 1998, there were no potential shares considered to be antidilutive. For the three and six months ended December 28, 1997, there were 300,000 shares that were not included in calculating diluted income per share because their effect was antidilutive.

-12-

New Accounting Pronouncements

In fiscal 1999, the Company adopted Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("SFAS 130"), which establishes standards for reporting and display of comprehensive income and its components in a full set of general-purpose financial statements. SFAS 130 only impacts financial statement presentation as opposed to actual amounts recorded. Other comprehensive income includes all nonowner changes in equity that are excluded from net income. This Statement has no financial statement impact for an enterprise that has no items of other comprehensive income in any period presented. During the three and six months ended December 27, 1998 and December 28, 1997, the Company had no items of other comprehensive income.

In fiscal 1999, the Company adopted Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information" ("SFAS 131"). SFAS 131 changes the way public companies report segment information in annual financial statements and also requires those companies to report selected segment information in interim financial statements to shareholders. SFAS 131 also establishes standards for related disclosures about products and services, geographic areas, and major customers. The application of the new rules does not have a significant impact on the Company's financial statements.

In June 1998, the Financial Accounting Standards Board issued Statement No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS 133"), which is required to be adopted in years beginning after June 15, 1999. Because of the Company's minimal use of derivatives, management does not anticipate that the adoption of the new Statement will have a significant effect on earnings or the financial position of the Company.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Information set forth in this Form 10-Q, including Management's Discussion and Analysis of Financial Condition and Results of Operations, contains various "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Act of 1934, which statements represent the Company's judgment concerning the future and are subject to risks and uncertainties that could cause the Company's actual operating results and financial position to differ materially. Such forward-looking statements can be identified by the use of forward-looking terminology such as "may," "will," "anticipate," "believe," "plan," "estimate," "expect," and "intend" or the negative thereof or other variations thereof or comparable terminology. The Company cautions that any such forward-looking statements are further qualified by important factors that could cause the Company's actual operating results to differ materially from those in the forward-looking statements, including, but not limited to, fluctuations in our operating results, production yields in our manufacturing processes, whether we can produce commercial quantities of high brightness blue and green LEDs, our dependence on a few customers, whether we can manage our growth effectively, assertion of intellectual property rights by others, adverse economic conditions, and insufficient capital resources. See

Exhibit 99.1 for additional factors that could cause the Company's actual results to differ.

-13-

Overview

Cree Research, Inc. is the world leader in developing and manufacturing semiconductor materials and electronic devices made from silicon carbide ("SiC"). We recognize product revenue at the time of shipment or in accordance with the terms of the relevant contract. We derive the largest portion of our revenue from the sale of blue and green light emitting diode ("LED") products. The Company offers LEDs at two brightness levels -- high brightness blue and green products and standard blue products. The Company's LED devices are utilized by end users for automotive backlighting, liquid crystal display ("LCD") backlighting (including use in wireless handsets), indicator lamps, miniature white lights (such as replacements for miniature incandescent bulbs), indoor sign and arena displays, outdoor full color stadium displays, traffic signals and other lighting applications.

The high brightness products, which were introduced to the market in September 1998 in limited quantities, are currently being integrated into our manufacturing facility for full production. During the first six months of fiscal 1999, margins realized on the high brightness products were substantially lower than those derived from our standard blue LED product, as the yield was lower than the standard product. Historically, we have experienced low margins with many new product introductions, and we are working to make improvements to output and yield during the second half of fiscal 1999. We anticipate that the high brightness products will contribute greater volumes as yield improvements are obtained.

We believe that in order to increase market demand for all of our LED products, we must continue to substantially lower average sales prices. Historically, we have been successful in achieving lower costs for the standard blue product. During the remainder of fiscal 1999, we plan to focus on reducing costs through higher production yields and from higher volumes as fixed costs are spread over a greater number of units.

We also derive revenue from the sale of advanced materials made from SiC that are used primarily for research and development. We also sell SiC crystals to C3, which incorporates them in gemstone applications. During late fiscal 1998 and the first six months of fiscal 1999, C3 purchased equipment from us, which has more than doubled the capacity for the production of crystals for C3.

The balance of our revenue is derived from government contract funding. Under various programs, U.S. Government entities further the development of our technology by supplementing our research and development efforts. All resulting technology obtained through these efforts remains our property after the completion of the contract, subject to certain license rights retained by the government. Contract revenue includes funding of direct research and development costs and a portion of our 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. For contracts under which direct costs are anticipated to exceed amounts to be funded over the life of the contract (i.e., certain cost share arrangements), direct costs are reported as research and development expenses with related reimbursements recorded as an offset to those expenses.

-14-

On September 24, 1997, the Board of Directors changed the Company's fiscal year from the twelve months ending June 30 to a 52 or 53 week year ending on the last Sunday in the month of June. The Company's 1998 fiscal year extended from July 1, 1997 to June 28, 1998.

Results of Operations

Three Months Ended December 27, 1998 and December 28, 1997

Revenue. Revenue increased 39% from \$10.1 million in the second quarter of fiscal 1998 to \$14.0 million in the second quarter of fiscal 1999. This increase

was attributable to an increase in product revenue of 57% from \$8.2 million in the second quarter of fiscal 1998 to \$12.8 million in the second quarter of fiscal 1999. This rise in product revenue was a result of the 128% increase in sales of our LED products in the second quarter of fiscal 1999 compared to the second quarter of fiscal 1998. Growth in LED volume was due in part to the introduction of the new high brightness devices, but mostly was a result of strong demand for the standard brightness product. This volume increase was partly offset by a 35% decline in the average sales price of the standard blue LED chip during this same period. We believe that in order to increase volume, we must continue to lower average sales prices.

Revenue attributable to sales of SiC materials was 88% higher in the second quarter of fiscal 1999 than in the same period of fiscal 1998 due to a significant increase in sales to C3 for gemstone applications. During the second quarter of fiscal 1998, C3 was in initial stages of operation; therefore, unit sales were limited. Revenue from sales of SiC wafers increased 48% in the second quarter of fiscal 1999 as compared to the second quarter of fiscal 1998, due to quality improvements in wafers, along with the availability of the larger two-inch wafer during fiscal 1999. During the second quarter of fiscal 1999, sales from our displays business declined 95% over the prior year period as we have chosen to de-emphasize this product line. Contract revenue received from U.S. Government agencies declined 36% during the second quarter of fiscal 1999 compared to the second quarter of fiscal 1998, as a significant contract that funded optoelectronic research was exhausted in early fiscal 1999.

Gross Profit. Gross margin climbed to 47% of revenue during the second quarter of fiscal 1999 as compared to 35% during the second quarter of fiscal 1998. This increase is predominantly attributable to design and manufacturing improvements that occurred over the past year resulting in significant reductions in cost. With the introduction of the new conductive buffer LED technology in the fourth quarter of fiscal 1998, we were able to significantly lower costs of production due to the fewer manufacturing steps required with the new chip structure and improved yield. During the second quarter of fiscal 1998, we began to fabricate devices on a larger two-inch wafer; however, we were still in the process of establishing this new manufacturing design and had not achieved production efficiency. In addition, the larger two inch wafer had not been in full production for much of the period; therefore, average die yields during the second quarter of fiscal 1998 were significantly lower. Wafer costs for SiC material sales also declined 21% during the second quarter of fiscal 1999 over the comparative period due to more efficient processes and improved yield.

-15-

Research and Development. Research and development expenses increased 113% in the second quarter of fiscal 1999 to \$1.1 million from \$0.5 million in the second quarter of fiscal 1998. Much of this increase was caused by significantly higher costs for the initial development of the new high brightness LED products. We anticipate that internal funding for the development of new products will continue to grow in future periods, while we believe that government funding for our development projects will remain constant or decrease.

Sales, General and Administrative. Sales, general and administrative expenses increased 71% in the second quarter of fiscal 1999 to \$1.5 million from \$0.9 million in the second quarter of fiscal 1998 due primarily to two insurance events that were recorded in the second quarter of fiscal 1998. As a result of the dismissal of a securities class action lawsuit in November 1997, we were reimbursed \$0.2 million for costs incurred in connection with the lawsuit. Most of these expenses were recorded in fiscal 1997. In addition, we received a \$0.2 million reimbursement of medical expenses due to a negotiated cost cap in a partially self-funded insured health plan. As a result of our increased profitability during the second quarter of fiscal 1999 over the second quarter of fiscal 1998, the profit sharing accrual (which is based on 5% of net income) has also grown \$0.1 million. We anticipate that total sales, general and administrative costs will increase in connection with the growth of our business; however, we believe that as a percentage of revenue they will remain constant or possibly decline.

Other (Income) Expense. Other expenses have decreased 24% to \$0.3 million during the second quarter of fiscal 1999 from \$0.4 million for the second quarter of fiscal 1998. In the second quarter of fiscal 1999, we realized impairments to leasehold costs as a result of management's decision to move equipment from our leased facility to our new manufacturing site. This was offset somewhat by

investment income recognized on stock held in C3. In the second quarter of fiscal 1998, we had written off certain fixed assets that were impaired in value. These write-downs exceeded the fiscal 1999 leasehold write-downs offset by the investment income.

Interest Income, Net. Interest income, net has decreased 88% to \$0.02 million in the second quarter of fiscal 1999 from \$0.2 million in the second quarter of fiscal 1998 due to interest expense incurred. In November 1997, we obtained a term loan from NationsBank to fund the acquisition and construction of our new manufacturing facility in Durham, North Carolina. The majority of the interest incurred in the second quarter of fiscal 1999 has been expensed.

Income Tax Expense. Income tax expense for the second quarter of fiscal 1999 was \$0.9 million compared to \$0.5 million in the second quarter of fiscal 1998. This increase resulted from increased profitability during the second quarter of fiscal 1999 over fiscal 1998.

Six Months Ended December 27, 1998 and December 28, 1997

Revenue. Revenue increased 30% from \$20.3 million in the first six months of fiscal 1998 to \$26.3 million in the first six months of fiscal 1999. This increase was attributable to an increase in product revenue of 44% from \$16.4 million in the first six months of fiscal 1998 to \$23.5 million in the first six months of fiscal 1999. This rise in product revenue was a result of the 128% increase in sales of our LED products in the first six months of fiscal 1999 compared to

-16-

the first six months of fiscal 1998. Growth in LED volume was due in part to the introduction of the new high brightness devices, but mostly was a result of strong demand for the standard brightness product. This volume increase was partly offset by a 40% decline in the average sales price of the standard blue LED chip during this same period. We believe that in order to increase volume, we must continue to lower average sales prices.

Revenue attributable to sales of SiC material was 84% higher in the first six months of fiscal 1999 than in the same period of fiscal 1998 due to a significant increase in sales to C3 for gemstone applications. During the first six months of fiscal 1998, C3 was in initial stages of operation; therefore, unit sales were limited. Revenue from sales of SiC wafers increased 43% in the first six months of fiscal 1999 as compared to the first six months of fiscal 1998, due to quality improvements in wafers, along with the availability of the larger two-inch wafer during fiscal 1999. During the first six months of fiscal 1999, sales from our displays business declined 96% over the prior year period as we have chosen to de-emphasize this product line. Contract revenue received from U.S. Government agencies declined 29% during the first six months of fiscal 1999 compared to the first six months of fiscal 1998, as a significant contract that funded optoelectronic research was exhausted in early fiscal 1999.

Gross Profit. Gross margin climbed to 47% of revenue during the first six months of fiscal 1999 as compared to 33% during the first six months of fiscal 1998. This increase is predominantly attributable to design and manufacturing improvements that occurred over the past year resulting in significant reductions in cost. With the introduction of the new conductive buffer LED technology in the fourth quarter of fiscal 1998, we were able to significantly lower costs of production due to fewer manufacturing steps required with the new chip structure and improved yield. During the first six months of fiscal 1998, we introduced a smaller LED chip size and, in December 1997, we began to fabricate devices on a larger two-inch wafer. As of December 1997, we were still in the process of establishing these new manufacturing designs and had not achieved production efficiency. In addition, the larger two inch wafer had not been in full production for much of the period; therefore, average die yields during the first six months of fiscal 1998 were significantly lower. Wafer costs for SiC material sales also declined 47% during the first six months of fiscal 1999 over the comparative period due to more efficient processes and improved yield.

Research and Development. Research and development expenses increased 109% in the first six months of fiscal 1999 to \$1.9 million from \$0.9 million in the first six months of fiscal 1998. Much of this increase was caused by significantly higher costs for the initial development of the new high brightness LED product. We anticipate that internal funding for the development

of new products will continue to grow in future periods, while we believe that government funding for our development projects will remain constant or decrease.

Sales, General and Administrative. Sales, general and administrative expenses increased 34% in the first six months of fiscal 1999 to \$2.7 million from \$2.0 million in the first six months of fiscal 1998 due primarily to two insurance events that were recorded in the second quarter of fiscal 1998. As a result of the dismissal of a securities class action lawsuit in November 1997,

-17-

we were reimbursed \$0.2 million for costs incurred in connection with the lawsuit. Most of these expenses were recorded in fiscal 1997. In addition, we received a \$0.2 million reimbursement of medical expenses due to a negotiated cost cap in a partially self-funded insured health plan. As a result of our increased profitability during the first six months of fiscal 1999 over the first six months of fiscal 1998, the profit sharing accrual (which is based on 5% of net income) has also grown \$0.2 million. We anticipate that total sales, general and administrative costs will increase in connection with the growth of our business; however, we believe that as a percentage of revenue they will remain constant or possibly decline.

Other (Income) Expense. Other expenses have increased 45% to \$0.6 million during the first six months of fiscal 1999 from \$0.4 million for the first six months of fiscal 1998. In the first six months of fiscal 1999, we realized impairments to leasehold costs as a result of management's decision to move equipment from our leased facility to our new manufacturing site. This was offset somewhat by income recognized under our equipment build-out agreement with C3. In 1998, we sold to C3 equipment manufactured by us at cost plus a reasonable overhead allocation. The overhead allocation was recorded as "Other income."

Interest Income, Net. Interest income, net has decreased 59% to \$0.1 million in the first six months of fiscal 1999 from \$0.3 million in the first six months of fiscal 1998 due to interest expense incurred. In November 1997, we obtained a term loan from NationsBank to fund the acquisition and construction of our new manufacturing facility in Durham, North Carolina. While much of the interest was capitalized during the last half of fiscal 1998, the majority of the interest incurred in the first six months of fiscal 1999 has been expensed.

Income Tax Expense. Income tax expense for the first six months of fiscal 1999 was \$2.0 million compared to \$1.1 million in the first six months of fiscal 1998. This increase resulted from increased profitability during the first six months of fiscal 1999 over fiscal 1998. Our effective tax rate during the first six months of fiscal 1999 was 28% compared to 29% in the first six months of fiscal 1998.

Liquidity and Capital Resources

We have funded our operations to date through sales of equity, bank borrowings and revenue from product and contract sales. As of December 27, 1998, we had working capital of approximately \$24.4 million, including \$13.7 million in cash and cash equivalents and marketable securities.

Operating activities generated \$4.2 million in cash during the first six months of fiscal 1999. This was attributable primarily to net income of \$5.2 million and other non-cash expenses of \$3.3 million. These amounts were partly offset by an increase of \$2.0 million in accounts receivable, a \$0.9 million rise in inventory and a \$3.1 million decrease in accounts payable.

Most of the \$10.4 million of cash used by investing activities in the first six months of fiscal 1999 was related to expenditures associated with the continued construction of our new

-18-

manufacturing facility in Durham, North Carolina. We also increased manufacturing capacity by adding new equipment to support the epitaxial deposition and clean room fabrication processes.

The \$1.2 million of cash provided by financing activities in the first six

months of fiscal 1999 related primarily to the receipt of \$1.8 million and \$0.7 million in proceeds from the exercise of stock warrants and stock options from the Company's employee stock option plan, respectively. In addition, \$0.6 million was received from a Director as payment of profits from a short-swing transaction in our securities and \$1.3 million was funded as the final draw from the long term debt arrangement with NationsBank. We currently have a \$10.0 million loan outstanding from NationsBank. We expect to pay off this loan with the proceeds from our secondary stock offering described in the registration statement on Form S-3 filed by the Company with the Securities and Exchange Commission on January 14, 1999. These cash proceeds were offset by a \$3.2 million cash outlay for the repurchase of our common stock. This stock was repurchased at an average price of \$13.68. The stock warrants exercised were distributed in connection with the Company's September 1995 private placement and have an exercise price of \$27.23. As of December 28, 1998, warrants remained outstanding to purchase 234,575 shares; these warrants will expire in September 2000.

We are currently engaged in construction activities related to a new clean room fabrication facility. We also intend to expand our facility for new crystal growth and test and packaging areas in calendar 1999. These additions will allow the Company to consolidate all LED and wafer manufacturing facilities to one site with improved manufacturing capabilities. In addition, in order to keep pace with anticipated growth in LED and wafer sales and provide expanded facilities for our new microwave product line, the Company anticipates a second phase of expansion to facilities and infrastructure to begin in early fiscal 2000. We anticipate total costs for these expenses to be between \$15 and \$18 million. Estimates for equipment costs related to this expansion total between \$15 and \$17 million. We plan to fund these capital projects from the proceeds of our secondary stock offering. In addition, we are in the process of purchasing a 79-acre site close to our present facility for \$1.5 million. We anticipate that internally generated cash plus the proceeds of the secondary stock offering will be sufficient to fund our capital requirements for the next 12 months.

Impact of the Year 2000

State of Readiness

We have adopted a Year 2000 compliance plan and formed a team of information technology professionals assigned the task of identifying and resolving any Year 2000 issues that may affect our business. Our compliance plan has four phases: inventory, assessment, remediation and testing. We have completed an inventory for all of our computer systems, computer related equipment and equipment with embedded processors, as well as our products, and are in the process of assessing those systems. We have completed this assessment with respect to approximately 80% of our systems and expect to complete our assessment of the remaining systems by February 1999. In addition, we have determined that our products are of a nature that they are not subject to failure as a result of Year 2000 issues. Although we cannot control

-19-

whether and how third parties will address the Year 2000 issue, we also are in the process of contacting critical vendors and suppliers to assess their ability to ensure smooth delivery of products without disruptions caused by Year 2000 problems. In the course of our assessment, we have not yet identified any Year 2000 issues that would affect our ability to do business; however, our assessment is not complete, and there can be no assurance that there are no Year 2000 issues that may affect us. Once we complete the assessment phase, we will prioritize and implement necessary repairs or replacements to equipment and software to achieve Year 2000 compliance. We expect to complete this phase by March 1999. The final phase will consist of a testing program for all repairs. We anticipate that all testing will be completed by April 1999.

Costs

We have not prepared estimates of costs to remediate Year 2000 problems; however, based on currently available information, including the results of our assessment to date and our replacement schedule for equipment, we do not believe that the costs associated with Year 2000 compliance will have a material adverse effect on our business, results of operations or financial condition.

Year 2000 Risks

Although we believe that our Year 2000 compliance plan is adequate to address Year 2000 concerns, there can be no assurance that we will not experience negative consequences as a result of undetected defects or the non-compliance of third parties with whom we interact. Furthermore, there can be no assurance that there will not be a delay in, or increased costs associated with, the implementation of corrections as the Year 2000 compliance plan is performed, such as unexpected costs of correcting equipment that has not yet been fully evaluated. If realized, these risks could result in an adverse effect on our business, results of operations and financial condition.

We believe that our greatest risk stems from the potential non-compliance of our suppliers. We depend on a limited number of suppliers for certain raw materials, components and equipment necessary for the manufacture of our products. Accordingly, if those suppliers are unable to process or fill our orders or otherwise interact with us because of Year 2000 problems, we could experience material adverse effects to our business. We are in the process of assessing the Year 2000 status of our suppliers and are investigating alternative sources of supply. As a consequence of our dependence on limited sources of supply, we generally maintain a significant inventory of certain critical materials and require suppliers to keep certain amounts of inventory available for us; however, there can be no assurance that we will have enough materials on hand to continue production without interruption in the event one or more of our suppliers experiences Year 2000 problems that affect its (their) ability to supply us. Any supply chain disruptions would affect our ability to manufacture our products which could result in material adverse consequences to our business, results of operations and financial condition.

-20-

Contingencies

We have not yet developed a contingency plan to address what would happen in the event we are unable to address the Year 2000 issue. The contingency plan is expected to be completed after the inquiry of vendors and customers is completed.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

No material changes in market risk have been identified during the most recent quarter.

PART II - OTHER INFORMATION

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

The Company's Annual Meeting of Shareholders convened on November 3, 1998. The following proposals were introduced and voted upon:

PROPOSAL NO. 1 -- Election of Directors

Name	Votes For	Votes Withheld
F. Neal Hunter	11,740,086	203,680
Calvin H. Carter, Jr.	11,870,286	73,480
John W. Palmour	11,869,286	74,480
Walter L. Robb	11,853,486	90,280
Michael W. Haley	11,738,686	205,080
Dolph W. von Arx	11,722,686	221,080
James E. Dykes	11,715,486	228,280

PROPOSAL NO.2 -- Amendment and Restatement of Articles of Incorporation

FOR	7,543,630
AGAINST	595,781
ABSTAINED	41,635
BROKER NON-VOTES	3,762,720

PROPOSAL NO.3 -- To ratify the selection of Ernst & Young LLP as auditors for the fiscal year ending June 27, 1999

FOR	11,613,306
AGAINST	13,091

ABSTAINED 28,369
BROKER NON-VOTES 289,000

-21-

The matters listed above are described in detail in the Company's definitive proxy statement dated October 1, 1998, for the Annual Meeting of Shareholders held on November 3, 1998.

Item 6. Exhibits and Reports on Form 8-K

(a) Exhibits

Exhibit	Description
10.1	Amended and Restated Equity Compensation Plan effective December 7, 1998
10.16	Fourth Amendment to Purchase Agreement between the Company and Siemens AG dated December 16, 1998 (1)
10.17	Second Amended and Restated Indemnity Agreement between the Company and F. Neal Hunter dated September 25, 1998
27	Financial Data Schedule
99.1	Risk Factors

(b) Reports on Form 8-K

No reports on Form 8-K were filed by the Company during the quarter ended December 27, 1998.

(1) Confidential treatment of portions of this document is being requested pursuant to Rule 24b-2 of the Securities and Exchange Commission.

-22-

SIGNATURES

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

CREE RESEARCH, INC.

Date: January 28, 1999

/s/ Cynthia B. Merrell

Cynthia B. Merrell
Chief Financial Officer and Treasurer
(Authorized Officer and Chief Financial
and Accounting Officer)

-23-

CREE RESEARCH, INC.

AMENDED AND RESTATED
EQUITY COMPENSATION PLAN

(formerly the Cree Research, Inc.
Employee Stock Option Plan)

ARTICLE I - GENERAL PROVISIONS

- 1.1 The Plan is designed, for the benefit of the Company, to attract and retain for the Company personnel of exceptional ability; to motivate such personnel through added incentives to make a maximum contribution to the Company; to develop and maintain a highly competent management team; and to be competitive with other companies with respect to executive compensation.
- 1.2 Awards under the Plan may be made to Participants in the form of (i) Incentive Stock Options; (ii) Nonqualified Stock Options; (iii) Restricted Stock; and (iv) Other Stock-Based Awards and such other forms of equity-based compensation as may be provided and are permissible under this Plan and the law.
- 1.3 The Cree Research, Inc. Employee Stock Option Plan was initially adopted effective August 2, 1989, was amended and restated in the form of the Plan effective as of July 1, 1995 (the "Effective Date"), was again amended and restated effective September 17, 1996, and was again amended effective September 1, 1997. This amendment and restatement of the Plan shall be effective as of December 7, 1998.

ARTICLE II - DEFINITIONS

Except where the context otherwise indicates, the following definitions apply:

- 2.1 "Act" means the Securities Exchange Act of 1934, as now in effect or as hereafter amended. All citations to sections of the Act or rules thereunder are to such sections or rules as they may from time to time be amended or renumbered.
- 2.2 "Agreement" means the written agreement evidencing each Award granted to a Participant under the Plan.
- 2.3 "Award" means an award granted to a Participant in accordance with the provisions of the Plan, including, but not limited to, a Stock Option, Restricted Stock, Other Stock-Based Awards, or any combination of the foregoing.
- 2.4 "Board" means the Board of Directors of Cree Research, Inc.
- 2.5 "Change in Control" means the occurrence of an event defined in Section 9.1 of the Plan.
- 2.6 "Code" means the Internal Revenue Code of 1986, as now in effect or as hereafter amended. All citations to sections of the Code are to such sections as they may from time to time be amended or renumbered.
- 2.7 "Committee" means the Compensation Committee of the Board or such other committee consisting of two or more members of the Board as may be appointed by the Board to administer this Plan pursuant to Article III. Committee members may also be appointed for such limited purposes as may be provided by the Board.
- 2.8 "Company" means Cree Research, Inc., a North Carolina corporation, and its successors and assigns. The term "Company" shall include any corporation which is a member of a controlled group of corporations (as defined in Section 414(b) of the Code, as modified by Section 415(h) of the Code) which includes the Company; any trade or business (whether or not

incorporated) which is under common control (as defined in Section 414(c) of the Code, as modified by Section 415(h) of the Code) with the Company; any organization (whether or not incorporated) which is a member of an affiliated service group (as defined in Section 414(m) of the Code) which includes the Company; and any other entity required to be aggregated with the Company pursuant to regulations under Section 414(o) of the Code. With respect to all purposes of the Plan, including, but not limited to, the establishment, amendment, termination, operation and administration of the Plan, Cree Research, Inc. shall be authorized to act on behalf of all other entities included within the definition of "Company".

2.9 "Disability" means (i) with respect to a Participant who is eligible to participate in the Company's program of long-term disability insurance, a condition with respect to which the Participant is entitled to commence benefits under such program of long-term disability insurance, and (ii) with respect to any Participant (including a Participant who is eligible to participate in the Company's program of long-term disability insurance), a disability as determined under procedures established by the Committee or in any Award.

2.10 "Discount Stock Options" means Nonqualified Stock Options which provide for an exercise price of less than the Fair Market Value of the Stock at the date of the Award.

2.11 "Early Retirement" shall mean retirement from active employment with the Company, with the express consent of the Committee, pursuant to early retirement provisions established by the Committee or in any Award.

2.12 "Eligible Participant" means any employee of the Company, as shall be determined by the Committee, as well as any other person, including directors, whose participation the Committee determines is in the best interest of the Company, subject to limitations as may be provided by the Code, the Act or the Committee.

2.13 "Fair Market Value" means, with respect to any given day, the following:

(i) If the Stock is not listed for trading on a national securities exchange but is listed on the NASDAQ National Market System or the NASDAQ Small-Cap Market System, then the Fair Market Value shall be the last sale price of the Stock on the date of reference if a minimum

of 100 shares are traded on such date or, if less than 100 shares are traded on such date, then the last sale price of the Stock as of the last date on which at least 100 shares were traded, in either case as reported by the NASDAQ National Market System or the NASDAQ Small-Cap Market System, as the case may be.

(ii) If the Stock is listed for trading on any national securities exchange, then the Fair Market Value shall be the closing price of the Stock on such exchange on the date of reference if a minimum of 100 shares are traded on such date or, if less than 100 shares are traded on such date, then the closing price of the Stock on such exchange as of the last date on which at least 100 shares were traded.

The Committee may establish an alternative method of determining Fair Market Value.

2.14 "Incentive Stock Option" means a Stock Option granted under Article IV of the Plan, and as defined in Section 422 of the Code.

2.15 "Nonqualified Stock Option" means a Stock Option granted under Article V of the Plan.

2.16 "Normal Retirement" shall mean retirement from active employment with the Company on or after age 65, or pursuant to such other requirements as may be established by the Committee or in any Award.

2.17 "Option Grant Date" means, as to any Stock Option, the latest of:

(a) the date on which the Committee takes action to grant the Stock Option to the Participant;

(b) the date the Participant receiving the Stock Option becomes an

employee of the Company, to the extent employment status is a condition of the grant or a requirement of the Code or the Act; or

- (c) such other date (later than the dates described in (a) and (b) above) as the Committee may designate.
- 2.18 "Participant" means an Eligible Participant to whom an Award has been granted and who has entered into an Agreement evidencing the Award.
- 2.19 "Plan" means the Cree Research, Inc. Equity Compensation Plan as set forth herein, and, as further amended or amended and restated from time to time.
- 2.20 "Restricted Stock" means an Award of Stock under Article VII of the Plan, which Stock is issued with the restriction that the holder may not sell, transfer, pledge, or assign such Stock and with such other restrictions as the Committee, in its sole discretion, may impose, including without limitation, any restriction on the right to vote such Stock, and the right to receive any cash dividends, which restrictions may lapse separately or in combination at such time or times, in installments or otherwise, as the Committee may deem appropriate.
- 2.21 "Restriction Period" means the period commencing on the date an Award of Restricted Stock is granted and ending on such date as the Committee shall determine.
- 2.22 "Retirement" shall mean Early Retirement or Normal Retirement.
- 2.23 "Stock" means shares of the Common Stock of Cree Research, Inc., par value \$.005 per share, as may be adjusted pursuant to the provisions of Section 3.9.
- 2.24 "Stock Option" means an Award under Article IV or V of the Plan of an option to purchase Stock. A Stock Option may be either an Incentive Stock Option or a Nonqualified Stock Option.
- 2.25 "Termination of Employment" means the discontinuance of employment of a Participant with the Company for any reason. The determination of whether a Participant has discontinued employment shall be made by the Committee in its discretion. In determining whether a Termination of Employment has occurred, the Committee may provide that service as a consultant or service with a business enterprise in which the Company has a significant ownership interest shall be treated as employment with the Company. The Committee shall have the discretion, exercisable either at the time the Award is granted or at the time the Participant terminates employment, to establish as a provision applicable to the exercise of one or more Awards that during the limited period of exercisability following Termination of Employment, the Award may be exercised not only with respect to the number of shares of Stock for which it is exercisable at the time of the Termination of Employment but also with respect to one or more subsequent installments for which the Award would have become exercisable had the Termination of Employment not occurred.

ARTICLE III - ADMINISTRATION

- 3.1 This Plan shall be administered by the Committee. The Committee, in its discretion, may delegate to one or more of its members such of its powers as it deems appropriate. The Committee also may limit the power of any member to the extent necessary to comply with any law. Members of the Committee shall be appointed originally, and as vacancies occur, by the Board, to serve at the pleasure of the Board. The Board may serve as the Committee, if by the terms of the Plan all Board members are otherwise eligible to serve on the Committee.
- 3.2 The Committee shall meet at such times and places as it determines. A majority of its members shall constitute a quorum, and the decision of a majority of those present at any meeting at which a quorum is present shall constitute the decision of the Committee. A memorandum signed by all of its members shall constitute the decision of the Committee without necessity, in such event, for holding an actual meeting.
- 3.3 The Committee shall have the exclusive right to interpret, construe and administer the Plan, to select the persons who are eligible to receive an

Award, and to act in all matters pertaining to the granting of an Award and the contents of the Agreement evidencing the Award, including without limitation, the determination of the number of Stock Options, shares of Stock subject to an Award, and the form, terms, conditions and duration of each Award, and any amendment thereof consistent with the provisions of the Plan. All acts, determinations and decisions of the Committee made or

taken pursuant to grants of authority under the Plan or with respect to any questions arising in connection with the administration and interpretation of the Plan, including the severability of any and all of the provisions thereof, shall be conclusive, final and binding upon all Participants, Eligible Participants and their beneficiaries.

- 3.4 The Committee may adopt such rules, regulations and procedures of general application for the administration of this Plan, as it deems appropriate.
- 3.5 The number of shares of Stock which are available for Award under the Plan shall be Two Million Five Hundred Forty Thousand (2,540,000) shares or any larger number of shares of Stock that, subsequent to the date this Plan is adopted, may be authorized for issuance by the Company. Such shares of Stock shall be made available from authorized and unissued shares. If, for any reason, any shares of Stock awarded or subject to purchase under the Plan are not delivered or purchased, or are reacquired by the Company, for reasons including, but not limited to, a forfeiture of Restricted Stock or termination, expiration or cancellation of a Stock Option, or any other termination of an Award without payment being made in the form of Stock, whether or not Restricted Stock, such shares of Stock shall not be charged against the aggregate number of shares of Stock available for Awards under the Plan, and may again be available for Award under the Plan.
- 3.6 Each Award granted under the Plan shall be evidenced by a written Agreement. Each Agreement shall be subject to and incorporate, by reference or otherwise, the applicable terms and conditions of the Plan, and any other terms and conditions, not inconsistent with the Plan, as may be imposed by the Committee.
- 3.7 The Company shall not be required to issue or deliver any certificates for shares of Stock prior to:
 - (a) the listing of such shares on any stock exchange on which the Stock may then be listed; and
 - (b) the completion of any registration or qualification of such shares of Stock under any federal or state law, or any ruling or regulation of any government body which the Company shall, in its discretion, determine to be necessary or advisable.
- 3.8 All certificates for shares of Stock delivered under the Plan shall also be subject to such stop-transfer orders and other restrictions as the Committee may deem advisable under the rules, regulations, and other requirements of the Securities and Exchange Commission, any stock exchange upon which the Stock is then listed and any applicable federal or state laws, and the Committee may cause a legend or legends to be placed on any such certificates to make appropriate reference to such restrictions. In making such determination, the Committee may rely upon an opinion of counsel for the Company.
- 3.9 Subject to the restrictions on Restricted Stock, as provided in Article VII of the Plan and in the Restricted Stock Agreement, each Participant who receives an Award of Restricted Stock shall have all of the rights of a shareholder with respect to such shares of Stock, including the right to vote the shares to the extent, if any, such shares possess voting rights and receive dividends and other distributions. Except as provided otherwise in the Plan or in an Agreement, no Participant awarded a Stock Option shall have any right as a shareholder with respect to any shares of Stock covered by his or her Stock Option prior to the date of issuance to him or her of a certificate or certificates for such shares of Stock.
- 3.10 If any reorganization, recapitalization, reclassification, stock split-up, stock dividend, or consolidation of shares of Stock, merger or

consolidation of the Company or sale or other disposition by the Company of all or a portion of its assets, any other change in the Company's corporate structure, or any distribution to shareholders other than a cash dividend results in the outstanding shares of Stock, or any securities exchanged therefor or received in their place, being exchanged for a different number or class of shares of Stock or other securities of the Company, or for shares of Stock or other securities of any other corporation; or new, different or additional shares or other securities of the Company or of any other corporation being received by the holders of outstanding shares of Stock, then equitable adjustments shall be made by the Committee in:

- (a) the limitation on the aggregate number of shares of Stock that may be awarded as set forth in Section 3.5 of the Plan;
- (b) the number and class of Stock that may be subject to an Award, and which have not been issued or transferred under an outstanding Award;
- (c) the purchase price to be paid per share of Stock under outstanding Stock Options; and
- (d) the terms, conditions or restrictions of any Award and Agreement, including the price payable for the acquisition of Stock; provided, however, that all adjustments made as the result of the foregoing in respect of each Incentive Stock Option shall be made so that such Stock Option shall continue to be an Incentive Stock Option, as defined in Section 422 of the Code.

3.11 In addition to such other rights of indemnification as they may have as directors or as members of the Committee, the members of the Committee shall be indemnified by the Company against reasonable expenses, including attorney's fees, actually and necessarily incurred in connection with the defense of any action, suit or proceeding, or in connection with any appeal therein, to which they or any of them may be a party by reason of any action taken or failure to act under or in connection with the Plan or any Award granted thereunder, and against all amounts paid by them in settlement thereof, provided such settlement is approved by independent legal counsel selected by the Company, or paid by them in satisfaction of a judgment or settlement in any such action, suit or proceeding, except as to matters as to which the Committee member has been negligent or engaged in misconduct in the performance of his duties; provided, that within 60 days after institution of any such action, suit or proceeding, a Committee member shall in writing offer the Company the opportunity, at its own expense, to handle and defend the same.

3.12 The Committee may require each person purchasing shares of Stock pursuant to a Stock Option or other Award under the Plan to represent to and agree with the Company in writing that he is acquiring the shares of Stock without a view to distribution thereof and/or that he has met such other requirements as the Committee determines may be applicable to such

purchase. The certificates for such shares of Stock may include any legend which the Committee deems appropriate to reflect any restrictions on transfer.

3.13 The Committee shall be authorized to make adjustments in performance based criteria or in the terms and conditions of other Awards in recognition of unusual or nonrecurring events affecting the Company or its financial statements or changes in applicable laws, regulations or accounting principles. The Committee may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Agreement in the manner and to the extent it shall deem desirable to carry it into effect. In the event the Company shall assume outstanding employee benefit awards or the right or obligation to make future such awards in connection with the acquisition of another corporation or business entity, the Committee may, in its discretion, make such adjustments in the terms of Awards under the Plan as it shall deem appropriate.

3.14 The Committee shall have full power and authority to determine whether, to what extent and under what circumstances, any Award shall be canceled or suspended if (a) the Participant, without the consent of the Committee, while employed by the Company or after termination of such employment,

becomes associated with, employed by, renders services to, or owns any interest in, other than any insubstantial interest, as determined by the Committee, any business that is in competition with the Company as determined by the Committee in its discretion; or (b) is terminated for cause as determined by the Committee in its discretion.

ARTICLE IV - INCENTIVE STOCK OPTIONS

4.1 Each provision of this Article IV and of each Incentive Stock Option granted hereunder shall be construed in accordance with the provisions of Section 422 of the Code, and any provision hereof that cannot be so construed shall be disregarded.

4.2 Incentive Stock Options shall be granted only to Eligible Participants who are in the active employment of the Company, each of whom may be granted one or more such Incentive Stock Options for a reason related to his employment at such time or times determined by the Committee following the Effective Date through the date which is ten (10) years following the Effective Date, subject to the following conditions:

- (a) The Incentive Stock Option price per share of Stock shall be set in the Agreement, but shall not be less than 100% of the Fair Market Value of the Stock on the Option Grant Date. If the Eligible Participant owns more than 10% of the outstanding Stock (as determined pursuant to Section 424(d) of the Code) on the Option Grant Date, the Incentive Stock Option price per share shall not be less than 110% of the Fair Market Value of the Stock on the Option Grant Date.
- (b) Subject to any conditions on exercise set forth in the corresponding Agreement, the Incentive Stock Option may be exercised in whole or in part from time to time within ten (10) years from the Option Grant Date (five (5) years if the Eligible Participant owns more than 10% of the Stock on the Option Grant Date), or such shorter period as may be specified by the Committee in the Award; provided, that in any event, the Incentive Stock Option shall lapse and cease to be exercisable upon a Termination of Employment or within such period following a

Termination of Employment as shall have been specified in the Incentive Stock Option Agreement, which period shall not exceed three months unless:

- (i) employment shall have terminated as a result of death or Disability, in which event such period shall not exceed one year after the date of death or Disability; or
- (ii) death shall have occurred following a Termination of Employment and while the Incentive Stock Option was still exercisable, in which event such period shall not exceed one year after the date of death;

provided, further, that such period following a Termination of Employment shall in no event extend the original exercise period of the Incentive Stock Option.

- (c) To the extent the aggregate Fair Market Value, determined as of the Option Grant Date, of the shares of Stock with respect to which Incentive Stock Options (determined without regard to this subsection) are first exercisable during any calendar year by any Eligible Participant exceeds \$100,000, such options shall be treated as Nonqualified Stock Options granted under Article V.
- (d) The Committee may adopt any other terms and conditions which it determines should be imposed for the Incentive Stock Option to qualify under Section 422 of the Code, as well as any other terms and conditions not inconsistent with this Article IV as determined by the Committee. If, for any reason, an Incentive Stock Option fails to meet the requirements of Section 422 of the Code, the Option shall automatically be deemed a Nonqualified Stock Option granted under Article V herein.
- (e) The maximum number of shares of Stock subject to Incentive Stock Option Awards hereunder shall be the total number of shares authorized

for issuance under the Plan pursuant to Section 3.5.

- 4.3 The Committee may at any time offer to buy out for a payment in cash, Stock or Restricted Stock an Incentive Stock Option previously granted, based on such terms and conditions as the Committee shall establish and communicate to the Participant at the time that such offer is made.
- 4.4 If the Incentive Stock Option Agreement so provides, the Committee may require that all or part of the shares of Stock to be issued upon the exercise of an Incentive Stock Option shall take the form of Restricted Stock, which shall be valued on the date of exercise, as determined by the Committee, on the basis of the Fair Market Value of such Restricted Stock determined without regard to the deferral limitations and/or forfeiture restrictions involved.

ARTICLE V - NONQUALIFIED STOCK OPTIONS

- 5.1 One or more Stock Options may be granted as Nonqualified Stock Options to Eligible Participants to purchase shares of Stock at such time or times determined by the Committee, following the Effective Date, subject to the terms and conditions set forth in this Article V.
- 5.2 The Nonqualified Stock Option price per share of Stock shall be established in the Agreement and may be less than or greater than 100% of the Fair Market Value at the time of the grant.
- 5.3 The Nonqualified Stock Option may be exercised in full or in part from time to time within such period as may be specified by the Committee or in the Agreement; provided, that, in any event, the Nonqualified Stock Option shall lapse and cease to be exercisable upon a Termination of Employment or within such period following a Termination of Employment as shall have been specified in the Nonqualified Stock Option Agreement, which period shall not exceed three months unless:
- (i) employment shall have terminated as a result of death or Disability, in which event such period shall not exceed one year after the date of death or Disability; or
 - (ii) death shall have occurred following a Termination of Employment and while the Nonqualified Stock Option was still exercisable, in which event such period shall not exceed one year after the date of death;
- provided, further, that such period following a Termination of Employment shall in no event extend the original exercise period of the Nonqualified Stock Option.
- 5.4 The Nonqualified Stock Option Agreement may include any other terms and conditions not inconsistent with this Article V or in Article VI, as determined by the Committee.

ARTICLE VI - INCIDENTS OF STOCK OPTIONS

- 6.1 Each Stock Option shall be granted subject to such terms and conditions, if any, not inconsistent with this Plan, as shall be determined by the Committee, including any provisions as to continued employment as consideration for the grant or exercise of such Stock Option and any provisions which may be advisable to comply with applicable laws, regulations or rulings of any governmental authority.
- 6.2 Except as provided below, a Stock Option shall be exercisable during the lifetime of the Participant only by him or his guardian or legal representative and shall not be transferable by the Participant other than (i) by will or by the laws of descent and distribution, or (ii) to the extent otherwise allowed by applicable law, pursuant to a qualified domestic relations order as defined by the Code and the Employee Retirement Income Security Act of 1974, as amended, or the rules thereunder. However, the Committee may, in its sole discretion, either pursuant to an Agreement or otherwise, permit a Participant to transfer a Nonqualified Stock Option by gift or other donative transfer without payment of consideration, conditioned upon and subject to compliance with all applicable law (including, but not limited to, securities law).

- 6.3 Shares of Stock purchased upon exercise of a Stock Option shall be paid for in such amounts, at such times and upon such terms as shall be determined by the Committee, subject to limitations set forth in the Stock Option Agreement. Without limiting the foregoing, the Committee may establish payment terms for the exercise of Stock Options which permit the Participant to deliver shares of Stock, or other evidence of ownership of Stock satisfactory to the Company, with a Fair Market Value equal to the Stock Option price as payment.
- 6.4 No cash dividends shall be paid on shares of Stock subject to unexercised Stock Options. The Committee may provide, however, that a Participant to whom a Stock Option has been granted which is exercisable in whole or in part at a future time for shares of Stock shall be entitled to receive an amount per share equal in value to the cash dividends, if any, paid per share on issued and outstanding Stock, as of the dividend record dates occurring during the period between the date of the grant and the time each such share of Stock is delivered pursuant to exercise of such Stock Option. Such amounts (herein called "dividend equivalents") may, in the discretion of the Committee, be:
- (a) paid in cash or Stock either from time to time prior to, or at the time of the delivery of, such Stock, or upon expiration of the Stock Option if it shall not have been fully exercised; or
 - (b) converted into contingently credited shares of Stock, with respect to which dividend equivalents may accrue, in such manner, at such value, and deliverable at such time or times, as may be determined by the Committee.
- Such Stock, whether delivered or contingently credited, shall be charged against the limitations set forth in Section 3.5.
- 6.5 The Committee, in its sole discretion, may authorize payment of interest equivalents on dividend equivalents which are payable in cash at a future time.
- 6.6 In the event of Disability or death, the Committee, with the consent of the Participant or his legal representative, may authorize payment, in cash or in Stock, or partly in cash and partly in Stock, as the Committee may direct, of an amount equal to the difference at the time between the Fair Market Value of the Stock subject to a Stock Option and the option price in consideration of the surrender of the Stock Option.
- 6.7 If a Participant is required to pay to the Company an amount with respect to income and employment tax withholding obligations in connection with exercise of a Nonqualified Stock Option, and/or with respect to certain dispositions of Stock acquired upon the exercise of an Incentive Stock Option, the Committee, in its discretion and subject to such rules as it may adopt, may permit the Participant to satisfy the obligation, in whole or in part, by making an irrevocable election that a portion of the total Fair Market Value of the shares of Stock subject to the Nonqualified Stock Option and/or with respect to certain dispositions of Stock acquired upon the exercise of an Incentive Stock Option, be paid in the form of cash in lieu of the issuance of Stock and that such cash payment be applied to the satisfaction of the withholding obligations. The amount to be withheld shall not exceed the statutory minimum federal and state income and employment tax liability arising from the Stock Option exercise transaction.
- 6.8 The Committee may permit the voluntary surrender of all or a portion of any Stock Option granted under the Plan to be conditioned upon the granting to the Participant of a new Stock Option for the same or a different number of shares of Stock as the Stock Option surrendered, or may require such surrender as a condition precedent to a grant of a new Stock Option to such Participant. Subject to the provisions of the Plan, such new Stock Option shall be exercisable at the such price, during such period and on such other terms and conditions as are specified by the Committee at the time the new Stock Option is granted. Upon surrender, the Stock Options surrendered shall be canceled and the shares of Stock previously subject to them shall be available for the grant of other Stock Options.

ARTICLE VII - RESTRICTED STOCK

- 7.1 Restricted Stock Awards may be made to certain Participants as an incentive for the performance of future services that will contribute materially to the successful operation of the Company. Awards of Restricted Stock may be made either alone, in addition to or in tandem with other Awards granted under the Plan and/or cash payments made outside of the Plan.
- 7.2 With respect to Awards of Restricted Stock, the Committee shall:
- (a) determine the purchase price, if any, to be paid for such Restricted Stock, which may be equal to or less than par value and may be zero, subject to such minimum consideration as may be required by applicable law;
 - (b) determine the length of the Restriction Period;
 - (c) determine any restrictions applicable to the Restricted Stock such as service or performance, other than those set forth in this Article VII;
 - (d) determine if the restrictions shall lapse as to all shares of Restricted Stock at the end of the Restriction Period or as to a portion of the shares of Restricted Stock in installments during the Restriction Period; and
 - (e) determine if dividends and other distributions on the Restricted Stock are to be paid currently to the Participant or paid to the Company for the account of the Participant.
- 7.3 Awards of Restricted Stock must be accepted within a period of 60 days, or such shorter period as the Committee may specify, by executing a Restricted Stock Agreement and paying whatever price, if any, is required. The prospective recipient of a Restricted Stock Award shall not have any rights with respect to such Award, unless such recipient has executed a Restricted Stock Agreement and has delivered a fully executed copy thereof to the Committee, and has otherwise complied with the applicable terms and conditions of such Award.
- 7.4 Except when the Committee determines otherwise, or as otherwise provided in the Restricted Stock Agreement, if a Participant terminates employment with the Company for any reason before the expiration of the Restriction Period, all shares of Restricted Stock still subject to restriction shall be forfeited by the Participant and shall be reacquired by the Company.
- 7.5 Except as otherwise provided in this Article VII or in the corresponding Agreement, no shares of Restricted Stock received by a Participant shall be sold, exchanged, transferred, pledged, hypothecated or otherwise disposed of during the Restriction Period.
- 7.6 To the extent not otherwise provided in a Restricted Stock Agreement, in cases of death, Disability or Retirement or in cases of special circumstances, the committee, if it finds that a waiver would be appropriate, may elect to waive any or all remaining restrictions with respect to such Participant's Restricted Stock.
- 7.7 In the event of hardship or other special circumstances of a Participant whose employment with the Company is involuntarily terminated, the Committee may waive in whole or in part any or all remaining restrictions with respect to any or all of the Participant's Restricted Stock, based on such factors and criteria as the Committee may deem appropriate.
- 7.8 The certificates representing shares of Restricted Stock may either:
- (a) be held in custody by the Company until the Restriction Period expires or until restrictions thereon otherwise lapse, and the Participant shall deliver to the Company a stock power endorsed in blank relating to the Restricted Stock; and/or
 - (b) be issued to the Participant and registered in the name of the

Participant, and shall bear an appropriate restrictive legend and shall be subject to appropriate stop-transfer orders.

- 7.9 Except as provided in this Article VII, a Participant receiving a Restricted Stock Award shall have, with respect to the shares of Restricted Stock covered by any Award, all of the rights of a shareholder of the Company, including the right to vote the shares to the extent, if any, such shares possess voting rights and the right to receive any dividends; provided, however, the Committee may require that any dividends on such shares of Restricted Stock shall be automatically deferred and reinvested in additional Restricted Stock subject to the same restrictions as the underlying Award, or may require that dividends and other distributions on Restricted Stock shall be paid to the Company for the account of the Participant. The Committee shall determine whether interest shall be paid on such amounts, the rate of any such interest, and the other terms applicable to such amounts.
- 7.10 If and when the Restriction Period expires without a prior forfeiture of the Restricted Stock subject to such Restriction Period, unrestricted certificates for such shares shall be delivered to the Participant; provided, however, that the Committee may cause such legend or legends to be placed on any such certificates as it may deem advisable under the rules, regulations and other requirements of the Securities and Exchange Commission and any applicable federal or state law.
- 7.11 In order to better ensure that Award payments actually reflect the performance of the Company and the service of the Participant, the Committee may provide, in its sole discretion, for a tandem performance-based or other Award designed to guarantee a minimum value,

payable in cash or Stock to the recipient of a Restricted Stock Award, subject to such performance, future service, deferral and other terms and conditions as may be specified by the Committee.

ARTICLE VIII - OTHER STOCK-BASED AWARDS

- 8.1 Other awards that are valued in whole or in part by reference to, or are otherwise based on, Stock ("Other Stock-Based Awards"), including without limitation, convertible preferred stock, convertible debentures, exchangeable securities, phantom stock and Stock awards or options valued by reference to book value or performance, may be granted either alone or in addition to or in tandem with Stock Options or Restricted Stock granted under the Plan and/or cash awards made outside of the Plan.

Subject to the provisions of the Plan, the Committee shall have authority to determine the Eligible Participants to whom and the time or times at which such Awards shall be made, the number of shares of Stock subject to such Awards, and all other conditions of the Awards. The Committee also may provide for the grant of shares of Stock upon the completion of a specified Performance Period.

The provisions of Other Stock-Based Awards need not be the same with respect to each recipient.

- 8.2 Other Stock-Based Awards made pursuant to this Article VIII shall be subject to the following terms and conditions:
- (a) Subject to the provisions of this Plan and the Agreement, shares of Stock subject to Awards made under this Article VIII may not be sold, assigned, transferred, pledged or otherwise encumbered prior to the date on which the shares are issued, or, if later, the date on which any applicable restriction, performance or deferral period lapses.
- (b) Subject to the provisions of this Plan and the Agreement and unless otherwise determined by the Committee at the time of the Award, the recipient of an Award under this Article VIII shall be entitled to receive, currently or on a deferred basis, interest or dividends or interest or dividend equivalents with respect to the number of shares covered by the Award, as determined at the time of the Award by the Committee, in its sole discretion, and the Committee may provide that such amounts, if any, shall be deemed to have been reinvested in additional Stock or otherwise reinvested.

- (c) Any Award under this Article VIII and any Stock covered by any such Award shall vest or be forfeited to the extent so provided in the Agreement, as determined by the Committee, in its sole discretion.
 - (d) Upon the Participant's Retirement, Disability or death, or in cases of special circumstances, the Committee may, in its sole discretion, waive in whole or in part any or all of the remaining limitations imposed hereunder, if any, with respect to any or all of an Award under this Article VIII.
 - (e) Each Award under this Article VIII shall be confirmed by, and subject to the terms of, an Agreement.
 - (f) Stock, including securities convertible into Stock, issued on a bonus basis under this Article VIII may be issued for no cash consideration.
- 8.3 Other Stock-Based Awards may include a phantom stock Award, which is subject to the following terms and conditions:
- (a) The Committee shall select the Eligible Participants who may receive phantom stock Awards. The Eligible Participant shall be awarded a phantom stock unit, which shall be the equivalent to a share of Stock.
 - (b) Under an Award of phantom stock, payment shall be made on the dates or dates as specified by the Committee or as stated in the Agreement and phantom stock Awards may be settled in cash, Stock, or some combination thereof as determined by the Committee in its sole discretion.
 - (c) The Committee shall determine such other terms and conditions of each Award as it deems necessary in its sole discretion.

ARTICLE IX - CHANGE IN CONTROL

- 9.1 A "Change in Control" shall be deemed to have occurred upon the happening of any of the following events:
- (a) Any "Person" as defined in Section 3(a)(9) of the Act, including a "group" (as that term is used in Sections 13(d)(3) and 14(d)(2) of the Act), but excluding the Company (as defined in Section 2.8 of this Plan) and any employee benefit plan sponsored or maintained by the Company (including any trustee of such plan acting as trustee), who together with its "affiliates" and "associates" (as those terms are defined in Rule 12b-2 under the Act) becomes the "Beneficial Owner" (within the meaning of Rule 13d-3 under the Act) of 20% or more of the then-outstanding shares of Stock or the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of its directors. For purposes of calculating the number of shares or voting power held by such Person and its affiliates and associates under this Section 9.1(a), there shall be excluded any securities acquired by such Person or its affiliates or associates directly from the Company.
 - (b) A sale or other disposition of all or substantially all of the Company's assets is consummated, other than such a sale or disposition that would not have constituted a Change of Control under subsection (d) below had it been structured as a merger or consolidation.
 - (c) The shareholders of the Company approve a definitive agreement or plan to liquidate the Company.
 - (d) A merger or consolidation of the Company with and into another entity is consummated, unless immediately following such transaction (1) more than 50% of the members of the governing body of the surviving entity were Incumbent Directors (as defined in subsection (e) below) at the time of execution of the initial agreement providing for such transaction, (2) no "Person" (as defined in Section 9.1(a) above), together with its "affiliates" and "associates" (as defined in Section

9.1(a) above), is the "Beneficial Owner" (as defined in Section 9.1(a) above), directly or indirectly, of 20% or more of the then-outstanding equity interests of the surviving entity or the combined voting power of the then-outstanding equity interests of the surviving entity entitled to vote generally in the election of members of its governing body, and (3) more than 50% of the then-outstanding equity interests of the surviving entity and the combined voting power of the then-outstanding equity interests of the surviving entity entitled to vote generally in the election of members of its governing body is "Beneficially Owned", directly or indirectly, by all or substantially all of the individuals and entities who were the "Beneficial Owners" of the shares of Stock immediately prior to such transaction in substantially the same proportions as their ownership immediately prior to such transaction.

- (e) During any period of 24 consecutive months during the existence of the Plan, the individuals who, at the beginning of such period, constitute the Board (the "Incumbent Directors") cease for any reason other than death to constitute at least a majority thereof; provided, however, that a director who was not a director at the beginning of such 24 month period shall be deemed to have satisfied such 24 month requirement, and be an Incumbent Director, if such director was elected by, or on the recommendation of or with the approval of, at least two-thirds of the directors who then qualified as Incumbent Directors either actually, because they were directors at the beginning of such 24 month period, or by prior operation of this Section 9.1(e), but excluding for this purpose any such individual whose initial assumption of office is in connection with an actual or threatened election context subject to Rule 14a-11 of Regulation 14A promulgated under the Act or other actual or threatened solicitation of proxies or consents by or on behalf of a "Person" (as defined in Section 9.1(a) above) other than the Board.
- 9.2 In the event of a Change in Control: (a) any or all then outstanding Stock Options having an Option Grant Date on or before January 31, 1999, to the extent not previously fully vested and exercisable, shall automatically become fully vested and, except to the extent such Options are cashed out pursuant to Section 9.4 below, exercisable effective immediately prior to the Change in Control; and (b) outstanding Stock Options having an Option Grant Date after January 31, 1999 shall vest and become exercisable only to the extent and in such manner as is provided in the applicable Agreement evidencing the Stock Option.
- 9.3 In the event of a Change in Control, the restrictions applicable to Awards of Restricted Stock or Other Stock-Based Awards shall automatically lapse effective immediately prior to the Change in Control, in which case, subject to the requirements of applicable law, the Company shall remove all restrictive legends and stop-transfer orders applicable to the certificates for such shares of Stock and deliver such certificates to the Participants in whose names they are registered.
- 9.4 Upon the occurrence of a Change in Control, the Committee may in its sole discretion and consistent with the requirements of applicable law decide to cash-out the value of all outstanding Stock Options, Restricted Stock and Other Stock-Based Awards, in each case to the extent vested pursuant to Sections 9.2 and/or 9.3 above or otherwise, on the basis of the "Change in Control Price" (as defined in Section 9.5) less the exercise price under such Award (if any) as of the date such Change in Control is determined to have occurred or such other date prior to the Change in Control as the Committee may determine.
- 9.5 For purposes of Section 9.4, "Change in Control Price" means the highest price per share of Stock paid in any transaction reported on the exchange on which the Stock is then traded or on the NASDAQ National Market System or the NASDAQ Small-Cap Market System, as the case may be, or paid or offered in any bona fide transaction related to a Change in Control, at any time during the 120 day period immediately preceding the occurrence of the Change in Control, as determined by the Committee.
- 9.6 The Committee is authorized to take such actions that are not inconsistent with Sections 9.2, 9.3, 9.4 and 9.5 above as the Committee determines to be necessary or advisable, and fair and equitable to Participants, with respect to an Award in the event of a Change in Control. Such action may

include, but shall not be limited to, establishing, amending or waiving the forms, terms, conditions and duration of an Award and the Agreement, so as to provide for earlier, later, extended or additional times for exercise or payment, differing methods for calculating payments and alternate forms and amounts of payment. The Committee may take such actions pursuant to this Section 9.6 by adopting rules and regulations of general applicability to all Participants or to certain categories of Participants, by including, amending or waiving terms and conditions in an Award and the Agreement, or by taking action with respect to individual Participants.

ARTICLE X - AMENDMENT AND TERMINATION

10.1 The Board, upon recommendation of the Committee, or otherwise, at any time and from time to time, may amend or terminate the Plan. To the extent required by Code Section 422, no amendment, without approval by the Company's shareholders, shall:

- (a) alter the group of persons eligible to participate in the Plan;
- (b) except as provided in Section 3.5, increase the maximum number of shares of Stock or Stock Options which are available for Awards under the Plan;
- (c) extend the period during which Incentive Stock Option Awards may be granted beyond the date which is ten (10) years following the Effective Date.
- (d) limit or restrict the powers of the Committee with respect to the administration of this Plan;
- (e) change the definition of an Eligible Participant for the purpose of an Incentive Stock Option or increase the limit or the value of shares of Stock for which an Eligible Participant may be granted an Incentive Stock Option;
- (f) materially increase the benefits accruing to Participants under this Plan;
- (g) materially modify the requirements as to eligibility for participation in this Plan; or
- (h) change any of the provisions of this Article X.

10.2 No amendment to or discontinuance of this Plan or any provision thereof by the Board or the shareholders of the Company shall, without the written consent of the Participant, adversely affect, as shall be determined by the Committee, any Award previously granted to such Participant under this Plan; provided, however, the Committee retains the right and power to:

- (a) annul any Award if the Participant is terminated for cause as determined by the Committee;
- (b) provide for the forfeiture of shares of Stock or other gain under an Award as determined by the Committee for competing against the Company; and
- (c) convert any outstanding Incentive Stock Option to a Nonqualified Stock Option.

10.3 If a Change in Control has occurred, no amendment or termination shall impair the rights of any person with respect to an outstanding Award as provided in Article IX.

ARTICLE XI - MISCELLANEOUS PROVISIONS

11.1 Nothing in the Plan or any Award granted hereunder shall confer upon any Participant any right to continue in the employ of the Company, or to serve as a director thereof, or interfere in any way with the right of the Company to terminate his or her employment at any time. Unless specifically provided otherwise, no Award granted under the Plan shall be

deemed salary or compensation for the purpose of computing benefits under any employee benefit plan or other arrangement of the Company for the benefit of its employees unless the Company shall determine otherwise. No Participant shall have any claim to an Award until it is actually granted under the Plan. To the extent that any person acquires a right to receive payments from the Company under the Plan, such right shall, except as otherwise provided by the Committee, be no greater than the right of an unsecured general creditor of the Company. All payments to be made hereunder shall be paid from the general funds of the company, and no special or separate fund shall be established and no segregation of assets shall be made to assure payment of such amounts, except as provided in Article VII with respect to Restricted Stock and except as otherwise provided by the Committee.

11.2 The Company may make such provisions and take such steps as it may deem necessary or appropriate for the withholding of any taxes which the Company is required by any law or regulation of any governmental authority, whether federal, state or local, domestic or foreign, to withhold in connection with any Stock Option or the exercise thereof, or in connection with any other type of equity-based compensation provided hereunder or the exercise thereof, including, but not limited to, the withholding of payment of all or any portion of such Award or another Award under this Plan until the Participant reimburses the Company for the

amount the Company is required to withhold with respect to such taxes, or canceling any portion of such Award or another Award under this Plan in an amount sufficient to reimburse itself for the amount it is required to so withhold, or selling any property contingently credited by the Company for the purpose of paying such Award or another Award under this Plan, in order to withhold or reimburse itself for the amount it is required to so withhold.

11.3 The Plan and the grant of Awards shall be subject to all applicable federal and state laws, rules, and regulations and to such approvals by any United States government or regulatory agency as may be required.

11.4 The terms of the Plan shall be binding upon the Company, and its successors and assigns.

11.5 Neither a Stock Option, nor any other type of equity-based compensation provided for hereunder, shall be transferable except as provided for herein. Unless otherwise provided by the Committee or in an Agreement, transfer restrictions shall only apply to Incentive Stock Options as required in Article IV and to the extent otherwise required by federal or state securities laws. If any Participant makes such a transfer in violation hereof, any obligation of the Company shall forthwith terminate.

11.6 This Plan and all actions taken hereunder shall be governed by the laws of the State of North Carolina.

11.7 The Plan is intended to constitute an "unfunded" plan for incentive and deferred compensation. With respect to any payments not yet made to a Participant by the Company, nothing contained herein shall give any such Participant any rights that are greater than those of a general creditor of the Company. In its sole discretion, the Committee may authorize the creation of trusts or other arrangements to meet the obligations created under the Plan to deliver shares of Stock or payments in lieu of or with respect to Awards hereunder; provided, however, that, unless the Committee otherwise determines with the consent of the affected Participant, the existence of such trusts or other arrangements is consistent with the "unfunded" status of the Plan.

11.8 Each Participant exercising an Award hereunder agrees to give the Committee prompt written notice of any election made by such Participant under Section 83(b) of the Code, or any similar provision thereof.

11.9 If any provision of this Plan or an Agreement is or becomes or is deemed invalid, illegal or unenforceable in any jurisdiction, or would disqualify the Plan or any Agreement under any law deemed applicable by the Committee, such provision shall be construed or deemed amended to conform to applicable laws or if it cannot be construed or deemed amended without, in the determination of the Committee, materially altering the intent of the Plan or the Agreement, it shall be stricken and the remainder of the

Plan or the Agreement shall remain in full force and effect.

[*] --Certain information omitted and filed separately with the Commission pursuant to a confidential treatment request under Commission Rule 24b-2.

FOURTH AMENDMENT
TO PURCHASE AGREEMENT

FOURTH AMENDMENT (this "Amendment"), dated and effective as of the 16th day of December, 1998 (the "Effective Date"), to the PURCHASE AGREEMENT dated September 6, 1996, as amended by the FIRST AMENDMENT dated April 22, 1997, as further amended by the SECOND AMENDMENT dated December 9, 1997, and as further amended by the THIRD AMENDMENT dated September 8, 1998 (as thus amended, the "Purchase Agreement" or "Agreement"), between CREE RESEARCH, INC. ("Seller"), a corporation organized under the laws of the State of North Carolina, the United States of America, and SIEMENS AKTIENGESELLSCHAFT ("Purchaser"), a corporation organized under the laws of the Federal Republic of Germany. As used in this Amendment, capitalized terms not defined herein which are defined in the Purchase Agreement shall have the meaning defined in the Purchase Agreement.

In consideration of the mutual provisions below the parties hereby agree as follows:

1. In Second Amended Schedule 1 annexed to the Third Amendment to this Agreement, the first sentence of Paragraph A(1) is amended to increase the number of GaN LEDs to be purchased during the year ending June 27, 1999 from ***** die to ***** die. In addition, the following is added at the end of such Paragraph A(1): "Purchaser will also purchase from Seller, during the period commencing June 28, 1999 and ending September 26, 1999, an additional ***** GaN LED die."
2. In Second Amended Schedule 1 annexed to the Third Amendment to this Agreement, the shipment schedule for GaN LED die in Paragraph B(1) is revised as follows (with no change being made to the shipment schedule given in such paragraph for other Products):

Product*	Quarterly (13-Week) Period Ending				
	9/27/98	12/27/98	3/29/99	6/27/99	9/26/99
GaN LED die (in K)	***** **	*****	*****	*****	*****

* As described in Third Amended Schedule 3.
** ***** was included in June 1998 shipments.

3. In Second Amended Schedule 2 annexed to the Third Amendment to this Agreement, the price schedule for GaN LEDs in the Paragraph (A)(1) is revised as follows:

Incremental Quantities	Unit Price (US\$)
0 to *****	\$*****
***** to *****	\$*****
***** to *****	\$*****
***** to *****	\$*****
***** to *****	\$*****
Greater than *****	\$*****

4. The Purchase Agreement as previously amended shall govern the prices and other terms applicable to Products shipped prior to the Effective Date of this Amendment; such prices are final and no adjustment is made by this Amendment. Except as amended hereby, the terms and conditions of the

Purchase Agreement shall continue in effect.

IN WITNESS WHEREOF, the parties, through their respective duly authorized officers, have executed this Amendment to be effective as of the Effective Date set out in the preamble hereto.

CREE RESEARCH, INC.

SIEMENS AKTIENGESELLSCHAFT

By /s/ F. Neal Hunter

F. Neal Hunter, President

By /s/ R. Mueller

R. Mueller, President, Opto
Semiconductors

Date

Date

By /s/ C. Hagan

C. Hagan, Vice President-
Finance & Admin.

Date 16.12.98

SECOND AMENDED AND RESTATED
INDEMNITY AGREEMENT

SECOND AMENDED AND RESTATED INDEMNITY AGREEMENT (this "Agreement"), made and entered into as of this the 25th day of September, 1998, by F. NEAL HUNTER, an individual residing in Durham County, North Carolina ("Hunter"), and CREE RESEARCH, INC., a North Carolina corporation ("Cree").

W I T N E S S E T H:

WHEREAS, Hunter serves as Cree's President and Chief Executive Officer, and as a member and Chairman of its Board of Directors, and holds a substantial number of shares of Cree's common stock; and

WHEREAS, Cree acquired 24,601 shares of the common stock of C3, Inc., a North Carolina corporation ("C3"), pursuant to an Assignment Agreement between Cree and C3 dated June 28, 1995 which gave Cree the right to acquire one percent of the outstanding common stock of C3 for \$500 but permitted C3 to waive the consideration and issue the stock at any time, which C3 elected to do in January 1997; and

WHEREAS, C3 conducted an initial public offering of its common stock in November 1997 and, pursuant to Hunter's direction after consultation with its Board of Directors, Cree purchased 100,000 shares in the offering, at the offering price of \$15 per share, based upon the judgment that the market price of the shares would likely increase and that the purchase would thus enhance Cree's value; and

WHEREAS, Cree has continued to monitor and evaluate its C3 holdings and has engaged in market transactions in C3 common stock since C3's public offering in 1997; and

WHEREAS, due to a decline in the market price of C3 stock and in order to avoid having Cree record a loss as a result of its C3 holdings, Hunter entered into an agreement with Cree on December 28, 1997 under which he promised to indemnify Cree against any losses that might result from the sale of its C3 stock, up to a maximum of \$300,000 (such agreement is referred to herein as the "Original Agreement"); and

WHEREAS, Hunter and Cree entered into an amendment and restatement of the Original Agreement on June 26, 1998 which increased the maximum amount of Hunter's obligation to \$400,000 and made certain other modifications (such amendment and restatement of the Original Agreement is referred to herein as the "First Amended Agreement");

WHEREAS, Hunter has reached an agreement with Cree to increase further the maximum amount of his indemnity and to modify the First Amended Agreement in certain other respects; and

WHEREAS, Hunter and Cree desire to memorialize their understanding and agreement by amending and restating the provisions of the First Amended Agreement as set forth below;

NOW, THEREFORE, for and in consideration of the foregoing premises and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, Hunter and Cree agree that the First Amended Agreement is hereby amended and restated to read as follows:

1. As used in this Agreement the following terms shall have the meaning indicated:

(a) "Measurement Date" means the date on which Hunter receives a written demand for payment under this Agreement in accordance with paragraph 4 below.

(b) "Fair Market Value" of the C3 common stock means, with respect to a given Measurement Date,

(i) the last sale price reported on the Measurement Date (or,

if none, on the nearest preceding trading day) on (A) The Nasdaq Stock Market, if the stock is listed on The Nasdaq Stock Market on the Measurement Date, or (B) if the stock is not then listed on The Nasdaq Stock Market, then on the principal exchange on which the stock is then listed, or

(ii) if the stock is not then listed on any exchange, then the fair market value on the Measurement Date (A) as determined by mutual agreement of the parties or (B) if the parties are unable to reach such agreement within thirty days after the Measurement Date, then as determined by a panel of three arbitrators appointed in accordance with the arbitration rules of the American Arbitration Association.

2. Subject to the terms and conditions of this Agreement Hunter will pay Cree an amount equal to:

(a) the excess, if any, of (x) the aggregate cash consideration paid by or due from Cree for shares of C3 common stock acquired at any time on or before the Measurement Date over (y) the aggregate cash proceeds received by or due to Cree for shares of C3 common stock sold at any time on or before the Measurement Date; less

(b) the Fair Market Value of shares of C3 common stock held by Cree at the close of business on the Measurement Date.

3. Commissions and other trading expenses shall be disregarded for purposes of this Agreement.

4. Payment of amounts due under this Agreement shall be made within ten (10) days after receipt by Hunter of Cree's written demand therefor. The demand must be made pursuant to the vote or written consent of a majority of the members of the Board of Directors of Cree other than Hunter.

5. Hunter's maximum liability under this Agreement shall in no event exceed Four Hundred Fifty Thousand Dollars (\$450,000.00).

6. This Agreement shall be binding upon and inure to the benefit of Hunter and his heirs, personal representatives, successors and assigns and upon Cree and its successors and assigns. This Agreement shall be governed by the laws of the State of North Carolina. This Agreement shall not be amended except in a document executed on behalf of both parties.

IN WITNESS WHEREOF, the parties have executed this Agreement and affixed their respective seals hereto as of the date first stated in the preamble above.

/s/ F. Neal Hunter (SEAL)

F. Neal Hunter

CREE RESEARCH, INC.

(CORPORATE SEAL)

Attest: By: /s/ Charles M. Swoboda

Charles M. Swoboda, Vice President

/s/ Adam H. Broome

Adam H. Broome, Secretary

<ARTICLE> 5

<LEGEND>

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE ACCOMPANYING FINANCIAL STATEMENTS AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

</LEGEND>

<CIK> 0000895419
<NAME> CREE RESEARCH, INC.
<MULTIPLIER> 1,000
<CURRENCY> U.S. DOLLARS

<PERIOD-TYPE>	6-MOS
<FISCAL-YEAR-END>	JUN-27-1999
<PERIOD-START>	JUN-29-1998
<PERIOD-END>	DEC-27-1998
<EXCHANGE-RATE>	1
<CASH>	12,769
<SECURITIES>	905
<RECEIVABLES>	12,261
<ALLOWANCES>	151
<INVENTORY>	3,402
<CURRENT-ASSETS>	30,141
<PP&E>	56,989
<DEPRECIATION>	12,017
<TOTAL-ASSETS>	78,103
<CURRENT-LIABILITIES>	5,758
<BONDS>	0
<PREFERRED-MANDATORY>	0
<PREFERRED>	0
<COMMON>	49,648
<OTHER-SE>	10,341
<TOTAL-LIABILITY-AND-EQUITY>	59,989
<SALES>	26,317
<TOTAL-REVENUES>	26,317
<CGS>	14,044
<TOTAL-COSTS>	19,071
<OTHER-EXPENSES>	0
<LOSS-PROVISION>	0
<INTEREST-EXPENSE>	(115)
<INCOME-PRETAX>	7,246
<INCOME-TAX>	2,029
<INCOME-CONTINUING>	5,217
<DISCONTINUED>	0
<EXTRAORDINARY>	0
<CHANGES>	0
<NET-INCOME>	5,217
<EPS-PRIMARY>	0.41
<EPS-DILUTED>	0.39

RISK FACTORS

The risks and uncertainties described below 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 impair our business operations. If any of the following risks actually occurs, our business, financial condition or results of future operations could be materially and adversely affected.

Our Operating Results May Fluctuate Significantly and We May Not Be Able to Maintain Our Existing Growth Rate.

Although we have had significant revenue and earnings growth in recent quarters, we may not be able to sustain these growth rates and we may experience significant fluctuations in our revenue and earnings in the future. Our operating results will depend on many factors, including the following:

- our ability to develop, manufacture and deliver products in a timely and cost-effective manner;
- whether we encounter low levels of usable product produced during each manufacturing step (our "yield");
- our ability to expand our production of Silicon Carbide ("SiC") wafers and devices;
- demand for our products;
- demand for our customers' products;
- competition; and
- general industry and global economic conditions.

Our future operating results could be adversely affected by these or other factors. If our future operating results are below the expectations of stock market analysts or our investors, our stock price may decline.

If We Experience Poor Production Yields, Our Operating Results May Suffer.

Our SiC products are manufactured using technologies that are highly complex. Our customers incorporate our products into high volume applications such as automotive dashboards, wireless handsets, full color video displays and gemstones, and they insist that our products meet exact specifications for quality, performance and reliability.

The number of usable crystals, wafers and devices that result from our production processes can fluctuate as a result of many factors, including 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 other human error; and
- defects in packaging.

Because many of our manufacturing costs are fixed, if our yields decrease our operating results would be adversely affected. For this reason, we are constantly trying to improve our yields.

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. These problems could significantly affect our future operating results.

If We Are Unable to Produce Adequate Quantities of Our High Brightness Blue and Green LEDs, Our Operating Results May Suffer.

We are currently beginning the manufacture of commercial quantities of high brightness blue and green LEDs, and as a result we have incurred certain fixed costs. We believe that high volume production of these products will be important to our future operating results. Achieving greater volumes requires improved production yields for these products. Successful production of these

products is subject to a number of risks, including the following:

- our ability to consistently manufacture these products in volumes large enough to cover our fixed costs and satisfy our customers' requirements;
- our ability to improve our yields and reduce the costs associated with the manufacture of these products; and
- whether these products gain market acceptance.

Our inability to produce adequate quantities of our high brightness blue and green products 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 high power radio frequency and microwave devices, power devices, blue laser diodes and high temperature devices. 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; 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 Depend on a Few Large Customers.

Historically, a substantial portion of our revenue has come from large purchases by a small number of customers. We expect that trend to continue. For example, for fiscal 1998 our top five customers accounted for 81% of our total revenue. For the six months ended December 27, 1998, our top five customers accounted for 79% of our total revenue. (These percentages consider sales to a distributor as sales to one customer). Sales to Siemens AG during both periods accounted for 40% of our total revenue. In addition, sales to C3, Inc. accounted for 11% of our total revenue in fiscal 1998 and 18% of our total revenue in the six months ended December 27, 1998. 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 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.

We Face Challenges Relating to Expansion of Our Production and Manufacturing Facility.

In order to increase production at our new facility, we must add critical new equipment, move existing equipment and complete the remaining phases of building out the facility. We are in the process of completing this build-out and expect to construct additional facilities in the future. Expansion activities such as these are subject to a number of risks, including the following:

- unforeseen environmental or engineering problems relating to existing or new facilities;
- unavailability or late delivery of the advanced, and often customized, equipment used in the production of our products;

- unavailability of funds necessary for expansion;
- work stoppages and delays; and
- delays in bringing production equipment on-line.

These and other risks may affect the ultimate cost and timing of the build-out of our existing facility, as well as the construction of new facilities, which could adversely affect our business, results of operations and financial condition.

The Ongoing Operation of Our Manufacturing Facility Is Critical to Our Business.

In November 1997, we acquired our present principal facility in Durham, North Carolina, which includes a total of 172,000 square feet. The ongoing operation of this facility is crucial to our strategy of expanding our manufacturing capacity to meet demand for our SiC products now and in the future.

We began commercial production of products from this facility in August 1998. We expect that production from the facility will increase throughout the remainder of fiscal 1999 and into fiscal 2000. A number of factors will affect the successful operation of this facility and our business, including the following:

- demand for our products;
- our production yields;
- our ability to generate revenues in amounts that cover the significant fixed costs of operating our facility;
- our ability to hire, train and manage qualified production personnel; and
- our inability to use all or a significant portion of our facility for prolonged periods of time for any reason -- for example, a fire or explosion caused by our use of combustible chemicals and high temperatures during certain of our manufacturing processes.

We Face Significant Challenges Managing Our Rapid Growth.

We are experiencing a period of significant growth that will continue to place a great strain on our management and other resources. We have grown from 188 employees on December 31, 1996 to 297 employees on December 27, 1998 and from revenues of \$29.0 million for the fiscal

year ended June 30, 1997 to \$42.5 million for the fiscal year ended June 28, 1998. To manage our growth effectively, we must continue to:

- implement and improve operational systems;
- maintain adequate physical plant, manufacturing facilities and equipment to meet customer demand;
- add experienced senior level managers; and
- attract and retain qualified people with experience in engineering, design, technical marketing and support.

We will spend substantial amounts of money in connection with our rapid 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.

The Markets In Which We Operate Are Highly Competitive.

The market for our products is highly competitive. Although we believe our SiC-based LEDs offer substantial advantages, competitors currently sell blue and green LEDs made from sapphire wafers that are brighter than the high brightness LEDs we currently produce. In addition, we believe that other firms (including certain of our customers) may seek to enter the blue and green LED market in the future. For example, Siemens AG and Shin-Etsu Handotai Co. Ltd. license certain of our LED technology, which may facilitate their entrance into our LED markets. 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.

Also, other firms may develop new or enhanced products that are more effective than any that we have developed or may develop. These firms may develop

technology that produces commercial products with characteristics similar to SiC-based products, but at a lower cost. Many existing and potential competitors have far greater financial, marketing and other resources than we do. We believe that present and future competitors will aggressively pursue the development and sale of competing products. We also expect significant competition for products we are currently developing, such as those for use in microwave communications.

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. Any of these developments could have an adverse effect on our business, results of operations and financial condition.

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 SiC 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 efforts could be hampered significantly. Although we believe our relationship with our suppliers is good, we cannot assure you that we will continue to maintain good relationships with such suppliers or that such suppliers will continue to exist.

If Government Agencies or Other Customers Discontinue Their Funding for Our Research and Development of SiC Technology, Our Business May Suffer.

In the past, government agencies and other customers have funded a significant portion of our research and development activities. If this support 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.

We Depend Heavily on Key Personnel.

Our success depends in part on keeping key technical and management personnel. For example, some of the equipment used in the production of our products must be modified before it is put to use and only a limited number of employees possess the expertise needed to perform these modifications. Furthermore, the number of individuals with experience in the production of SiC and related products is limited, and our future success depends in part on retaining those individuals who are already employees.

We must also continue to attract qualified personnel. The competition for qualified personnel is intense, and the number of people with the experience that we need is limited. We cannot be sure that we will be able to continue to attract and retain other skilled personnel in the future.

Limitations on the Protection of Our Intellectual Property.

Our intellectual property position is based on patents exclusively licensed to us by North Carolina State University, also known as N.C. State, and on patents owned by us. The licensed patents give us rights to our SiC crystal growth process. The expiration dates on the U.S. patents we license from N.C. State run from 2007 to 2009. We also own 43 U.S. patents relating to various aspects of our technology and have other patent applications pending. The issued U.S. patents we own expire between 2008 and 2016. We have obtained (or licensed from N.C. State) a number of patents covering these same technologies in key foreign jurisdictions.

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, but we cannot be sure that any other patents will be issued on such applications or that our patents will not be contested. In the past, one of the important patents we license from N.C. State relating to crystal growth was subject to re-examination in the U.S. but we prevailed in the proceeding. Currently, the corresponding

European patent is being challenged, which means that we could lose patent protection in certain European countries for this particular method. There is no assurance that other of our patents will not be contested. Also, because

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 N.C. State or other parties and licensed to us) will provide significant commercial protection.

In addition to patent protection, we also rely on trade secrets, technical know-how and other unpatented proprietary information relating to our product development and manufacturing activities. We try to protect this information with confidentiality agreements with our employees and other parties. We cannot be sure that these agreements will not be breached, that we would have adequate remedies for any breach or that our trade secrets and proprietary know-how will not otherwise become known or independently discovered by others.

Our Operations Could Infringe Upon the Intellectual Property Rights of Others.

Particular aspects of our technology could be found to infringe the claims of other existing or future patents. Other companies may hold or obtain patents on inventions or may otherwise claim proprietary rights to technology necessary to our business. We cannot predict the extent to which we may be required to seek licenses.

We Are Subject to Risks From International Sales.

Sales to customers located outside the U.S. accounted for about 69% of our revenue in fiscal 1996, about 79% of our revenue in fiscal 1997, about 74% of our revenue in fiscal 1998 and about 62% of our revenue in the first six months of fiscal 1999.

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, the emergence of the Euro, trading restrictions, tariffs, trade barriers and taxes. Also, future U.S. Government or military export restrictions could limit or prohibit sales of our products to customers in certain countries because of their uses in military or surveillance 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, 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.

We Are Subject to Stringent Environmental Regulation.

We are subject to a variety of government regulations pertaining to chemical and waste discharges and other aspects of our manufacturing process. For example, we are responsible for the management of the hazardous materials we use and disposal of hazardous waste resulting from our manufacturing process. The proper handling and disposal of such hazardous material and waste requires us to comply with certain government regulations. We believe we are in full

compliance with such regulations as of the date of this filing, but any failure, whether intentional or inadvertent, to comply with such regulations could have an adverse effect on our business. In addition, these regulations may affect our ability to expand or change our manufacturing facility.

Our Stock Price is Volatile.

The market price of our common stock has been and may continue to be subject to wide fluctuations. Factors affecting our stock price may include:

- variations in operating results from quarter to quarter;
- changes in earning estimates by analysts;
- market conditions in the industry; and
- general economic conditions.

Our stock price has fluctuated widely. For example, between November 1997 and January 1998 the price of our common stock dropped from approximately \$29.50 to \$13.50 per share. Between August 1998 and January 11, 1999, the price of our common stock rose from approximately \$10.50 to \$53.25 per share. Consequently, the current market price of our common stock may not be indicative of future

market prices.

We Face Risks Concerning Year 2000 Issues.

We are evaluating all of our internal computers, computer equipment and other equipment with embedded technology against Year 2000 concerns. Although we believe our planning efforts are adequate to address our Year 2000 concerns, it is still possible that we could experience negative consequences and material costs caused by undetected errors or defects in the technology used in our internal systems. Our most significant Year 2000 risk is that the systems of other parties on which we rely, specifically our key suppliers, will not be compliant on a timely basis. Any disruption in delivery of supplies to us that is caused by a third party's failure to address Year 2000 issues would affect our ability to manufacture our products, which could result in a material adverse effect on our business, operating results and financial condition.

At this time, we are unable to estimate the most likely worst-case effects of the arrival of the Year 2000 and we do not have a contingency plan for any unanticipated negative effects.