State of The SSL Industry

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Disclosure: Forward-Looking Statements

This presentation includes forward-looking statements about Cree’s business outlook, future financial results, product markets, plans and objectives for future operations, and product development programs and goals. These statements are subject to risks and uncertainties, both known and unknown, that may cause actual results to differ materially, as discussed in our most recent annual report for fiscal 2009 filed with the SEC.

Important factors that could cause actual results to differ materially include current uncertainty in global market conditions that could negatively affect product demand, collectability of receivables and other related matters; our ability to successfully develop new products; our ability to lower costs; increasing price competition; the complexity of our manufacturing processes and the risk of production delays and higher than expected costs; risks associated with the ramp-up of production for new and existing products; the rapid pace of technology development that could affect demand; and the difficulty of estimating future market demand for our products.

The forward-looking statements in this presentation were based on management’s analysis of information available at the time the presentation was prepared and on assumptions deemed reasonable by management. Our industry and business are constantly evolving, and Cree assumes no duty to update such forward-looking statements to reflect subsequent developments.
Agenda

• Cree Overview

• Background for The LED Lighting Revolution
  – Why now?

• Evidence of the Revolution - Rapid Deployment
A Global Company

Founded in 1987

- Public since 1993 (Nasdaq: CREE)
- Headquartered in Durham, NC
- Strong patent portfolio
  - 601 U.S. patents and 1094 foreign patents

Global Reach

- 11 Major Locations
- 4,500 Employees
- Fiscal 2010 Revenues $867M
Company Mission

Lead the LED Lighting Revolution and obsolete energy-inefficient light bulbs
Cree LED Lighting Strategy

**Market Opportunity**

- **LED Lighting**
  - Lead the market & accelerate adoption
  - Create demand/pull for LED lighting

- **LED Components**
  - Drive Revenue
  - Enable the market with “lighting-class” LEDs

- **LED Chips**
  - Technology to enable components
WHY LED LIGHTING, NOW?
Almost No One Survives Solid State Transitions

- **Vacuum Tubes** (1940s – 1960s) → **Transistors**
- **VHS** (1980s – 1990s) → **DVD**
- **CRT TV** (1990s – 2000s) → **Flat Panel TV and Displays**
- **Film** (1990s – 2000s) → **Flash Memory**
- **“Brick” phones** (1990s – 2000s) → **Smart phones**
- **Light Bulbs/Fluorescent Tubes** (2000s – …) → **Solid State Lighting**
Why Now?

10 Reasons:

1. 2 World trends
2. US EPA and DOE “Get It”
3. Traditional bulbs have big problems
4. The market is attractive
5. Superior performance
6. Superior reliability
7. Standards are in place
8. Technology continues to improve
9. Cost has dropped dramatically
10. Competitors see the LED light
1. Two Global Macro Trends

1. Limited energy availability and high cost

   Electricity Consumption Worldwide

   - Lighting 18-22%

2. “Green” movement

   - 2012: Cree’s production alone could save equivalent of 14 coal-fired generators

Source: EIA and Cree Analysis
2. Both EPA and DOE “Get It”

- DOE estimating 2030 consumption
  - Lighting energy use will be well below 2010 level
    - *Largely to LED lighting*
  - The LED scenario represents a reduction of 25% of total electrical energy consumption
    - *Savings is equivalent to 25, large nuclear generators*

Source: DOE, Energy Savings Potential of Solid-State Lighting in General Illumination Applications 2010 to 2030
Why Choose ENERGY STAR Qualified LED Lighting?

LED lighting is a rapidly evolving technology that produces light in a whole new way. It is already beginning to surpass the quality and efficiency of existing lighting technologies, such as fluorescent and incandescent — but not all LED lighting is created equal.
3. Traditional Technologies Have Big Problems

• Incandescents not efficient enough
  - “Space heater that gives off a little light”
  - Banned worldwide over next 10 years

• Fluorescents have mercury that end up in landfills
  - Bio-accumulating neurotoxin
  - 2.2 BILLION bulbs could be produced this year (Datapoint 2008 report)
  - See EPA website for issues with breakage
  - Recycling behavior is very, very low for residential
  - Now, with LEDs, they are not even necessary

Source: EPA
4. The Market is Attractive

$119 Billion*

- Fixtures
- Bulbs

Applications

- Commercial/Industrial
- Residential

*Source: Freedonia Group estimate for 2007
5. Superior Performance

Theoretical maximum for LED
6. Superior Reliability

Cree White XLamp Long Term Lumen Maintenance
(Ambient Temperature = 25C, Junction Temperature = 65C)

% LF

time (hours)

study name: Derr03WTest#52#53RTOL
7. Standards are in Place

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Status of NEMA, ANSI, IES, IEC, and CIE Solid State Lighting Standards (Partial List)
Standards Under Development

• **TM-21**
  - An IESNA Technical Memorandum currently under development
  - Recommendations for projecting long-term lumen maintenance per IES M-80-08
  - Representatives from major LED manufacturers and other SSL organizations have been involved
  - PNNL (Pacific Northwest National Labs) has been providing technical support in developing the document
  - Completion of the document is currently targeted for February 2011
8. Technology Continues to Improve

Lumens/Wafer

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9. Cost has Dropped Dramatically

Different lighting applications turn on at different LED cost/lumen points.
LED’s Are *No Longer* the Cost Issue

**LED Fixture Costs**

- LEDs: 35%
- Power Supply: 65%
- Mechanics
- Drive Circuit
- Optics
- Labor & OHD
10. Competitors Can See the LED Light

General Illumination Market**

* Strategies Unlimited 2009 / **Philips Lighting 2009

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EVIDENCE - RAPID DEPLOYMENT
CREE Lights Up the Olympics

- 盤古廣場 LED 顯示屏
- CREE LED LAMP
- 鳥巢體育場地屏 CREE LED LAMP
- 水立方
- CREE XLamp LED
- 奧運廣場和水立方之間
- 柱形信息柱
- CREE SMD LED
- 鳥巢外牆燈光
- CREE XLamp LED
Spokane, Washington

- 100% off grid
- Portable
- Dimmable
- Dark-sky compliant
High Bay lighting is an emerging application

- 50% + energy savings
- Lifetime 2-3x traditional lighting
- ROI < 1 year

Photo credit: Dialight
Walmart Stores

650 stores to install the LRP-38 during the first year

• 82% energy savings vs. ceramic metal halide

• 5+ year life in a 24/7 operating environment

Courtesy of John Sutton (2009)
Anchorage, AK

Courtesy of BetaLED
Los Angeles, CA
Edgewood, USA

Courtesy of BetaLED
Parma, Italy

Courtesy of BetaLED
Raleigh, USA

New Raleigh Convention Center
Hotels
Hyatt Regency Grand Cypress Resort

LRP-38™ and LR6™ lighting installed in the lobby and hallways

- > 80% energy savings vs. halogen
- ROI ~9 months
Chicago, USA

Photo Derry Berrigan, DBLD
Restaurants

- 80% Energy Savings
- Excellent Color Rendering (CRI >92)
North Carolina’s first eco-friendly McDonald’s is lit with Cree LEDs

- 78% energy reduction from baseline store
- 97% of lighting is high-performance LEDs
Yum Brands

- 81% energy reduction from baseline store
- 95% of lighting is high-performance LEDs

Courtesy of Derry Berrigan, DBLD
University of California

Courtesy of BetaLED
Results: Recognition
...Back in Durham.....
LED lighting: Energy efficient & planet friendly.

Cree. Leading the LED lighting revolution.

Join Cree’s LED lighting revolution. We invite you to see how our high-performance, high-efficiency LEDs are lighting up the world.