



Introduction

Purpose

- Provide an Overview of Cree's LMH2 Module

Objective

- Explain Cree's approach to LED Modules
- Give a brief summary of LHM2's Performance Options, Components and Features
- Highlight the New LMH2 Dome Optic
- Review which LMH2 works best versus various incumbent solutions
- Compare LMH2 performance versus specific incumbent solutions
- Demonstrate how LMH2 is at cost parity with incumbent solutions with superior performance

Content

- 13 slides

Content

- 15 Minutes

Cree Modules are Complete Light Engines & Drivers



Light Source with Primary Optics



Driver with Dimming options



LMH2 Also Available with Dome Optic



Optional Heat Sink

All Cree modules safety rated for RESIDENTIAL or COMMERCIAL

Cree Modules – The LED Design Solution for You

Highest efficacy

90+ CRI
TrueWhite®
Technology

Color
consistency

5 year
warranty

Highest
Performing
LEDs with
Low System
Cost

Faster Time
to Market

Concurrently
designed &
tested

Reduced
design steps

UL Recognized
& CE Compliant

Form Factor
Stability

Design investment ROI

Incorporate technology updates without design changes









Module Family	LMH2			
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Nominal Luminous Flux (lm)	850	1250	2000	3000
Available CCT (K)	2700, 3000, 3500, 4000			
CRI	90+			
Average Input Power (W)	10.5	15.5	25	37.5
Average System Efficacy (LPW)	80	80	80	80
Light Source LPW (LPW)	98	98	98	98

Drivers:				
230V	TRIAC	TRIAC	DALI/Touch	DALI/Touch
120, 230, 277V Universal	End of Summer	End of Summer	0-10/1-10v	0-10/1-10v
120V	TRIAC	TRIAC	(See universal)	(See Universal)
277V	Non Dim	Non Dim	(See Universal)	(See Universal)

Regulator and Standards	 CE Compliant	 CISPR-22 Class B Compliant	 UL Recognized	 T24 Compliant	 FCC Part 15 Class B Compliant
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LMH2



Lumen Levels - 850, 1250, 2000, 3000

CCT - 2700, 3000, 3500 & 4000K

TrueWhite® 90+ CRI

1-10V/0-10V

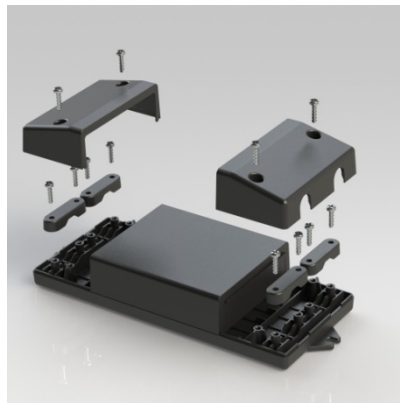
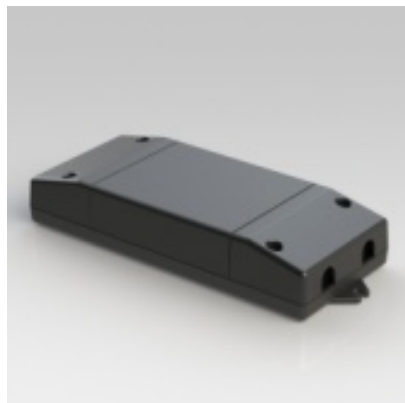
- Universal - 277V, 230V, 120
- *One SKU, many input voltages*
- Works with 2000lm and 3000lm modules



DALI/Touch

- *230V (DALI/Touch)*
- *Built in strain relief*
- *Option for conduit attachment*
- *Works with 2000lm and 3000lm modules*

Triac Available for 850 and 1250lm

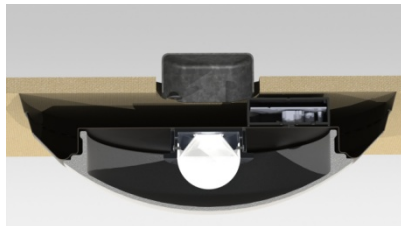
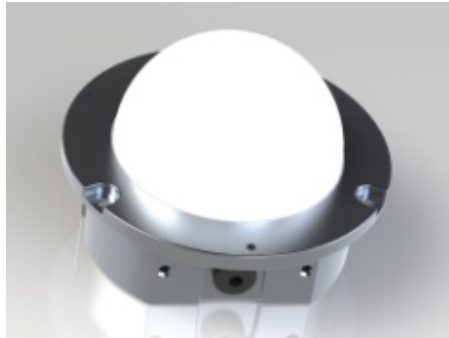




LMH2 With Dome Optic



- Dome optic provides omni-directional Light source
- Excellent for flush mounts, lamps, pendants.
- More complete color mixing in applications with specular reflectors.
- Up to a five percent increase in system efficacy compared to the standard lens and delivers an unrivalled hemispheric light pattern





LMH2 Versus Incumbent Light Sources

	21W CFL	26W CFL	32W CFL	42W CFL	2x26W CFL	2x32W CFL
LMH2-850	X					
LMH2-1250		X				
LMH2-2000			X	X	X	
LMH2-3000				X	X	X

	75W PAR	100W PAR
LMH2-850	X	
LMH2-1250		X

	50W HID	70W HID
LMH2-2000	X	
LMH2-3000		X



LMH2 - 2000lm → 32W CFL

In a Commercial application @ 3000K



Performance:	32W CFL 70% Efficient Sys	LMH2-2000 (24W)
Lumens	Design Mean: 2050 Luminaire: 1435	Source: 2000 Luminaire: 1700-1800
Luminaire LPW	44	72-75
CRI	80	90+
Life	12,000-16,000*	50,000+ L70

- *Tested with no more than 1 on/off cycle every 3 hours. Under typical use, or used with an occupancy sensor expect half that.



LMH2 - 3000lm → 2 x 26W CFL

In a Commercial application @ 3000K



Performance:	2x26W CFL 50-55% Efficient Sys	LMH2-3000 (37W)
Lumens	Lamp Design Mean: 3100 Luminaire: 1550-1800	Source: 3000 Luminaire: 2550-2700
Luminaire LPW	29-34	70-72
CRI	80	90+
Life	12,000-16,000*	50,000+ L70

- *Tested with no more than 1 on/off cycle every 3 hours. Under typical use, or used with an occupancy sensor expect half that.





LMH2 - Cost parity vs. Incumbent technologies

- **LMH2 Light Source + Driver = Price of typical lamp + ballast**
- **Immediate savings from lower energy usage + lower maintenance cost**
- **Significant savings from 4x the lifetime**
- **Superior CRI and lumen performance versus incumbent technologies**
- **Dimming and controllability of LMH2 superior to incumbent technologies**



LMH2 – Summary

- LMH2 delivers ease-of use and shortens your time to market
- Compact, two-piece design – separate light source and driver for greater flexibility
- Features Cree TrueWhite® Technology - a revolutionary way to generate white light with LEDs. Cree TrueWhite® Technology delivers high efficiency with beautiful light characteristics and color accuracy, while maintaining color consistency over the life of the product.
- The LMH2 is the only LED module delivering 80-lumens-per-watt system efficacy combined with CRI greater than 90 for all available color temperatures
- Backed by industry-leading warranty, UL recognized, CE compliant
- Available in a range of lumen, color temperature and driver options,



PORTABLE



RESIDENTIAL



OFFICE



RETAIL



ARCHITECTURAL



OUTDOOR

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.

