Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Cree Standard MHD-G LED Module
Power of Cree in Standard and Custom LED modules

Data Sheet

Illumination Accelerated

Design Faster – use standard, UL-listed modules
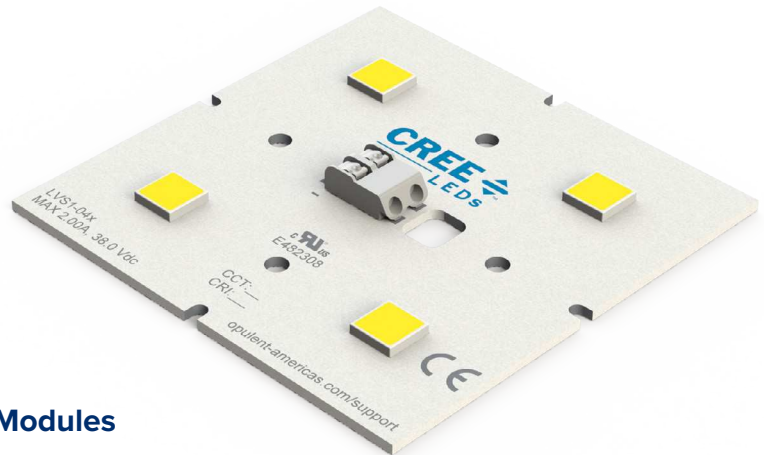**Superior Performance & Cost** – top flux bin LEDs at competitive prices
Thermal Interface Included – pre-installed to simplify assembly
Add Standard Optics – configured for off-the-shelf optics

Primary Applications

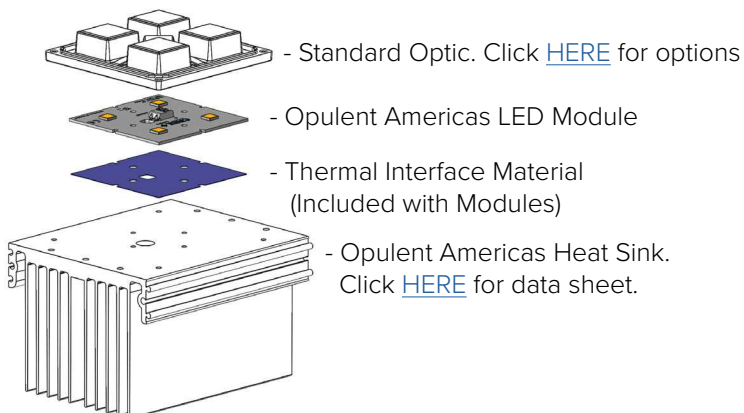|	
High Mast	Canopy
Streetlight	Garage
Stadium	Portable
Architectural	High bay

Superior Performance in Standard & Custom Modules

• 70, 80, and 90 CRI LEDs available
• Metal core PCB for optimal thermal management
• Configurable with off the shelf optics, and heat sinks
• Private label or custom designs available

Simplify Your Next Design

The Cree standard MHD-G modules are an off-the-shelf platform to rapidly move from prototype to finished LED lighting fixture. The thermal interface is already installed with easy to use connectors to help simplify the lighting design and get to market faster. These competitively priced, UL listed, modules come in a range of lumen outputs and can achieve both DLC Premium or DLC Standard lumens per watt specifications.

Integrate Further

Opulent Americas also offers standard heat sinks and fully assembled IP-rated modules.

- Standard Optic. Click HERE for options

- Opulent Americas LED Module

- Thermal Interface Material (Included with Modules)

- Opulent Americas Heat Sink. Click HERE for data sheet.

About Opulent Americas

Opulent Americas, part of Singapore based Opulent Group, is a fully integrated, global manufacturer for the lighting, automotive and medical industries. Through 30 years of manufacturing experience and state-of-the-art facilities, the company offers leading solid state lighting components and modules. The NC-based office provides quick engineering & sales support with an R&D lab to provide prototype development and custom solutions. See Opulent-Americas.com for more information.

RoHS   E482308   CE

Last Modified: 01/04/17

MHD-G Series Product Selection Table

Configuration	LED Layout	Part Number	CCT	CRI	Binning	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
						Nominal	Max		Nominal	Max
Square[1]	2x2	LVS1-04C05-2780-00	2700K	80	3-Step	2870	6796	120	23.9	76
Square[1]	2x2	LVS1-04C05-2790-00	2700K	90	3-Step	2492	5902	104	23.9	76
Square[1]	2x2	LVS1-04C05-3080-00	3000K	80	3-Step	3070	7272	128	23.9	76
Square[1]	2x2	LVS1-04C05-3090-00	3000K	90	3-Step	2670	6324	111	23.9	76
Square[1]	2x2	LVS1-04C05-4070-00	4000K	70	5-Step	3304	7824	138	23.9	76
Square[1]	2x2	LVS1-04C05-4080-00	4000K	80	3-Step	3070	7272	128	23.9	76
Square[1]	2x2	LVS1-04C05-5070-00	5000K	70	5-Step	3537	8376	148	23.9	76
Square[1]	2x2	LVS1-04C05-5080-00	5000K	80	3-Step	3304	7826	138	23.9	76
Square[1]	2x2	LVS1-04C05-5770-00	5700K	70	5-Step	3537	8376	148	23.9	76

[1] Nominal product performance at 350mA Tj = 85°C.

[2] Cree XLamp MHD-G LED order codes specify only a minimum flux bin and not a maximum. Opulent North America may ship modules in flux bins higher than the minimum specified by the order code without advance notice. Shipments will always adhere to the chromaticity bin restrictions specified by the order code.

MHD-G Series Specifications

Order Code Formatting

Series	-	LED Count	LED Code	-	Color Temperature	Color Rendering Index	-	Internal Code
LVS1 - High Power Array LED PCB Assembly, Square		04 - 4 LEDs	C05 - Cree MHDG		27 - 2700K	70 - 70 CRI		XX
					30 - 3000K	80 - 80 CRI		
					40 - 4000K	90 - 90 CRI		
					50 - 5000K			
					57 - 5700K			

MHD-G Series Electrical Characteristics

Part Number	Forward Voltage (v)		Typical Thermal Resistance - Juntion to Solder Point (°C/W) RTh J-HS
	Typical	Maximum	
LVS1-04x	34.2	38.0	2.6

Intended for connection to a class 2 power source with a maximum operating voltage of 50 Vdc

Maximum Ratings
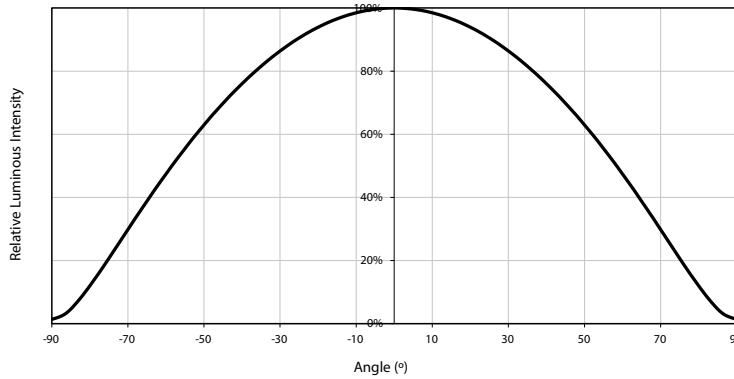
Part Number	DC Current (A)	Tc Temp (°C)	Power (W)
LVS1-04x	2.0	125	76.0

Relative Flux Vs Board Current (TJ = 85°C)
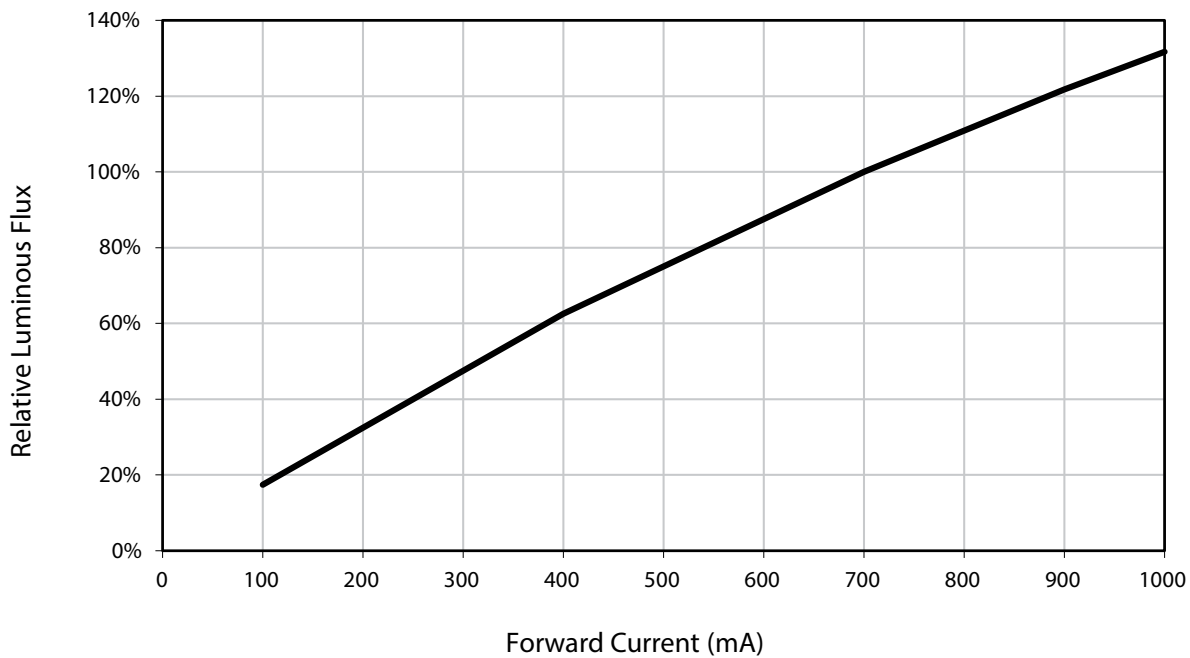
MHD-G Series Specifications
Spatial Distribution

Performance Groups – Chromaticity

Binning	CCT	Center Point		Major Axis		Rotation Angle (°)
		X	Y	a	b	
5-Step	5000K	0.3447	0.3553	0.01400	0.00520	65.0
5-Step	4000K	0.3818	0.3797	0.01565	0.00670	53.7
3-Step	3000K	0.4338	0.4030	0.00834	0.00408	53.2
3-Step	2700K	0.4577	0.4099	0.00834	0.00420	48.5

MHD-G Series Specifications
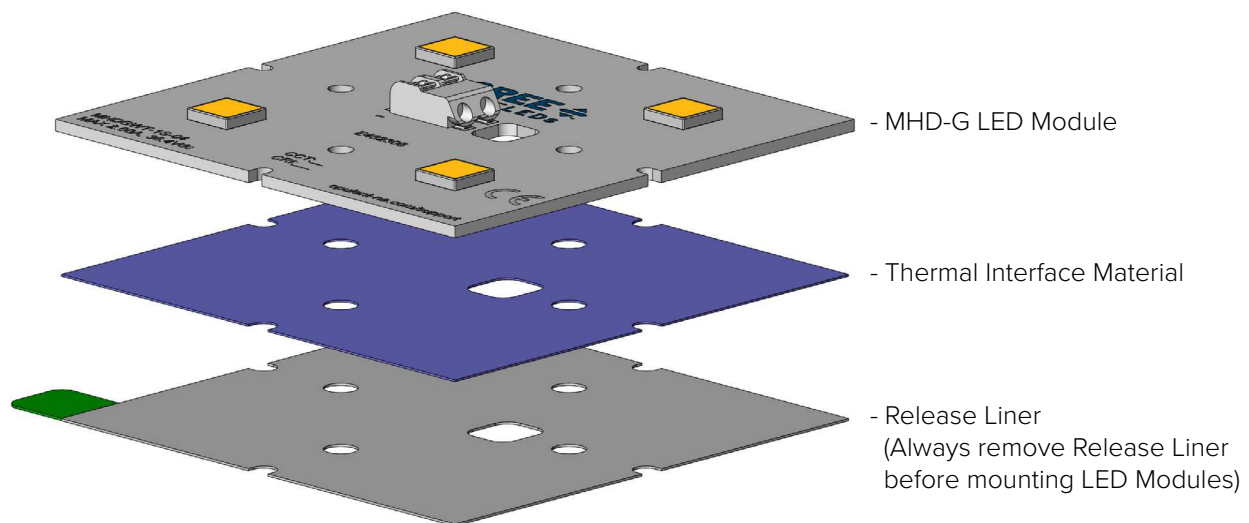## Standard White Chromaticity Regions Plotted On The CIE 1931 Curve
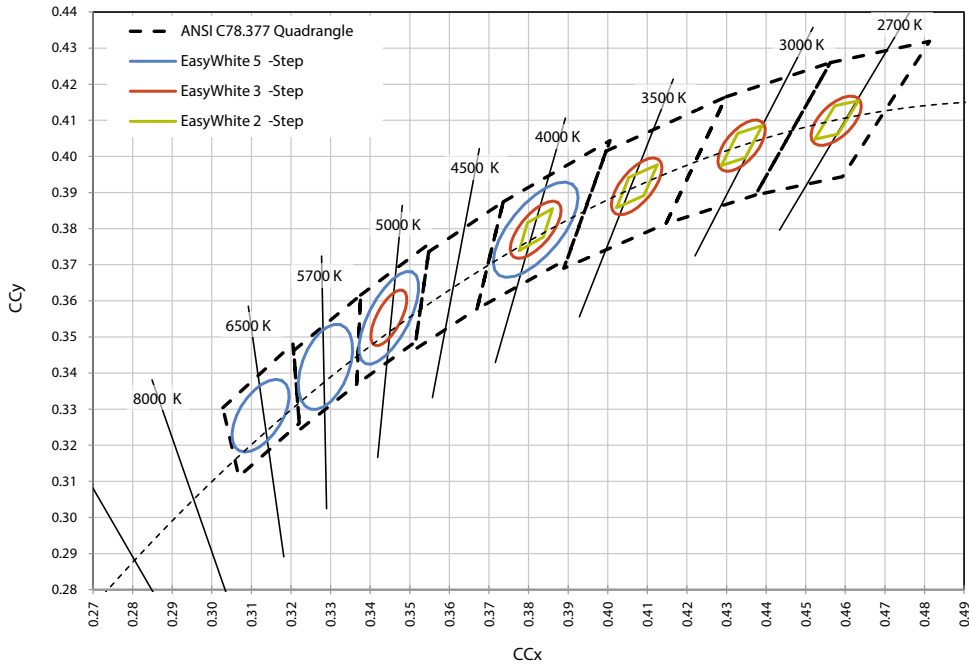
Thermal Interface Properties

Property	Test Method	Value	Unit
Color	-	Blue	-
Thickness	ASTM D374	0.3	mm
Construction	-	Silicone / Ceramic	-
Temperature Range	EN344	-50-200	°C
Breakdown Voltage	ASTM D149	>8.0	Kv/mm
Flame Rating	UL94	V-0	-
Thermal Conductivity	ASTM D5470	3.0	W/m-K

Intended for connection to a class 2 power source with a maximum operating voltage of 50 Vdc
Note: Release liner must be removed for proper thermal performance. Do not remove thermal Interface Material.
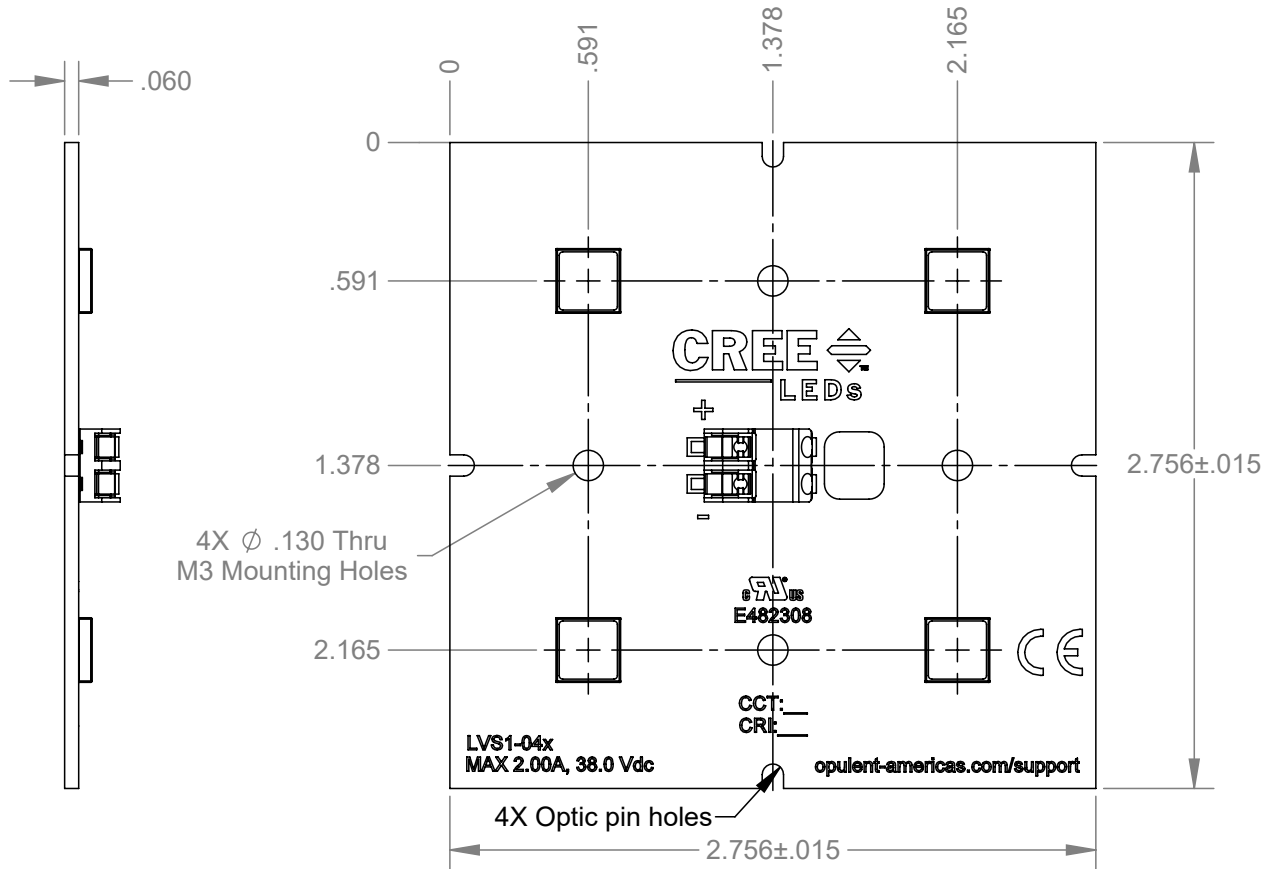
Board Material Properties

Property	Value	Unit
Solder Mask Color	White	-
Thickness	.062	in
Construction	AL	-
Temperature	130	°C
Flame Rating	V-0	-
Copper Thickness	2	oz

- MHD-G LED Module

- Thermal Interface Material

- Release Liner
(Always remove Release Liner
before mounting LED Modules)

MHD-G Series Specifications

Opulent North America Square 4 LED MHD-G Module

.060

0   .591   1.378   2.165

0

.591

1.378

2.165

4X ∅ .130 Thru
M3 Mounting Holes

2.756±.015

2.756±.015

CREE LEDs

E482308

CCT:___
CRI:___

LVS1-04x
MAX 2.00A, 38.0 Vdc

opulent-americas.com/support

4X Optic pin holes

Schematic

+   D1   D2   D3   D4
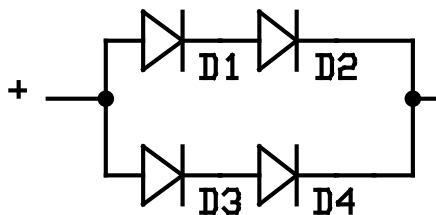
1. See Approved Optic Guide for recommended solutions
2. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
3. Recommended Mounting Hardware: 4x M3-.5 Socket Head Cap Screws

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