NewEnergy®

LED Module - Cree XHP35.2
Power of Cree in standard and custom LED modules

Data Sheet
Version 1.1

Lean & Fast. Made Smarter.

Design Faster – use standard modules to shorten development time

Superior Performance – stay current with the top flux bin LEDs

Maximum Flexibility – use off-the-shelf optics and drivers

Innovation – work with NewEnergy on your custom solution

Primary Applications

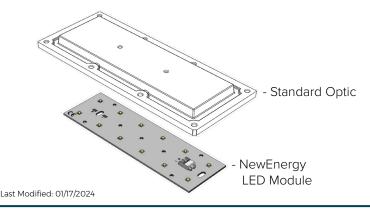|	
Horticulture	Canopy
High Mast	Garage
Streetlight	Portable
Stadium	High bay
Architectural	

Superior Performance in Standard & Custom Modules

• Market leading L90 & L70 lifetimes, even in high stress conditions
• 70, 80 and 90 CRI LEDs available
• Metal core PCB for optimal thermal management
• Configurable with off-the-shelf optics
• Talk to NewEnergy about your custom or private label designs

Simplify Your Next Design

The Cree XHP35.2 modules are an off-the-shelf platform to rapidly move from prototype to finished LED lighting fixture. These competitively priced modules come in a range of lumen outputs.

Custom Solutions

NewEnergy operates facilities globally with ISO certifications for the LED lighting, automotive and medical industries. Our North Carolina based office provides quick engineering & sales support with a R&D lab for prototype development and custom solutions. Our in-house global manufacturing capabilities allow for both building in the United States as well as overseas at scale.

- Standard Optic

- NewEnergy
  LED Module

About NewEnergy

NewEnergy accelerates the adoption of LED technology through simple, modular products and custom designs. Through 30 years of experience, state of the art manufacturing, full traceability and advanced quality controls, NewEnergy offers leading solid state lighting components, modules and custom solutions. NewEnergy customers get to market faster, with less resources, at lower costs. Visit New-EnergyLLC.com for more information.

CE

RoHS

LED Module Specifications - Cree XHP35.2
Product Selection Table[1,2]

LED Layout	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal	Max		Nominal	Max
2x2[1]	LSR4-04C48-2780-0X	2700K	80	1900	4626	121	16	50
	LSR4-04C48-2790-0X	2700K	90	1640	3993	105	16	50
	LSR4-04C48-3070-0X	3000K	70	2200	5356	140	16	50
	LSR4-04C48-3080-0X	3000K	80	2040	4966	130	16	50
	LSR4-04C48-3570-0X	3500K	70	2360	5745	151	16	50
	LSR4-04C48-3580-0X	3500K	80	2200	5356	140	16	50
	LSR4-04C48-4070-0X	4000K	70	2360	5745	151	16	50
	LSR4-04C48-4080-0X	4000K	80	2200	5356	140	16	50
	LSR4-04C48-5070-0X	5000K	70	2360	5745	151	16	50
	LSR4-04C48-5080-0X	5000K	80	2200	5356	140	16	50
	LSR4-04C48-5770-0X	5700K	70	2360	5745	151	16	50
	LSR4-04C48-5780-0X	5700K	80	2200	5356	140	16	50
2x6[2]	LSR4-12C48-2780-00	2700K	80	5700	13877	121	47	100/150[4]
	LSR4-12C48-2790-00	2700K	90	4920	11978	105	47	100/150[4]
	LSR4-12C48-3070-00	3000K	70	6600	16068	140	47	100/150[4]
	LSR4-12C48-3080-00	3000K	80	6120	14899	130	47	100/150[4]
	LSR4-12C48-3570-00	3500K	70	7080	17236	151	47	100/150[4]
	LSR4-12C48-3580-00	3500K	80	6600	16068	140	47	100/150[4]
	LSR4-12C48-4070-00	4000K	70	7080	17236	151	47	100/150[4]
	LSR4-12C48-4080-00	4000K	80	6600	16068	140	47	100/150[4]
	LSR4-12C48-5070-00	5000K	70	7080	17236	151	47	100/150[4]
	LSR4-12C48-5080-00	5000K	80	6600	16068	140	47	100/150[4]
	LSR4-12C48-5770-00	5700K	70	7080	17236	151	47	100/150[4]
	LSR4-12C48-5780-00	5700K	80	6600	16068	140	47	100/150[4]

[1] Product performance at 350mA Tj = 85°C, product performance applies to both small LSR4-04x-00 and large LSR4-04x-01 Modules
[2] Product performance at 1050mA Tj = 85°C.
[3] NewEnergy may ship modules in flux bins higher than the values specified by the order code without advance notice. Shipments will always adhere to the chromaticity bin restrictions specified by the order code.
[4] Input power not to exceed 100W for UL Class 2. Suitability for usage in other than Class 2 circuits shall be determined in the end-product investigation.

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LED Module Specifications - Cree XHP35.2

Order Code Formatting

Series	-	LED Count	LED Code	-	Color Temperature	Color Rendering Index	-	Internal Code
LSR4 - Standard High Power LED PCB Assembly, Rectangular		04 - 4 LEDs	C48 - Cree XHP35.2 LED		27 - 2700K	70 - 70 CRI		XX
		12 - 12 LEDs			30 - 3000K	80 - 80 CRI		
					40 - 4000K	90 - 90 CRI		
					50 - 5000K			
					57 - 5700K			

Electrical Characteristics

Part Number	Forward Voltage (v)		Typical Thermal Resistance - Junction to Solder Point (K/W) RTh J-HS
	Nominal	Maximum	
LSR4-04x	44.8	47.6	1.8
LSR4-12x	44.8	47.6	1.8

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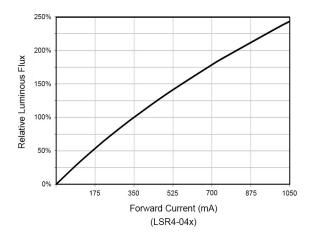
Maximum Ratings

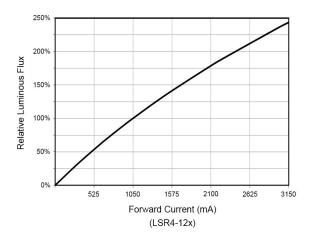| Part Number	DC Current (A)	Tsp Temp (°C)	Power (W)
LSR4-04x	1.05	105	50
LSR4-12x	3.15	105	100/150[1]

[1] Input power not to exceed 100W for UL Class 2. Suitability for usage in other than Class 2 circuits shall be determined in the end-product investigation.
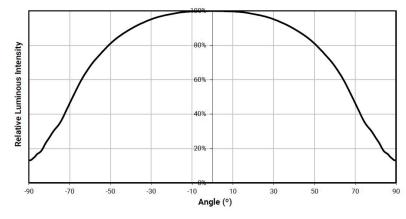
Board Material Properties

Property	Value	Unit
Solder Mask Color	White	-
Finished Board Thickness	1.7	mm
Construction	AL	-
Temperature	130	°C
Flame Rating	V-0	-
Copper Thickness	2	oz

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LED Module Specifications - Cree XHP35.2

Relative Flux vs. Board Current

(LSR4-04x)

(LSR4-12x)

Spatial Distribution

Standard White Chromaticity Regions

LED Module Specifications - Cree XHP35.2
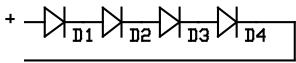## LSR4-04x-00 - 2x2 Small LED Module

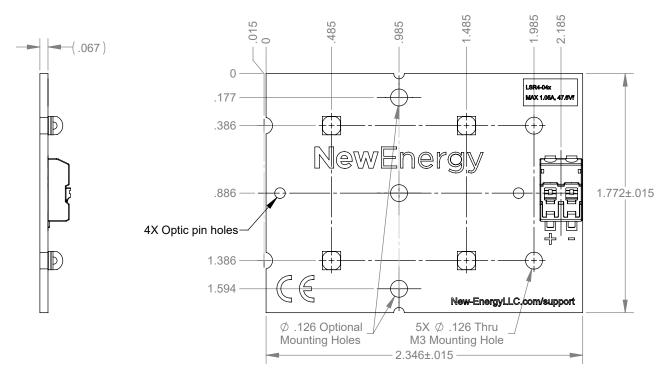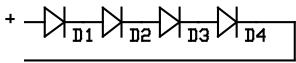### Schematic

1. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 2x M3-.5 Socket Head Cap Screws
3. Designed for LEDiL Sitara-2x2 IP67 Optic

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LED Module Specifications - Cree XHP35.2
LSR4-04x-01 - 2x2 Large LED Module

LSR4-04x
MAX 1.05A, 47.5Vf

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New-EnergyLLC.com/support

(.067)

.015
0
.485
.985
1.485
1.985
2.185

0
.177
.386
.886
1.386
1.594

1.772±.015

2.346±.015

4X Optic pin holes

$\emptyset$ .126 Optional Mounting Holes

5X $\emptyset$ .126 Thru M3 Mounting Hole

Schematic

+ D1 D2 D3 D4 −
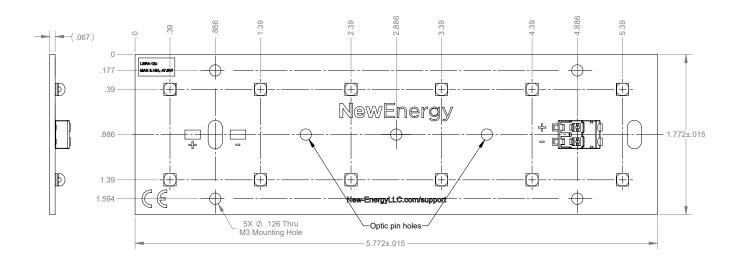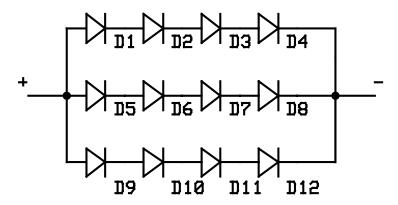
1. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 2x M3-.5 Socket Head Cap Screws
3. Designed for LEDiL Strada-2x2 Optic

6

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LED Module Specifications - Cree XHP35.2

LSR4-12x-00 - 2x6 LED Module

5X Ø .126 Thru
M3 Mounting Hole

Optic pin holes

5.772±.015

1.772±.015

Schematic

1. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 5x M3-.5 Socket Head Cap Screws
3. Designed for LEDiL Strada-IP-2x6 & HB-IP-2x6 IP67 Optics