

# LED Module - OSRAM OSLON Square

Power of OSRAM in standard and custom LED modules

# Data Sheet

Version 1.0

## Lean & Fast. Made Smarter.

**Design Faster** – use standard modules to shorten development time

**Superior Performance** – stay current with the top flux bin LEDs

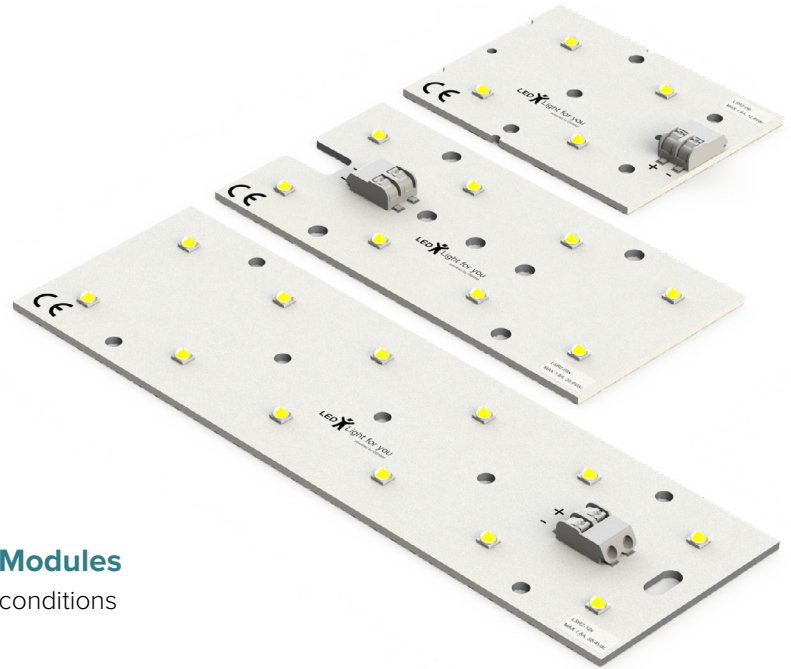
**Maximum Flexibility** – use off-the-shelf optics and drivers

**Innovation** – work with NewEnergy on your custom solution

## Primary Applications



High Mast	Canopy
Streetlight	Garage
Stadium	Portable
Architectural	High bay



## Superior Performance in Standard & Custom Modules

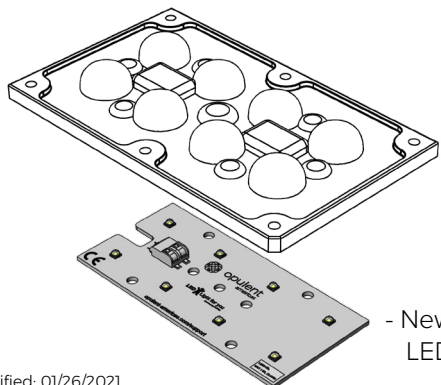
- Market leading L90 & L70 lifetimes, even in high stress conditions
- 70, 80, and 90 CRI LEDs available
- Metal core PCB for optimal thermal management
- Configurable with off-the-shelf optics
- Talk to NewEnergy about your custom or private label designs

## Simplify Your Next Design

The OSRAM Oslon Square 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 and can achieve both DLC Premium or DLC Standard lumens per watt specifications.

## 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 an 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.

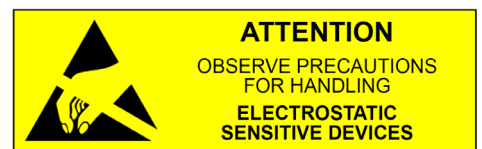


- Standard Khatod Optic, Nactus 4x2

- 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](http://New-EnergyLLC.com) for more information.



Last Modified: 01/26/2021

# LED Module Specifications - OSRAM OSLOON Square

## Product Selection Table

Configuration	LED Layout	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
					Nominal 700mA	Max 1800mA		Nominal	Max
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-2780-00	2700K	80	940	2,031	120	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-2790-00	2700K	90	820	1,774	104	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-3070-00	3000K	70	1,220	2,671	155	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-3080-00	3000K	80	980	2,118	125	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-4070-00	4000K	70	1,260	2,758	160	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-4080-00	4000K	80	1,020	2,204	130	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-5070-00	5000K	70	1,260	2,758	160	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-5080-00	5000K	80	1,060	2,290	135	8	22
Rectangular <sup>(1)</sup>	2x2	LSR2-04F04-5770-00	5700K	70	1,260	2,758	160	8	22
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-2780-00	2700K	80	1,880	4062	120	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-2790-00	2700K	90	1,640	3,548	104	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-3070-00	3000K	70	2,440	5,341	155	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-3080-00	3000K	80	1,960	4,235	125	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-4070-00	4000K	70	2,520	5,516	160	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-4080-00	4000K	80	2,040	4,408	130	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-5070-00	5000K	70	2,520	5,516	160	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-5080-00	5000K	80	2,120	4,580	135	15.7	43.4
Rectangular <sup>(1)</sup>	2x4	LSR2-08F04-5770-00	5700K	70	2,520	5,516	160	15.7	43.4
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-2780-00	2700K	80	2820	6093	120	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-2790-00	2700K	90	2460	5322	104	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-3070-00	3000K	70	3660	8012	155	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-3080-00	3000K	80	2940	6353	125	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-4070-00	4000K	70	3780	8274	160	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-4080-00	4000K	80	3060	6612	130	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-5070-00	5000K	70	3780	8274	160	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-5080-00	5000K	80	3180	6870	135	23.6	65.1
Rectangular <sup>(1)</sup>	2x6	LSR2-12F04-5770-00	5700K	70	3780	8274	160	23.6	65.1

<sup>(1)</sup> Product performance based on the typical luminous flux at Tj = 85°C.

<sup>(2)</sup> 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.

# LED Module Specifications - OSRAM OSOLON Square

## Order Code Formatting

Series	-	LED Count	LED Code	-	Color Temperature	Color Rendering Index	-	Internal Code
LSR2 - Standard High Power LED PCB Assembly, Rectangular		04 - 4 LEDs	F04 - OSOLON Square LED		27 - 2700K	70 - 70 CRI		XX
		08 - 8 LEDs			30 - 3000K	80 - 80 CRI		
		12 - 12 LEDs			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
	Typical	Maximum	
LSR2-04x	11.2	12.8	1.8
LSR2-08x	22.4	25.6	1.8
LSR2-12x	33.6	38.4	1.8

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

## Maximum Ratings

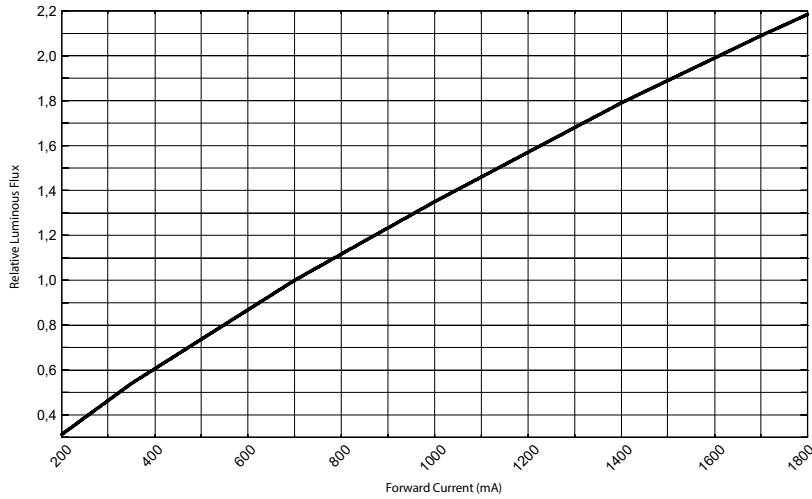
Part Number	DC Current (A)	Tsp Temp (°C)	Power (W)
LSR2-04x	1.8	105	23
LSR2-08x	1.8	105	46
LSR2-12x	1.8	105	69

## Board Material Properties

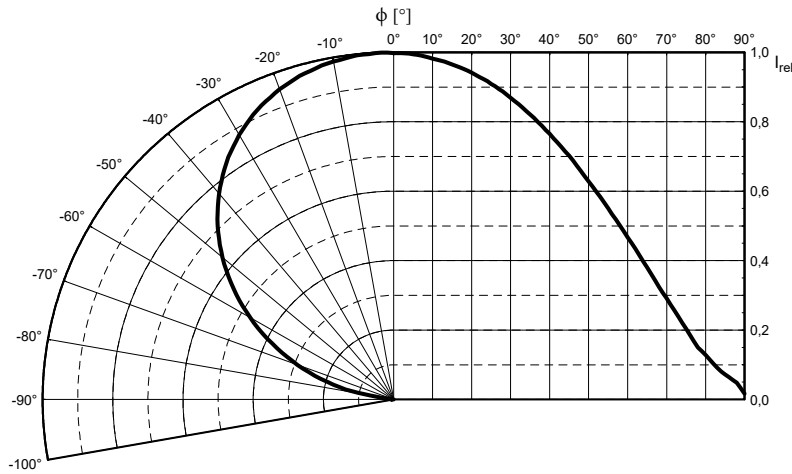
Property	Value	Unit
Solder Mask Color	White	-
Thickness	.062	in
Construction	AL	-
Temperature	130	°C
Flame Rating	V-0	-
Copper Thickness	2	oz

# LED Module Specifications - OSRAM OSLON Square

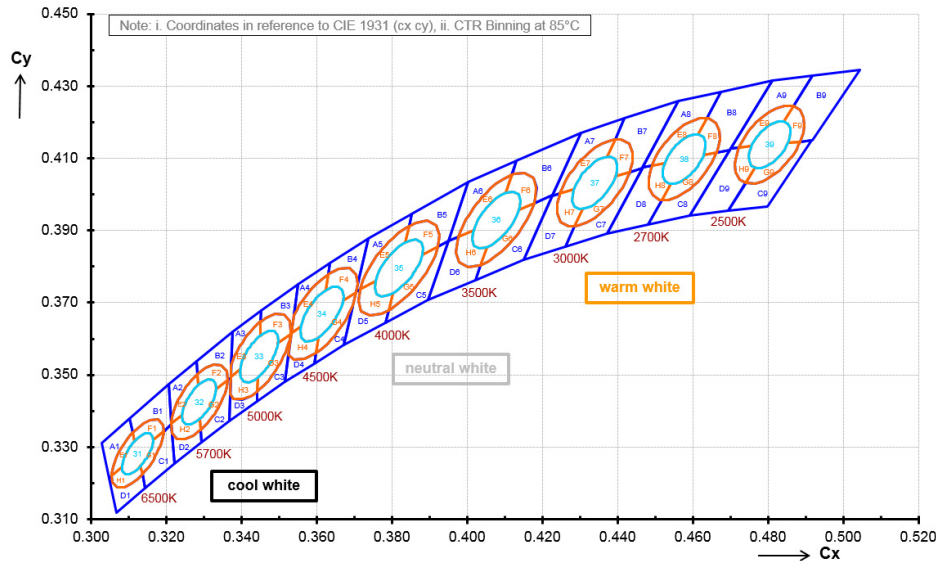
Relative Flux vs. Board Current ( $T_j = 85^\circ\text{C}$ )



## Spatial Distribution

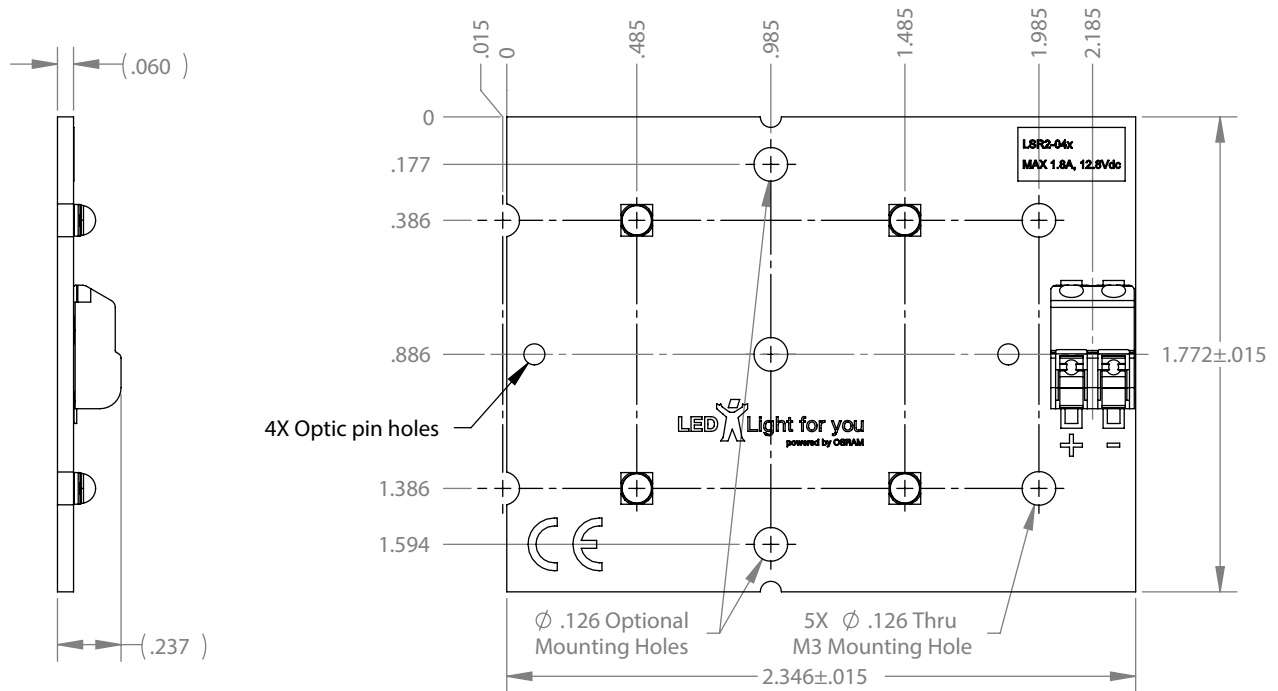


## Standard White Chromaticity Regions

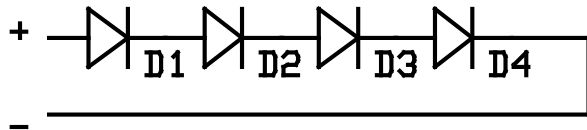


# LED Module Specifications - OSRAM OSLON Square

## NewEnergy Rectangular 4 LED Module



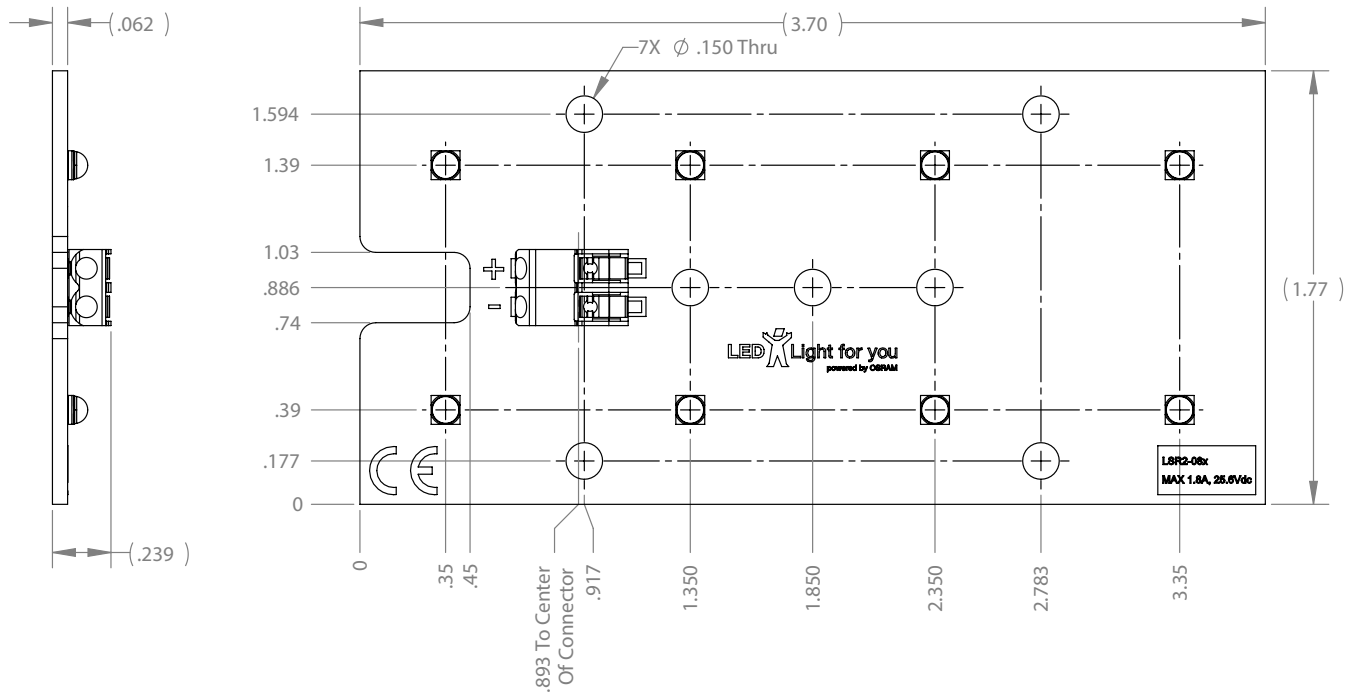
### Schematic



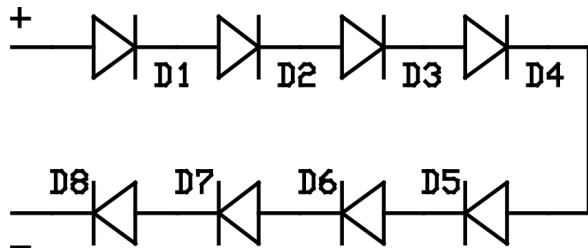
1. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 5x M3-5 Socket Head Cap Screws

# LED Module Specifications - OSRAM OSLON Square

## NewEnergy Rectangular 8 LED Module



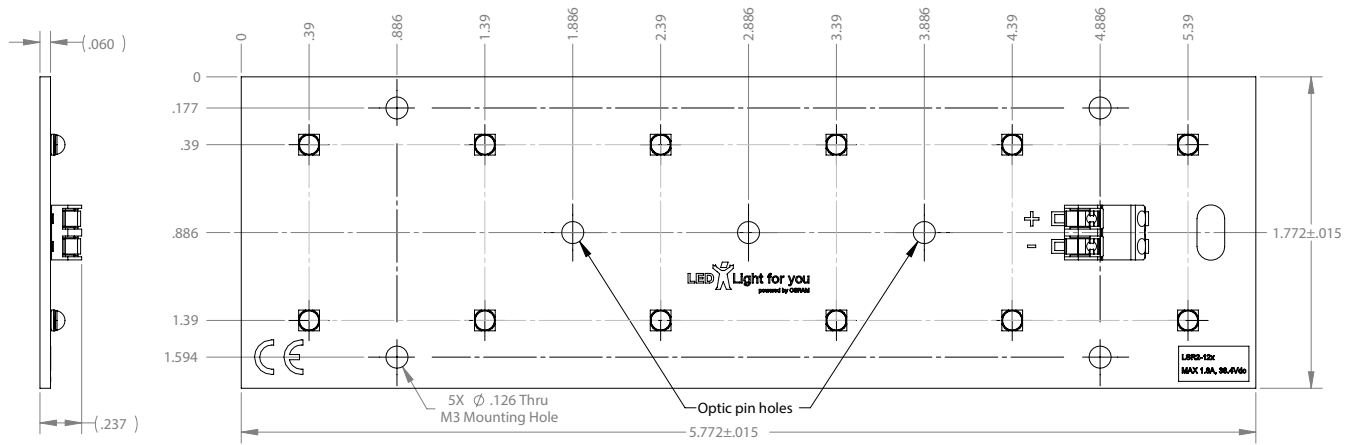
### Schematic



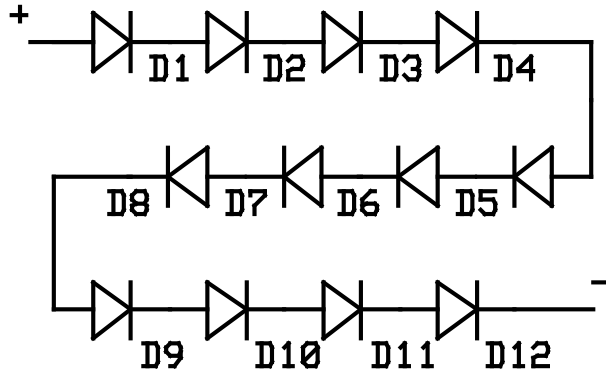
1. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 5x M3-.5 Socket Head Cap Screws

# LED Module Specifications - OSRAM OSLON Square

## NewEnergy Rectangular 12 LED Module



### 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

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