

LED Module - Luminus SST-20

Power of Luminus 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



Horticulture	Canopy
High Mast	Garage
Streetlight	Portable
Stadium	High bay
Architectural	



Superior Performance in Standard & Custom Modules

- Up to 180 lumen per watt when driven at 350mA
- 70 and 95 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

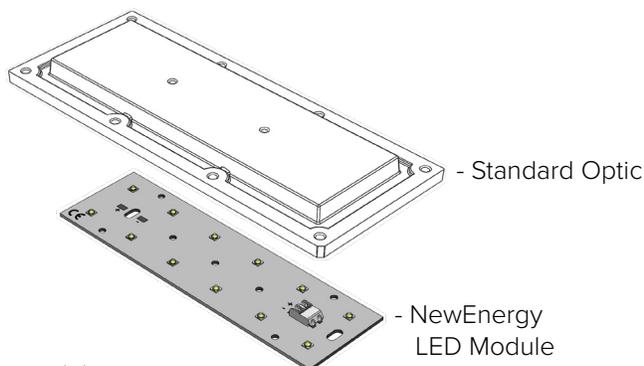
The Luminus SST-20 modules are an off-the-shelf platform to rapidly move from prototype to finished LED lighting fixture. These competitively priced modules come in a range of lumen outputs.

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.

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.



Last Modified: 01/17/2024

LED Module Specifications - Luminus SST-20

Product Selection Table^(1,2)

LED Layout	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal 700mA	Max 3000mA		Nominal	Max
Warm CCT 2x2	LSR3-04G03-2795-00	2700K	95	668	1936	87	7.6	32.8
	LSR3-04G03-3095-00	3000K	95	720	2080	94	7.6	32.8
	LSR3-04G03-3595-00	3500K	95	772	2224	101	7.6	32.8
	LSR3-04G03-4095-00	4000K	95	820	2372	107	7.6	32.8
Warm CCT 2x6	LSR3-12G03-2795-00	2700K	95	2004	5808	87	22.9	98.3
	LSR3-12G03-3095-00	3000K	95	2160	6240	94	22.9	98.3
	LSR3-12G03-3595-00	3500K	95	2316	6672	101	22.9	98.3
	LSR3-12G03-4095-00	4000K	95	2460	7116	107	22.9	98.3
Cool CCT 2x2	LSR3-04G03-5070-00	5000K	70	1208	3612	144	8.4	36.0
	LSR3-04G03-5770-00	5700K	70	1208	3612	144	8.4	36.0
	LSR3-04G03-6070-00	6000K	70	1264	3776	150	8.4	36.0
	LSR3-04G03-6570-00	6500K	70	1264	3776	150	8.4	36.0
Cool CCT 2x6	LSR3-12G03-5070-00	5000K	70	3624	10836	144	25.2	100/108 ⁽³⁾
	LSR3-12G03-5770-00	5700K	70	3624	10836	144	25.2	100/108 ⁽³⁾
	LSR3-12G03-6070-00	6000K	70	3792	11328	150	25.2	100/108 ⁽³⁾
	LSR3-12G03-6570-00	6500K	70	3792	11328	150	25.2	100/108 ⁽³⁾

⁽¹⁾ Product performance based on the typical luminous flux at T_j = 85°C.

⁽²⁾ 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.

⁽³⁾ 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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Order Code Formatting

Series	-	LED Count	LED Code	-	Color Temperature	Color Rendering Index	-	Internal Code
LSR3 - Standard High Power LED PCB Assembly, Rectangular		04 - 4 LEDs	G03 - Luminus SST-20 LED		27 - 2700K	70 - 70 CRI		XX
		12 - 12 LEDs			30 - 3000K	95 - 95 CRI		
					40 - 4000K			
					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	
LSR3-04x (2700K - 4000K)	10.92	12.4	1.8
LSR3-04x (5000K - 6500K)	12	13.2	1.8
LSR3-12x (2700K - 4000K)	32.76	37.2	1.8
LSR3-12x (5000K - 6500K)	36	39.6	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)
LSR3-04x (2700K - 4000K)	3	105	32.76
LSR3-04x (5000K - 6500K)	3	105	36
LSR3-12x (2700K - 4000K)	3	105	98.3
LSR3-12x (5000K - 6500K)	3	105	100/108 ⁽¹⁾

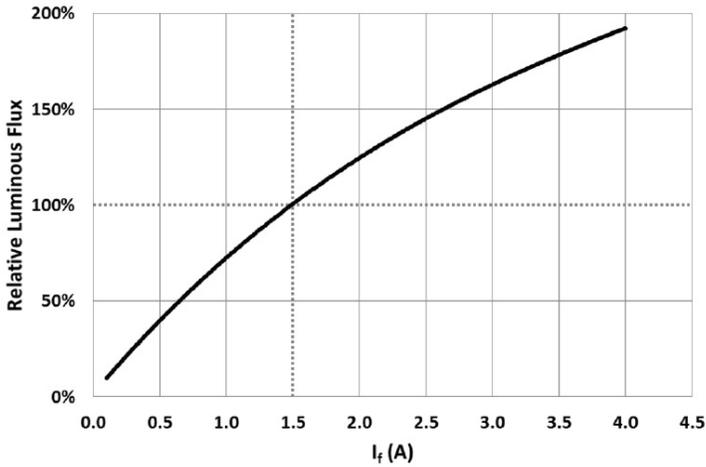
⁽¹⁾ Input power not to exceed 100W for UL Class 2. Suitability for usage in other than Class 2 circuits shall be determined in the end-product investigation.

Board Material Properties

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

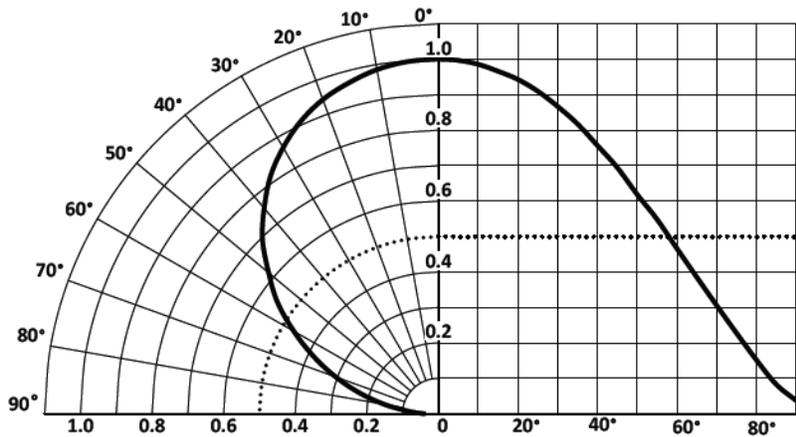
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Relative Flux vs. Board Current

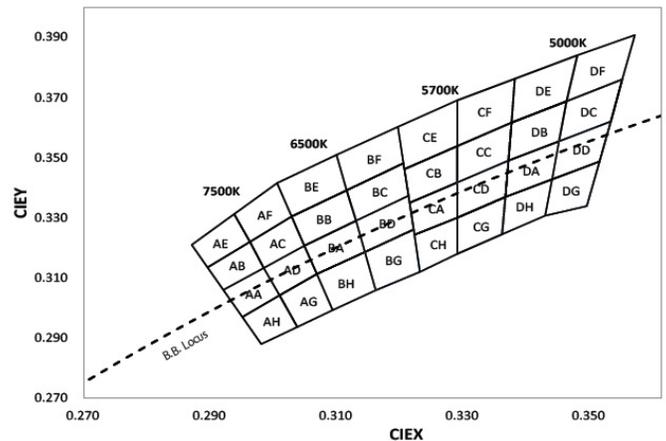
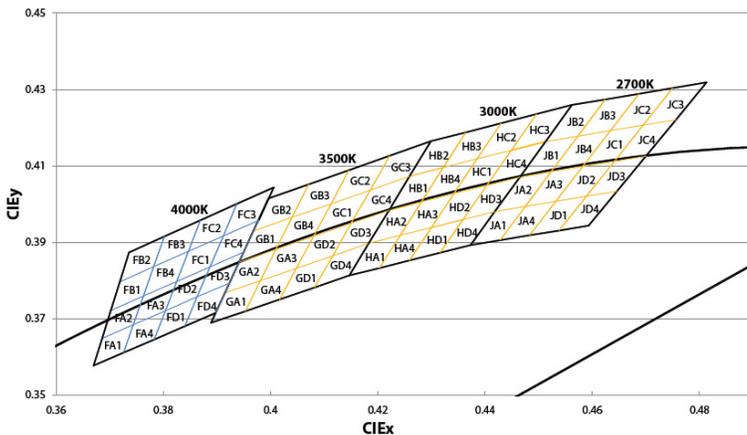


$\phi_v/\phi_v(1.5A)$ Single Pulse 20ms $T_j = 85^\circ C$

Spatial Distribution

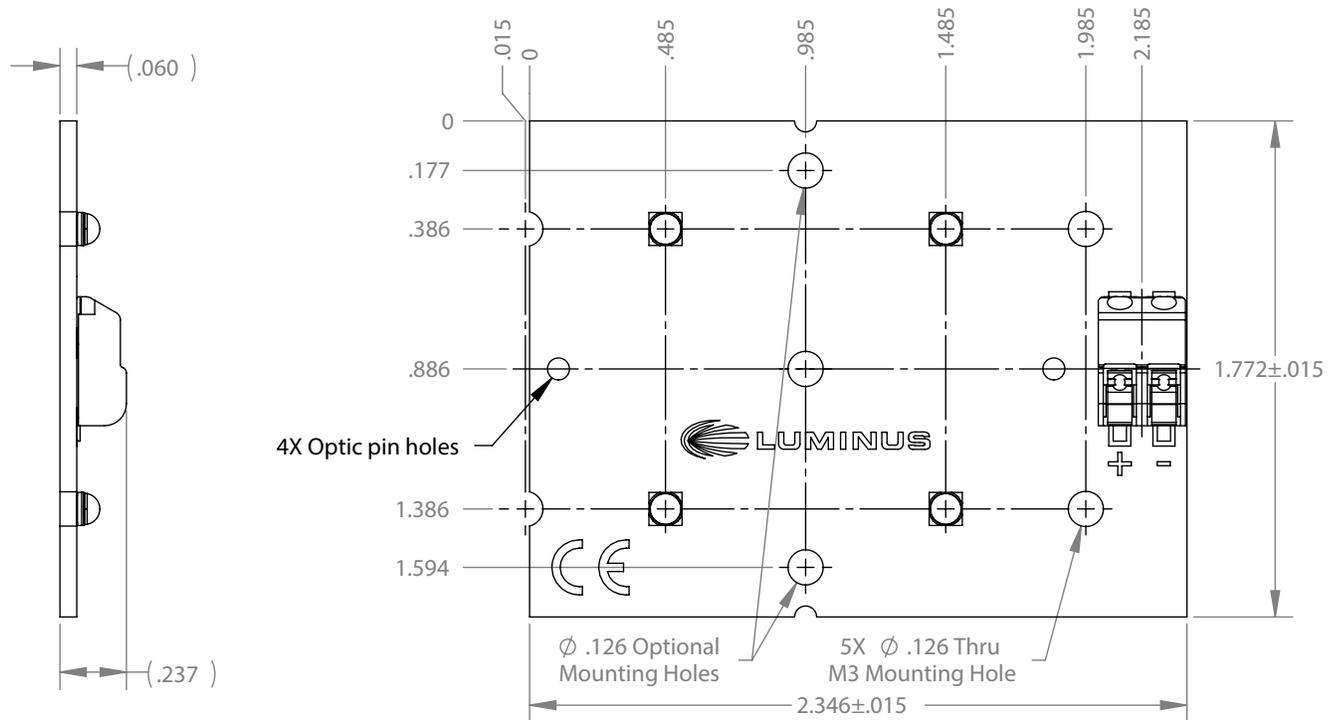


Standard White Chromaticity Regions

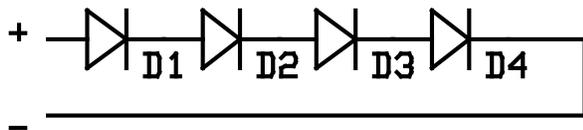


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NewEnergy Rectangular 4 LED Module



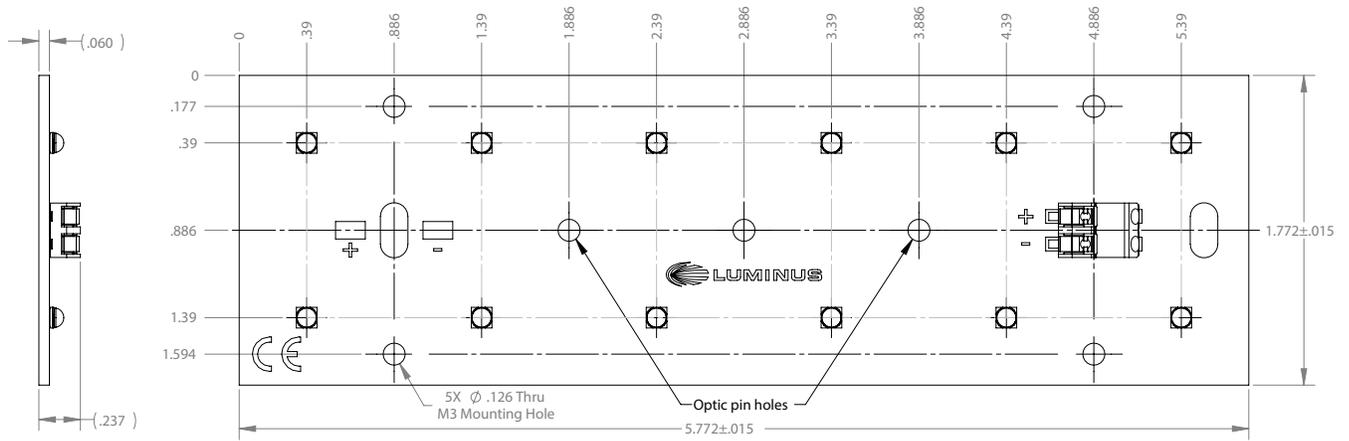
Schematic



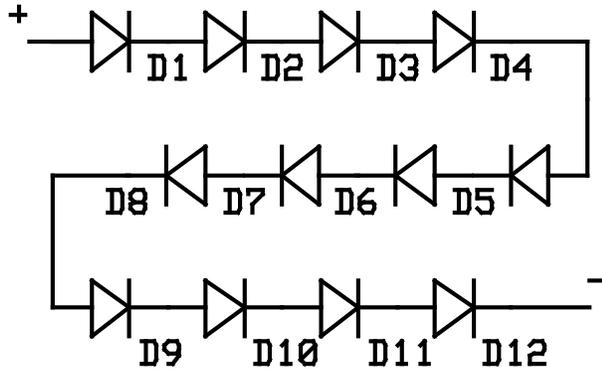
1. Dual Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 5x M3-5 Socket Head Cap Screws

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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