



LED Modules - Color Tunable Linear

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

Easy Integration – use standard 2-Channel LED drivers and dimmers

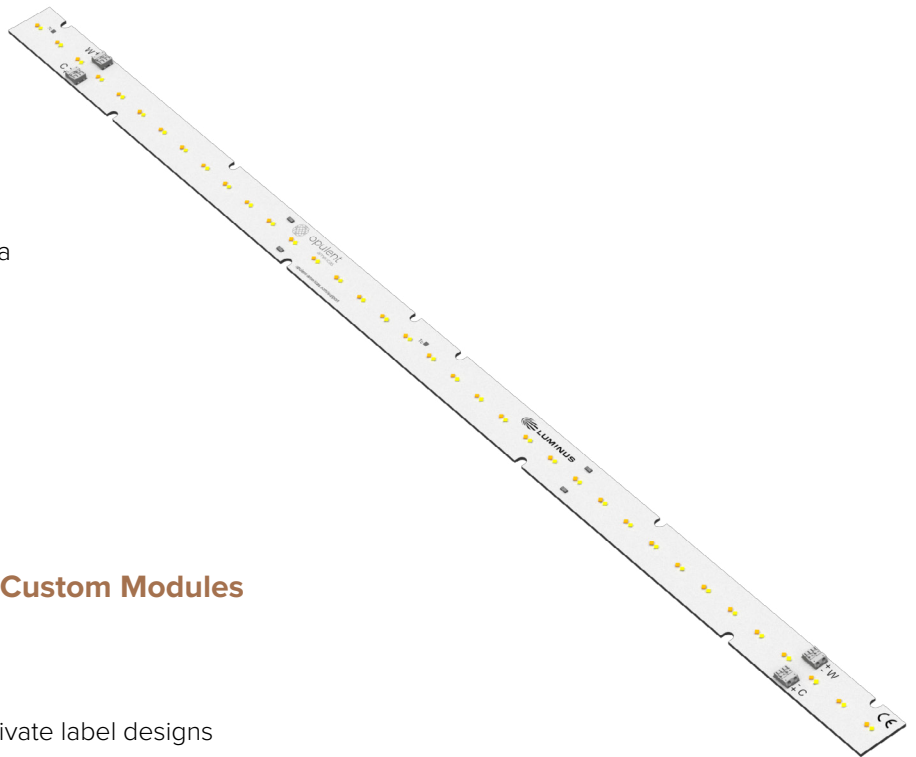
Maximum Flexibility – designed to Zhaga dimensions and screw hole specifications

Innovation – work with Opulent Americas on a custom solution

Primary Applications



Hospitality & Hotel
Restaurant
Architectural
Residential
Retail Shop
Entertainment
Transportation



Superior Performance in Standard & Custom Modules

- Independent CCT and Dimming control
- CCT ranging from 2700K - 6500K
- 9000 hour LM-80 data at 250mA per LED
- Talk to Opulent Americas about custom or private label designs

Enhance Your Next Design

The Color Tunable LED Modules from Opulent Americas enable lighting manufacturers the flexibility to reproduce both the warm glow traditionally associated with halogen light sources and cool white color temperatures. Compatible with most 2-channel LED drivers and standard dimmer switches, these Opulent Americas modules will simplify your lamp design.

Custom Solutions

Opulent Americas 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.

About Opulent Americas

Opulent Americas 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, Opulent offers leading solid state lighting components, modules and custom solutions. Opulent customers get to market faster, with less resources, at lower costs. Visit opulent-americas.com for more information.

RoHS 

LED Module Specifications - Color Tunable Linear

Product Selection Table

Part Number	LED Channel Config	CRI (Min)	CCT	Luminous Flux (lm)		Efficacy (lm/W)		Watts (W)	
				480mA (Typical)	600mA (Max)	480mA (Typical)	600mA (Max)	480mA (Typical)	600mA (Max)
CSB1-72G02-6527-90-00	Warm - On Cool - On	90	4100K	4001	4852	117.5	111.4	34.1	43.6
	Warm - On Cool - Off	90	2700K	1833.7	2214.4	107.49	101.56	17.1	21.8
	Warm - Off Cool - On	90	6500K	2409	2931	127.6	121.2	17.0	21.8

⁽¹⁾ Typical Drive Current: 480mA, Max Drive Current: 600mA

⁽²⁾ Opulent Americas 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.

Order Code Formatting

Series	-	LED Count	LED Code	-	Color Temp Range	-	Color Rendering Index	-	Internal Code
CSB1 - Color Tunable LED PCB Assembly, Linear		72 - 72 LEDs	G02 - MP-1616 XNOVA Cube		6527 - 6500K to 2700K		90 - 90 CRI		00
					4018 - 4000K to 1800K (Future Product)				

LED Module Specifications - Color Tunable Linear

Electrical Characteristics

Part Number	Cool Channel Forward Voltage (v)		Warm Channel Forward Voltage (v)	
	480mA (Typical)	600mA (Max)	480mA (Typical)	600mA (Max)
CSB1-72G02-x	35.4	36.3	35.5	36.3

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

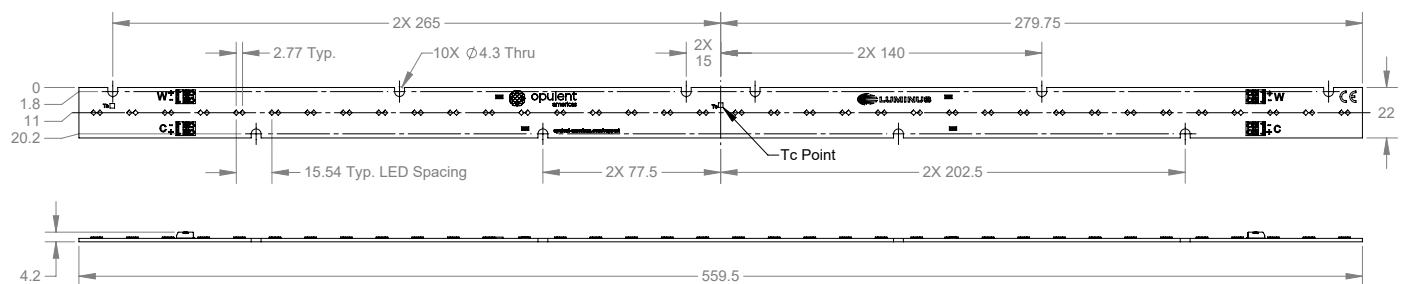
Maximum Ratings

Part Number	DC Current Per Channel (mA)	Tc Temp (°C)	Cool Channel Power (W)	Warm Channel Power (W)
CSB1-72G02-x	600	105	21.8	21.8

Board Material Properties

Property	Value	Unit
Solder Mask Color	White	-
Thickness	.062	in
Construction	CEM3	-
Temperature	130	°C
Flame Rating	V-0	-
Copper Thickness	1	oz

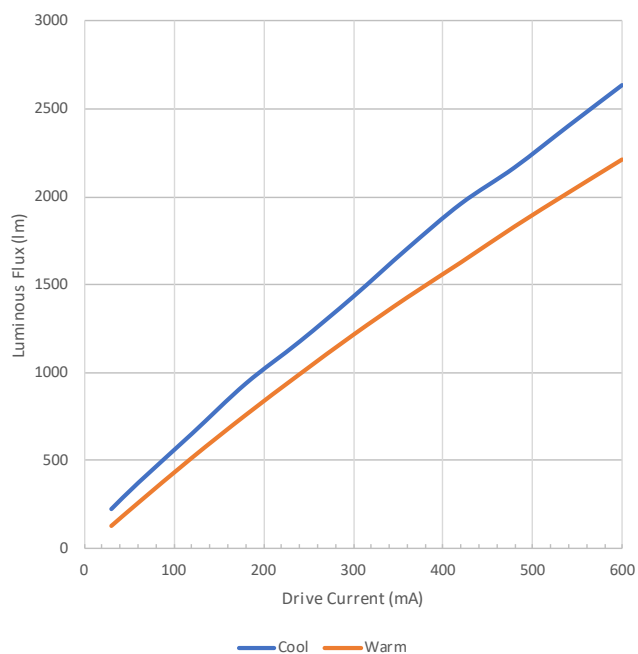
Mechanical Dimensions



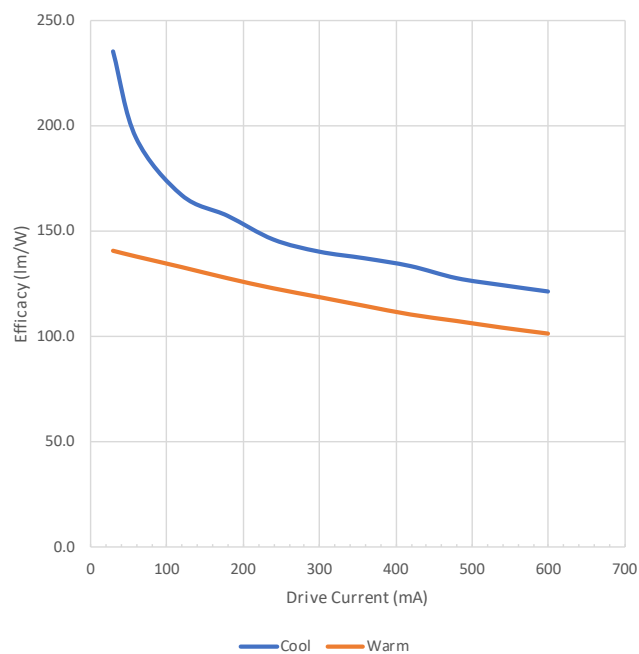
1. Four Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 10x M3-.5 Socket Head Cap Screws

LED Module Specifications - Color Tunable Linear

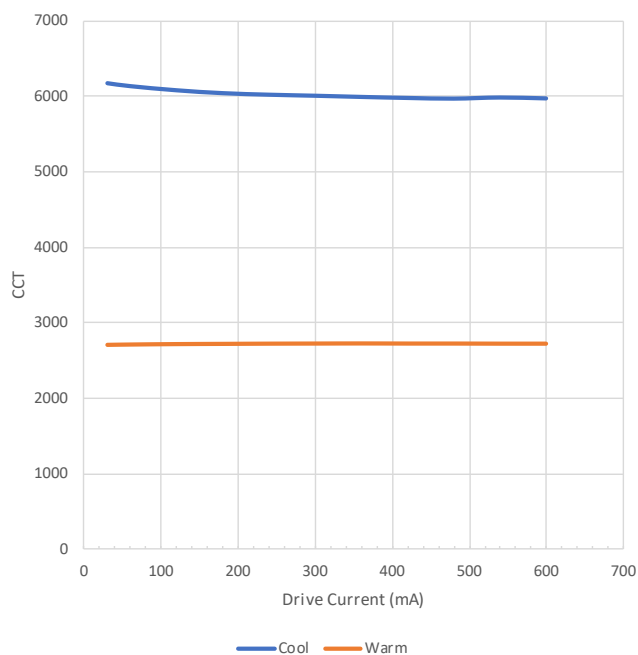
Luminous Flux vs. Current



Efficacy vs. Current



CCT vs. Current



Power vs. Current

