

Enables a dramatic increase in Power and Lumens

- Capable of cooling up to 325 Watts.
- No separate power supply required.
- Operating life exceeds 60,000 hours at 45°C.
- Broad range of input voltages from 11V to 60V.
- 10 mm thick mounting base allows unlimited hole patterns.
- Guaranteed for 5 years.
- Inaudible (<16dB noise level) at super quiet setting.
- Ability to select three fan speed settings to control thermal performance and noise.
- Integral mounting features to support attachment to Luminaire.



Specification Summary

Operating Voltage	11-60VDC (Uses driver powering the LED array)
Operating Power	Typically less than 1.5% of total lighting system power
LED Cooling Capacity	Up to 325 Watts
Acoustic Noise (from one meter)	Less than 16 dbA for SQ, 20 dbA for Q
Reliability (L10)	60,000 hours at 45°C

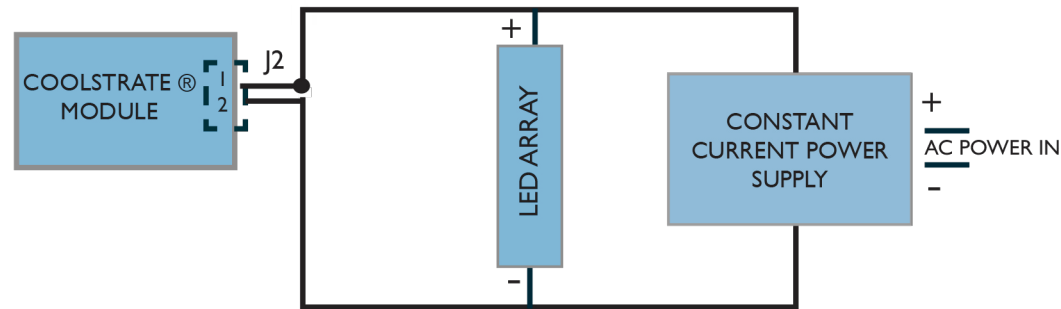
780 Series Active LED Cooler

Specifications

Model	Diameter (mm)	Height (mm)	Weight (g)	Setting	Thermal Resistance (°C/W)	Power Dissipation (w)		dbA
						Ambient 25°C	Ambient 35°C	
CSL8025Q	80	64	340	Quiet	0.80	94	78	16
CSL8025SQ	80	64	340	Super Quiet	0.65	115	96	20
CSL8025MP	80	64	340	Max Performance	0.43	174	145	34
CSL8050Q	80	92	480	Quiet	0.50	150	125	16
CSL8050SQ	80	92	480	Super Quiet	0.40	188	156	20
CSL8050MP	80	92	480	Max Performance	0.27	278	231	34
CSL8070Q	80	110	570	Quiet	0.47	160	133	16
CSL8070SQ	80	110	570	Super Quiet	0.35	214	179	20
CSL8070MP	80	110	570	Max Performance	0.23	326	272	34

Thermal resistance values are given as reference only and are measured in free air without airflow obstructions. Thermal resistance is measured from the bottom middle of the heat sink to ambient air. Actual thermal performance may vary by application and final product design should be tested to assure proper thermal performance. Thermal design power is based on cooling a typical LED array to 40°C and 30°C temperature rise above ambient, measured to LED array case temperatures.

Connection Diagram



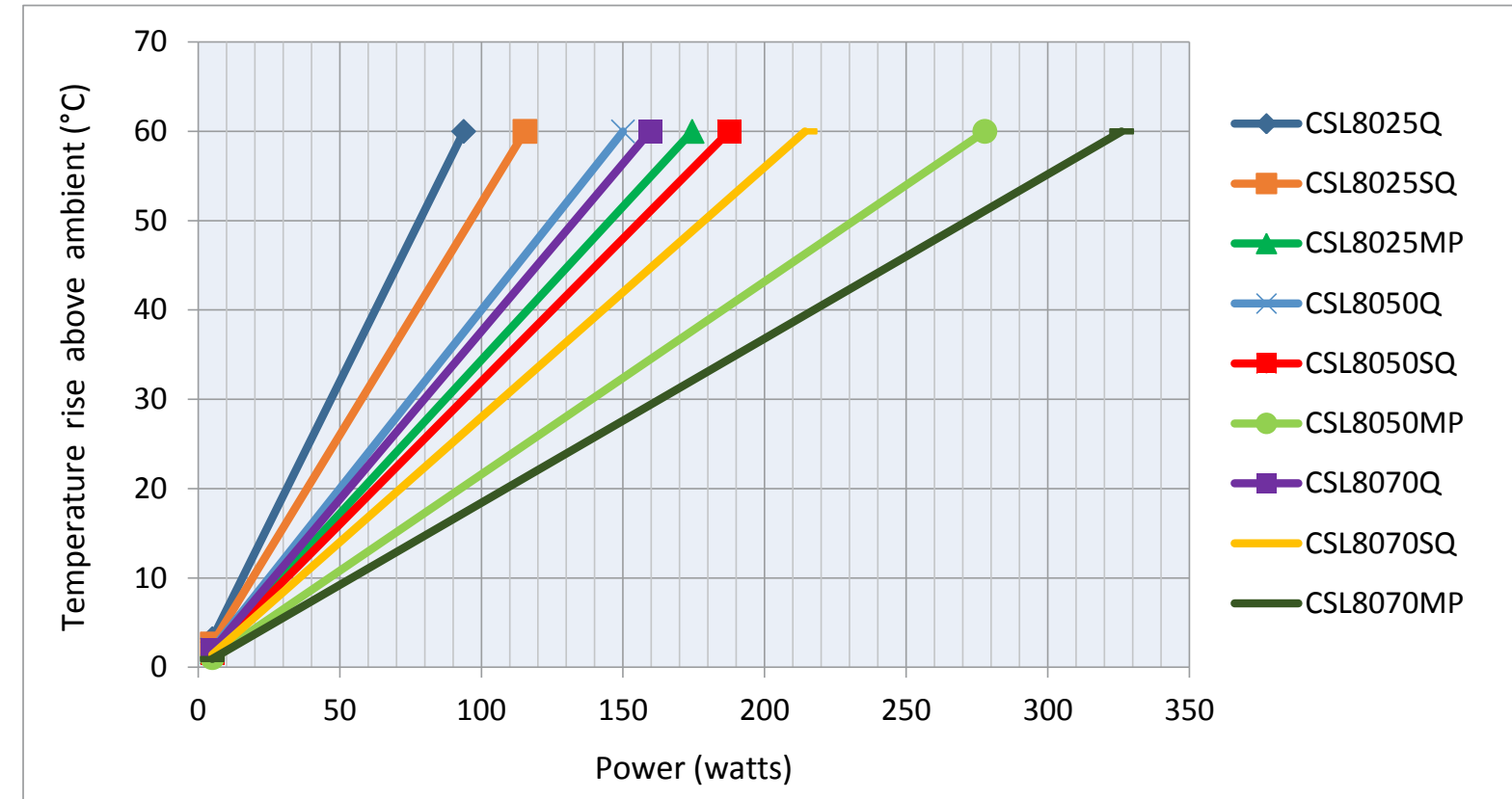
Power Consumption

780 Series	Power Consumption (Watts)	Setting	Input Voltage							
			12V	15V	20V	25V	30V	35V	40V	42V
			Quiet	0.46	0.45	0.46	0.48	0.48	0.49	0.52
Super Quiet	0.80	0.78	0.80	0.78	0.78	0.80	0.80	0.80		
Max Performance	*	1.88	2.00	1.98	2.07	2.03	2.04	2.02		

*MP option requires a minimum of 15V.

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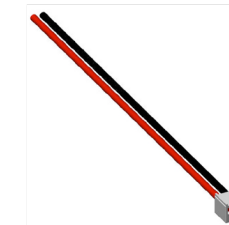
Thermal Performance Chart



Wire Harness Options

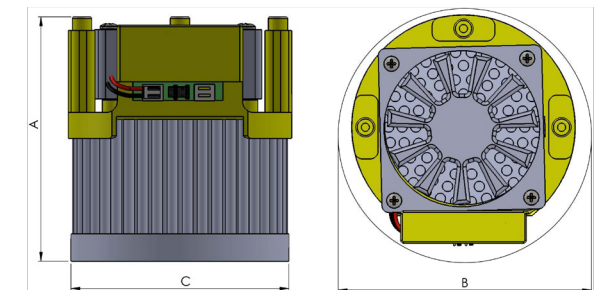
Part Number	Length (mm)	Pin	Wire Color	Symbol
CSLWH12	300	1	Red	+VDC
		2	Black	GND
CSLWH18	450	1	Red	+VDC
		2	Black	GND

Wire Connections	
Pin 1	Positive DC Output
Pin 2	Ground
Input Connector	JST Part # PHR-2



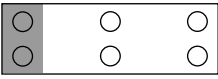
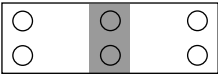
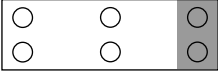
Mechanical Dimensions

Size	Model	A	B	C
780 Series	CSL8025	64 mm	85 mm	80 mm
	CSL8050	92 mm		
	CSL8070	110 mm		



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Control Board Jumper Settings

Setting	780 Series
Quiet	
Super Quiet	
Max Performance	

COOLSTRATE CONFIGURATIONS

Coolstrate modules are factory configured for Quiet (Q) settings. The Coolstrate module may be configured per the 3 setting by moving the jumpers in the following configurations. The drawing as shown is referenced with the LED pointing down towards the ground.

Operating Modes and Descriptions

COOLSTRATE MODULE

The Coolstrate module consists of a controller circuit, a special low noise, high efficiency, long life fan and an ultra low thermal resistance heat sink.

The controller circuit converts any input voltage from 11 to 60 volts to a fixed lower voltage as required by the fan. The input voltage is derived from the same voltage used to power the LED array.

OVERTEMP PROTECTION

Contact Cooliance Tech Support for further information and customized dimming and overtemp protection support.

DIMMING

Dimming should not affect the thermal performance of the Coolstrate unit. In most applications, the voltage output from a dimmed power supply will still be higher than the minimum input voltage of the Coolstrate unit and therefore its thermal operation will be unaffected. Should dimming of the LED power supply reduce the voltage output to below that of the Coolstrate minimum voltage input, the Coolstrate module will not be adversely affected and will continue to operate until the voltage reaches a point at which the fan turns off. At that point, the power output of the LEDs is at a reduced level and the Coolstrate heat sink is typically capable of providing adequate cooling in a passive mode. As the dimming level increases back to full power, the Coolstrate module will also turn back on and function as an active unit. Please consult factory for support with a specific dimmer and application.

COOLIANCE SOLUTIONS AND SUPPORT

Cooliance can assist with the selection of the power supply as well as the design, integration and selection of LEDs into the Luminaire solution. Please contact Cooliance for questions or support.