

Power LED Module

- High power & ultra long life COB LED module for channel letter, light box

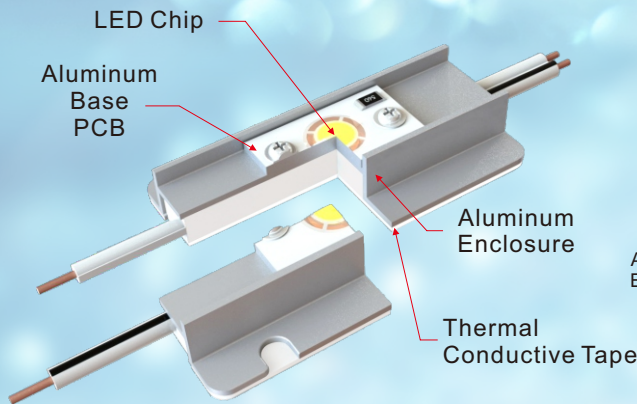


Features

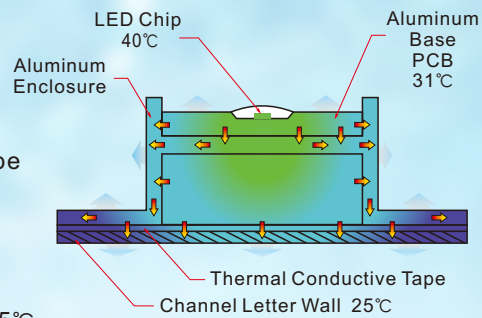
- Using innovative, patent pending CooChip® technology, the LED chip is attached and bonded directly to the aluminum PCB and heat-sink, resulting in ultra low heat resistance. **CooChip® RUNS COOL!**
- Extended operating life at high ambient temperature, 75,000+ hrs @25°C / 50,000+ hrs @40°C for white LED modules.
- 178° wide angle, emits much softer, more even light compared to regular LED structure.
- Can be customized as light bar.
- Excellent for channel letter, cabinet lighting or any other back lighting application.

Heat Management

CooChip® Module LEDMJ-W

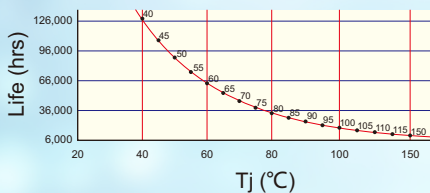


Cross Section Thermal Image

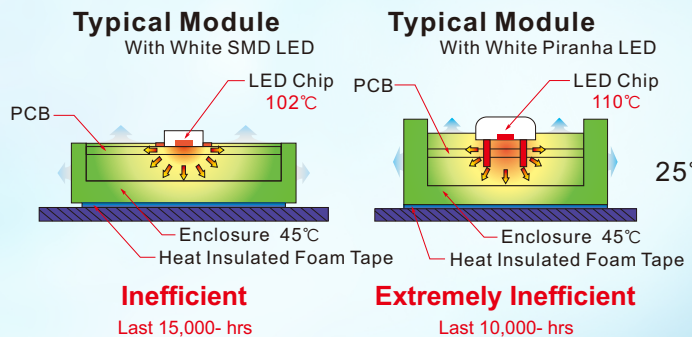


- The LED chip is bonded onto aluminum PCB embedded in aluminum enclosure. Heat directly transfers to the substantial heat-sink. In typical modules relying on tiny LED lamp legs to transfer the same amount of heat, the results are much higher thermal resistance and excessive chip temperatures of 100°C+.
- Thermal conductive tape further assists heat dissipation.

The illustration below demonstrates the relationship between life time and chip/junction temperature for typical LED chips. The lower the temperature, the longer the life. By using Coochip® technology, our LED modules have achieved the lowest possible chip temperature, thus prolonging its life even under high ambient temperatures.



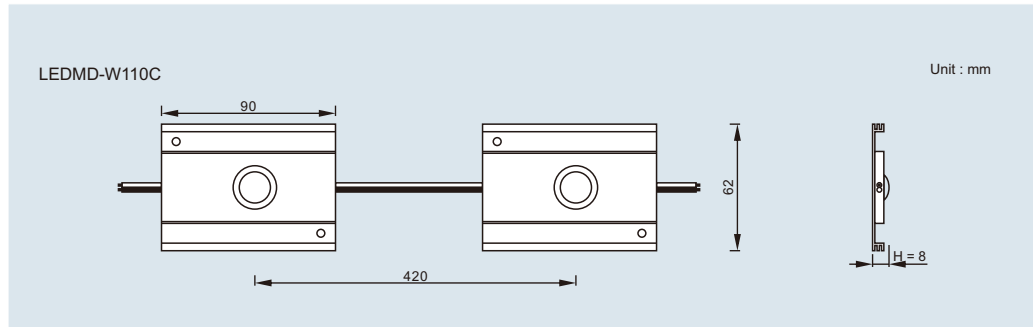
VS.



Specifications

Color	Model No.	LEDs /Unit	Voltage	Unit Watts (Max.)	Viewing Angle	W. L. (nm)	Luminance (lm)	Life Time (hrs, Ta=25°C)	Modules /Chain	Chains /Pack
Cool White	LEDMD-W110C	1	12VDC	9W	180°	10000K	550	75,000	10	1

Dimensions

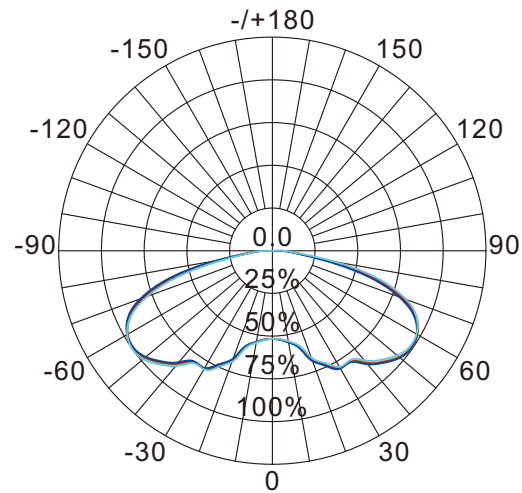


Radiation characteristics

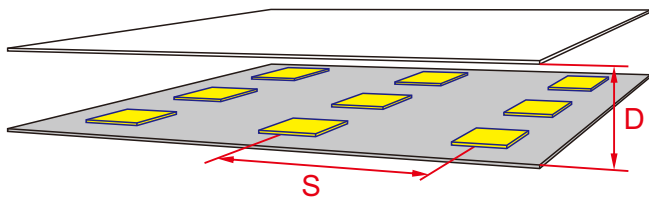
Average beam angle(50%) : 156.2°

Light intensity: Percentage

- C0/180, 156.4°
- C30/210, 156.6°
- C60/240, 156.2°
- C90/270, 155.8°



Module spacing calculation in light box (Size: L*W=1m*1m)



D: Light box depth **S:** Module spacing

D (inch)	4"	5"	6"	7"	8"
S _{max.} (inch)	9"	11"	13"	15"	17"
D (mm)	100 _{mm}	120 _{mm}	150 _{mm}	180 _{mm}	200 _{mm}
S _{max.} (mm)	220 _{mm}	260 _{mm}	330 _{mm}	400 _{mm}	440 _{mm}
Quantity _{min.}	20 _{pcs}	15 _{pcs}	9 _{pcs}	6 _{pcs}	5 _{pcs}