



LED

BuLED

BuLED-50E LED light accessory to replace MR16 fittings

Features VS Benefits

- * BuLED-50E LED light accessory includes one LED cooler and one LED housing to be assembled with LED modules to replace MR16.
- * Mechanical compatibility with direct mounting of the LED modules to the LED cooler and thermal performance matching the lumen packages.
- * For spotlight and downlight designs form 500 to 1400 lumen.
- * Thermal resistance range Rth 5.0°C/W.
- * Heatsink Diameter 48mm - Standard height 50mm , Other heights on request.
- * Housing Diameter 50mm - Standard height 50mm , Other heights on request.
- * Extruded from highly conductive aluminum.

Zhaga Book 3 Spot Light Modules Edison , Osram , Xicato , Bridgelux , Citizen , Cree , Lumileds , Seoul ,LG Innotek , Prolight Opto ,Vossloh-Schwabe , Samsung , Sharp , Philips , Nichia;



- | | |
|---|---|
| 1) Xicato: XSM, XIM,XTM; (XSA-390) series; | 9) Edison: EdiLex II series; |
| 2) Bridgelux: ESS, ESR, Vero 10, Vero 13 series; | 10) Vossloh-Schwabe: LUGA series; |
| 3) Citizen: CLL022, CLU024, CLL026, CLU028 series; | 11) Prolight Opto: PABS, PABA, PACB, PANA series; |
| 4) Cree: XLamp CXA13xx, CXA15xx; | 12) Luminus: Cxx-6 and Cxx-9 series; |
| 5) Lumileds: Luxeon COB's 1203, 1204,Luxeon K series; | 13) Samung: LC013 COB LED series; |
| 6) Osram: Soleriq S13 series; | 14) Sharp: Mini Zenigata LED series; |
| 7) Seoul: Semiconductor ZC6, ZC12 series; | 15) Nichia: NTCWS024B, NTCWL036B, NJCWS024Z series; |
| 8) LG Innotek: LEMWM18 10W, 13W series; | |



Order Information

Example:BuLED-50E-B

Example:BuLED-50E - **1**

- 1** Anodising Color
- B-Black
- C-Clear
- Z-Custom

Notes:

- Mentioned models are an extraction of full product range.
- For specific mechanical adaptations please contact MingfaTech.
- MingfaTech reserves the right to change products or specifications without prior

Product deta table

| | | |
|--|--|----------------|
| | Model No. | BuLED-50E |
| | Heatsink Size | Φ48xH50mm |
| | Housing Size | Φ50xH50mm |
| | Material (Heatsink + Housing) | AL6063-T5 |
| | Finish | Black Anodized |
| | Weight (g) | 155.0 |
| | Dissipated power (Ths-amb,60°C) | 12.0 (w) |
| | Cooling surface area (mm ²) | 52610 |
| | Thermal Resistance (Rhs-amb) | 5.0 (°C/W) |

BuLED

BuLED-50E LED light accessory to replace MR16 fittings

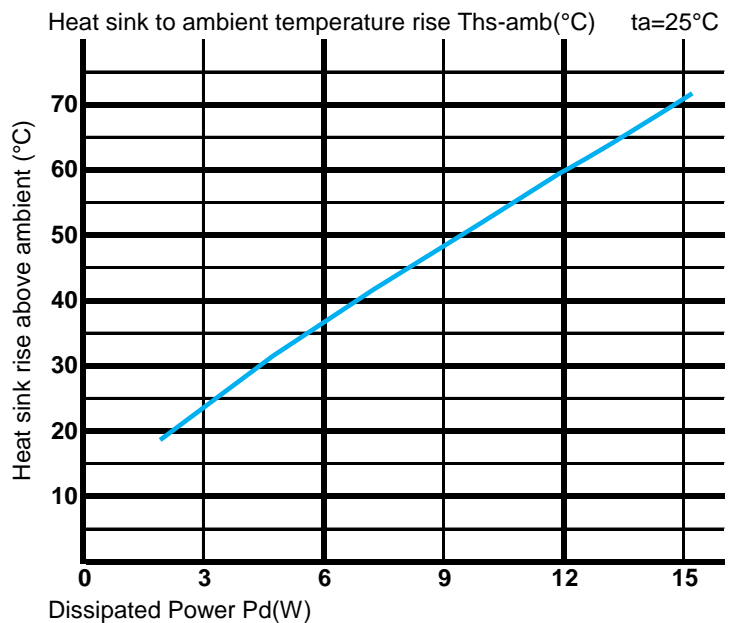
The thermal data table

* Please be aware the dissipated power Pd is not the same as the electrical power Pe of a LED module.

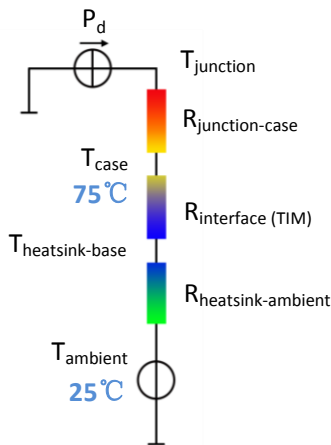
*To calculate the dissipated power please use the following formula: $P_d = P_e \times (1-\eta_L)$.

Pd - Dissipated power ; Pe - Electrical power ; η_L = Light efficiency of the LED module;

| Pd = Pe x (1-ηL) | | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|------------------------|------|--|--|
| | | BuLED-50E | |
| Dissipated Power Pd(W) | 3.0 | 7.7 | 23.0 |
| | 6.0 | 6.0 | 36.0 |
| | 9.0 | 5.3 | 48.0 |
| | 12.0 | 5.0 | 60.0 |
| | 15.0 | 4.7 | 71.0 |



*The aluminum substrate side of the package outer shell is thermally connected to the heat sink via TIM (Thermal interface material). MingFa recommends the use of a high thermal conductive interface between the LED module and the LED cooler. Either thermal grease, A thermal pad or a phase change thermal pad thickness 0.1-0.15mm is recommended.



*Thermal resistance is a heat property and a measurement of a temperature difference by which an object or material resists a heat flow. Geometric shapes are different, the thermal resistance is different.

Formula: $\theta = (Ths - Ta) / Pd$

θ - Thermal Resistance [°C/W] ; Ths - Heatsink temperature ; Ta - Ambient

*The thermal resistance between the junction section of the light-emitting diode and the aluminum substrate side of the package outer shell is $R_{junction-case}$, the thermal resistance of the TIM outside the package is $R_{interface (TIM)}$ [°C/W], the thermal resistance with the heat sink is $R_{heatsink-ambient}$ [°C/W], and the ambient temperature is $T_{ambient}$ [°C].

Thermal resistances outside the package $R_{interface (TIM)}$ and $R_{heatsink-ambient}$ can be integrated into the thermal resistance $R_{case-ambient}$ at this point. Thus, the following formula is also used:

$$T_{junction} = (R_{junction-case} + R_{case-ambient}) \cdot Pd + T_{ambient}$$