

BuLED

BuLED-50F LED light accessory to replace MR16 fittings

Features VS Benefits

- * BuLED-50F 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 4.9°C/W.
 - * Heatsink Diameter 48mm - Standard height 50mm , Other heights on request.
 - * Housing Diameter 50mm - Standard height 50mm , Other heights on request.
 - * Forged from highly conductive aluminum.
- Zhaga Book 3 Spot Light Modules: Xicato ,Bridgelux ,Citizen ,Lumileds ,Lumens , Seoul ,LG Innotek ,Prolight Opto ,Samsung ,Tridonic ,Luminus ,Edison;



- 1) Xicato: XSM, XIM,XTM series;
- 2) Bridgelux: ESS, ESR, Vero 10, Vero 13 series;
- 3) Citizen: CLL022, CLU024, CLL026, CLU028 series;
- 4) Lumileds: Luxeon COB's 1203, 1204,Luxeon K series;
- 5) Lumens: ERC1507 and ERC1512 series;
- 6) Seoul: Semiconductor ZC6, ZC12 series;
- 7) LG Innotek: LEMW18 10W, 13W series;
- 8) Tridonic: TALEXX SLE series;
- 9) Prolight Opto: PABS, PABA, PACB, PANA series;
- 10) Luminus: Cxx-6 and Cxx-9 series;
- 11) Samsung: LC013 series;
- 12) Edison: EdiLex II COB LED series;



Order Information

Example:BuLED-50F-B

Example:BuLED-50F - **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-50F
	Heatsink Size	Φ48xH50mm
	Housing Size	Φ50xH50mm
	Material (Heatsink + Housing)	AL1070 + AL6063-T5
	Finish	Black Anodized
	Weight (g)	93.0
	Dissipated power (Ths-amb,60°C)	12.2 (W)
	Cooling surface area (mm ²)	39200
	Thermal Resistance (Rhs-amb)	4.9 (°C/W)

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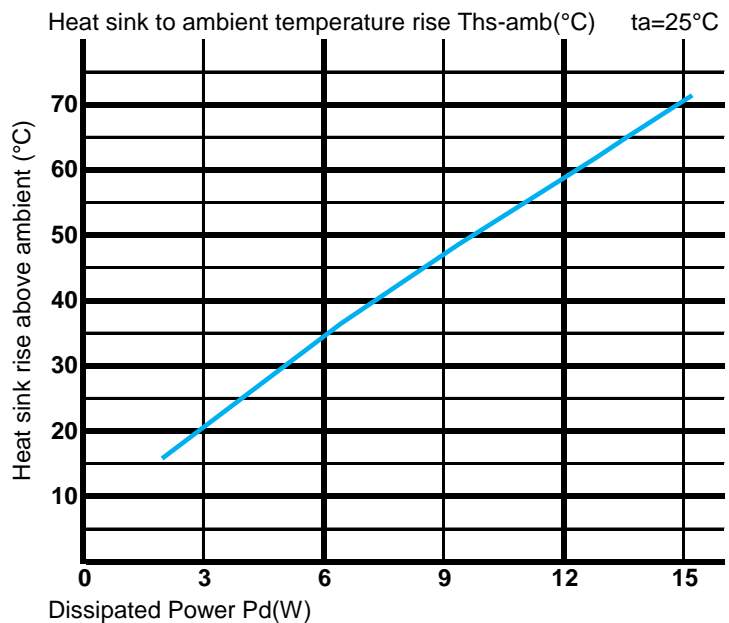
The thermal data table

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

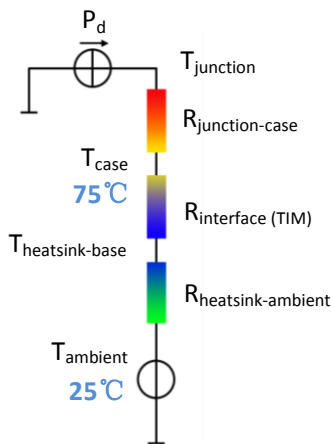
*To calculate the dissipated power please use the following formula: $P_d = P_e \times (1-\eta_L)$.

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

Dissipated Power Pd(W)	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-50F	
3.0	6.7	20.0
6.0	5.7	34.0
9.0	5.2	47.0
12.0	4.8	58.0
15.0	4.7	70.0



*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: $\theta = (T_{hs} - T_a) / P_d$

θ - Thermal Resistance [°C/W] ; T_{hs} - Heatsink temperature ; T_a - 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:

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