

# BuLED

## BuLED-50Fx LED light accessory to replace MR16 fittings

### Features VS Benefits

- \* BuLED-50Fx 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 4.8°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: LEMWWM18 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-50Fx-B

Example:BuLED-50Fx - **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

	<b>Model No.</b>	BuLED-50Fx
	<b>Heatsink Size</b>	Φ48xH50mm
	<b>Housing Size</b>	Φ50xH50mm
	<b>Material (Heatsink + Housing)</b>	AL1070 + AL6063-T5
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	95.0
	<b>Dissipated power (Ths-amb,60°C)</b>	12.5 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	54500
	<b>Thermal Resistance (Rhs-amb)</b>	4.8 (°C/W)

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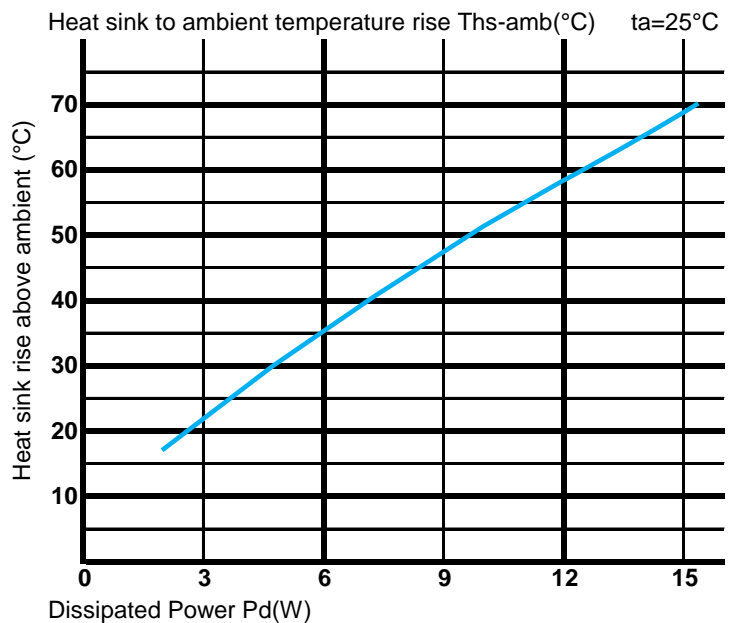
**The thermal data table**

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

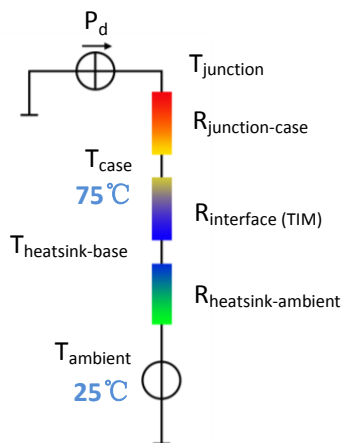
\*To calculate the dissipated power please use the following formula:  $P_d = P_e \times (1-\eta_L)$ .

Pd - Dissipated power ; Pe - Electrical power ;  $\eta_L$  = Light efficiency of the LED module;

Dissipated Power Pd(W)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)		Heat sink to ambient temperature rise Ths-amb (°C)	
	BuLED-50Fx			
3.0	7.7	23.0		
6.0	5.8	35.0		
9.0	5.2	47.0		
12.0	4.8	58.0		
15.0	3.9	58.0		



\*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.

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

$\theta$  - 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  $R_{\text{junction-case}}$ , the thermal resistance of the TIM outside the package is  $R_{\text{interface (TIM)}}$  [°C/W], the thermal resistance with the heat sink is  $R_{\text{heatsink-ambient}}$  [°C/W], and the ambient temperature is  $T_{\text{ambient}}$  [°C].

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

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