



# LED

## BuLED

**BuLED-30F LED light accessory to replace MR16 fittings**

### Features VS Benefits

- \* BuLED-30F 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 400 to 1200 lumen.
  - \* Thermal resistance range Rth 6.7°C/W.
  - \* Heatsink Diameter 48mm - Standard height 30mm , 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: LEMWM18 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-30F-B

Example:BuLED-30F - **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>	<b>BuLED-30F</b>
	<b>Heatsink Size</b>	<b>Φ48xH30mm</b>
	<b>Housing Size</b>	<b>Φ50xH50mm</b>
	<b>Material (Heatsink + Housing)</b>	<b>AL1070 + AL6063-T5</b>
	<b>Finish</b>	<b>Black Anodized</b>
	<b>Weight (g)</b>	<b>75.0</b>
	<b>Dissipated power (Ths-amb,60°C)</b>	<b>9.0 (W)</b>
	<b>Cooling surface area (mm<sup>2</sup>)</b>	<b>30600</b>
	<b>Thermal Resistance (Rhs-amb)</b>	<b>6.7 (°C/W)</b>

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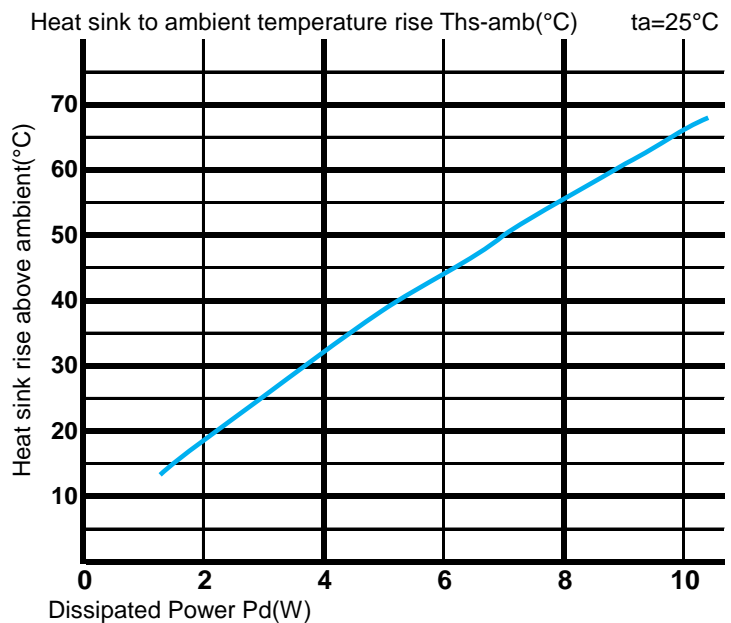
**The thermal data table**

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

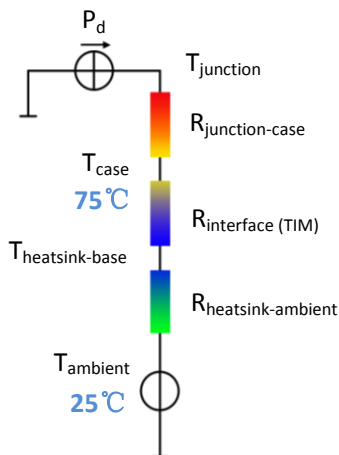
\*To calculate the dissipated power please use the following formula:  $P_d = P_e \times (1-\eta_L)$ .

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

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-30F	
Dissipated Power Pd(W)	2.0	9.0	18.0
	4.0	8.0	32.0
	6.0	7.3	44.0
	8.0	6.9	55.0
	10.0	6.6	66.0



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

$\theta$  - 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:

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