



for

LED



xLED

**xLED-BRI-7050 Pin Fin LED Heat Sink  $\Phi$ 70mm for Bridgelux**

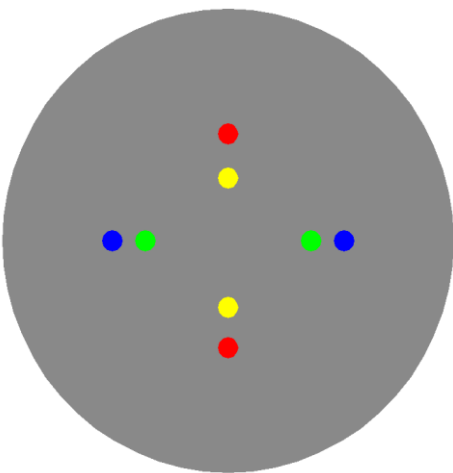
**Features VS Benefits**

- \* The xLED-BRI-7050 Bridgelux Pin Fin LED Heat Sinks are specifically designed for luminaires using the Bridgelux LED engines.
- \* Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- \* For spotlight and downlight designs from 1,000 to 2,600 lumen.
- \* Thermal resistance range  $R_{th}$  3.13°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Bridgelux V Series™, Vero® SE Series, Vero® Series, H Series™ and Vesta™ Series LED engines.
- \* Diameter 70.0mm - standard height 50.0mm, Other heights on request.
- \* Forged from highly conductive aluminum.



**Zhaga LED engine and radiator assembly is a unified future international standardization**

- \* Below you find an overview of Bridgelux COB's and LED modules which standard fit on the Pin Fin LED Heat Sinks.
- \* In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED Pin Fin LED Heat Sink.



**Bridgelux LED Modules directly Mounting Options**

**Bridgelux V13,V15,V18 LED Array Series:**

- BXRE-20xxxxxx-x-xx; BXRE-40xxxxxx-x-xx;
- BXRE-27xxxxxx-x-xx; BXRE-50xxxxxx-x-xx;
- BXRE-30xxxxxx-x-xx; BXRE-57xxxxxx-x-xx;
- BXRE-35xxxxxx-x-xx; BXRE-65xxxxxx-x-xx;

With the Zhaga Book 3 Holders:  
 BJB holder:47.319.2025.50; 47.319.2030.50;  
 Direct mounting with machine screws M3x6.5mm, Blue indicator marks.

With the LEDiL products:  
 Olivia series: FN14637-S;  
 Ronda series: FN15xxx-xx;

**Bridgelux Vero® Series Vero 10, Vero 13 LED Array and Vero® SE Series Vero 10 SE, Vero 13 SE LED Array**

- BXRC-27xxxxxx-x-xx; BXRC-50xxxxxx-x-xx;
- BXRC-30xxxxxx-x-xx; BXRC-57xxxxxx-x-xx;
- BXRC-35xxxxxx-x-xx; BXRC-65xxxxxx-x-xx;
- BXRC-40xxxxxx-x-xx;

With the Bridgelux Holder:  
 Direct mounting with machine screws M3x6.5mm.  
 Vero 10 for the yellow indicator mark, Vero 13 for the red indicator mark.

With the LEDiL products:  
 Olivia series: FN14637-S; FN14828-M;  
 Ronda series: FN15xxx-xx;

**Bridgelux® H Series™ H6, H9 LED Array:**

- BXRH-27xxxxxx-x-xx; BXRH-35xxxxxx-x-xx;
- BXRH-30xxxxxx-x-xx; BXRH-40xxxxxx-x-xx;

With the Zhaga Book 11 Holders:  
 BJB holder:47.319.6120.50; 47.319.6104.50;  
 Direct mounting with machine screws M3x6.5mm, Green indicator marks.  
 With the LEDiL products: Ronda series: FN15xxx-xx;

**Bridgelux® Vesta™ Series Dim-To-Warm 9mm Array**

- BXRV-DR-1830H-1000-x-13;

With the Zhaga Book 11 Holders:  
 BJB holder:47.319.6180.50;  
 Direct mounting with machine screws M3x6.5mm, Green indicator marks.

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## Mounting Options and Drawings & Dimensions

Example: xLED-BRI-7050-B-1,2

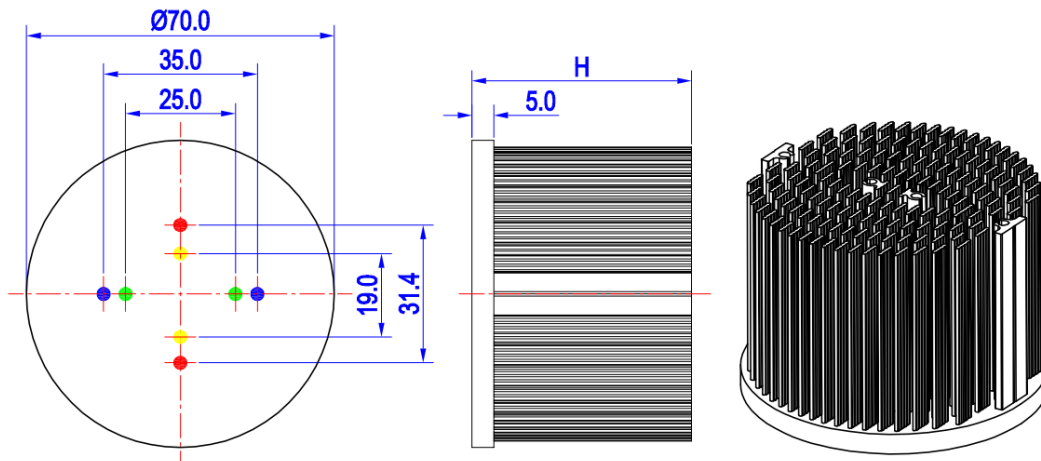
Example: xLED-BRI-70 **1** - **2** - **3**

- 1** Height (mm)
- 2** Anodising Color
  - B-Black
  - C-Clear
  - Z-Custom
- 3** Mounting Options - see graphics for details Combinations available  
Ex.order code - 12  
means option 1 and 2 combined

### 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 notice.


MOUNTING OPTION	Module type	Holder NO.	LEDiL products		THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
			Olivia series	Ronda series			
1	Vero 10 Vero SE 10	Bridgelux	/	/	M3	6.5mm	19.0mm/ 2-@180°
2	Vesta™ Series 9mm	BJB Holder 47.319.6180.50	/	/	M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
	H6	BJB Holder 47.319.6120.50	/	/			
	H9	BJB Holder 47.319.6104.50	/	FN15xxx-xx;			
3	Vero 13 Vero SE 13	Bridgelux	FN14637-S; FN14828-M;	FN15xxx-xx;	M3	6.5mm	31.4mm/ 2-@180°
4	V15, V18	BJB Holder 47.319.2224.50	FN14637-S	/	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book3)
	V13	BJB Holder 47.319.2025.50		FN15xxx-xx;			



## xLED

### xLED-BRI-7050 Pin Fin LED Heat Sink $\Phi 70\text{mm}$ for Bridgelux

#### The product data table

	<b>Model No.</b>	xLED-BRI-7050
	<b>Heatsink Size</b>	$\Phi 70 \times H 50\text{mm}$
	<b>Heatsink Material</b>	AL1070
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	150.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	16.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	91577
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	3.13 (°C/W)

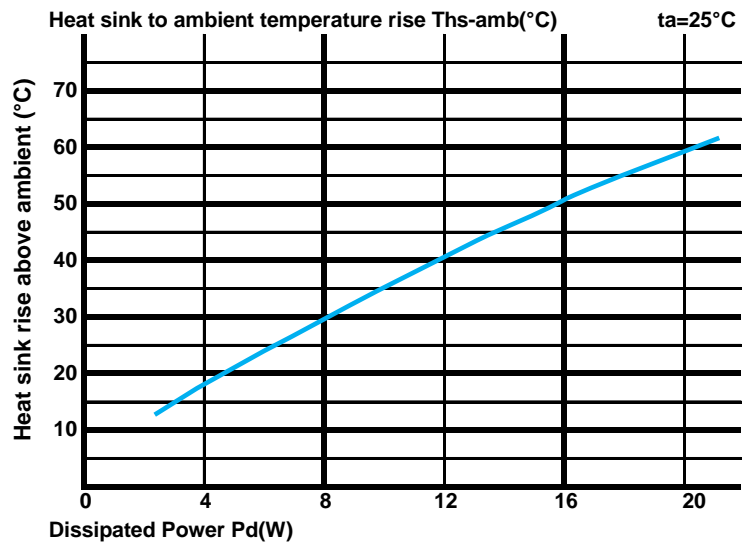
#### The thermal data table

\* 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;

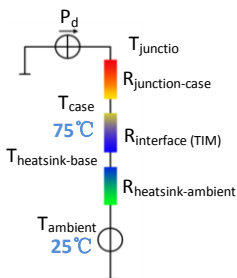
Dissipated Power Pd(W)	Pd = Pe x (1- $\eta_L$ )	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		xLED-BRI-7050	
4.0		4.25	17.0
8.0		3.63	29.0
12.0		3.33	40.0
16.0		3.13	50.0
20.0		2.95	59.0



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

$\theta$  - Thermal Resistance [°C/W] ; T<sub>hs</sub> - Heatsink temperature ; T<sub>a</sub> - Ambient temperature ;

\*The thermal resistance between the junction section of the light-emitting diode and the aluminum substrate side of the package outer shell is R<sub>junction-case</sub>, the thermal resistance of the TIM outside the package is R<sub>interface (TIM)</sub> [°C/W], the thermal resistance with the heat sink is R<sub>heatsink-ambient</sub> [°C/W], and the ambient temperature is T<sub>ambient</sub> [°C].

\*Thermal resistances outside the package R<sub>interface (TIM)</sub> and R<sub>heatsink-ambient</sub> can be integrated into the thermal resistance R<sub>case-ambient</sub> at this point. Thus, the following formula is also used:

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