

EtraLED

EtraLED-BRI-11020 Bridgelux Modular Passive Star LED Heat Sink Φ 110mm

Features VS Benefits

- * The EtraLED-BRI-11020 Bridgelux modular passive star LED heat sink 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 1,600 to 4,200 lumen.
- * Thermal resistance range Rth 1.79°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 110.0mm - standard height 20.0mm, Other heights on request.
- * Extruded 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 srar 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 srar LED heat sinks.



Bridgelux LED Modules directly Mounting Options

Bridgelux V18, V22 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:47.319.2224.50; 47.319.2030.50;

Direct mounting with machine screws M3x6.5mm, Blue indicator marks.

Bridgelux Vero® Series Vero 18, Vero 29 LED Array and Vero® SE Series

Vero 18 SE, Vero 29 SE LED Array

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

With the Bridgelux Holder:

Direct mounting with machine screws M3x6.5mm.

Vero 18 for the yellow indicator mark, Vero 29 for the red indicator mark.

Bridgelux® H Series™ H12, H15 LED Array:

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

With the Zhaga Book 3 Holders:

BJB holder:47.319.2131.50; 47.319.2021.50;

Direct mounting with machine screws M3x6.5mm, Blue indicator marks.

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Mounting Options and Drawings & Dimensions

Example: EtraLED-BRI-11020-B-1,2

Example: EtraLED-BRI-110 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

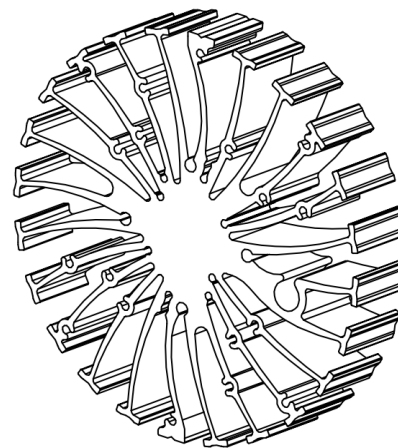
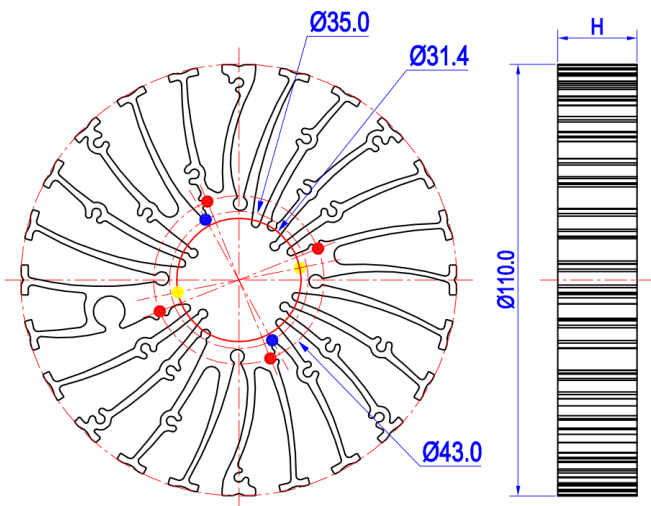
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means option 1 and 2 combined

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.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
1	Vero 18 Vero SE 18	Bridgelux	M3	6.5mm	31.4mm/ 2-@180°
2	H12	BJB Holder 47.319.2131.50	M3	6.5mm	35.0mm/ 2-@180°
	H15	BJB Holder 47.319.2021.50			
	V18	BJB Holder 47.319.2224.50			
	V22	BJB Holder 47.319.2030.50			
3	Vero 29 Vero SE 29	Bridgelux	M3	6.5mm	43.0mm/ 4-@90°



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The product data table

	Model No.	EtraLED-BRI-11020
	Heatsink Size	Φ 110xH20mm
	Heatsink Material	AL6063-T5
	Finish	Black Anodized
	Weight (g)	165.0
	Dissipated power (Ths-amb,50°C)	28.0 (W)
	Cooling surface area (mm²)	52211
	Thermal Resistance (Rhs-amb)	1.79 (°C/W)

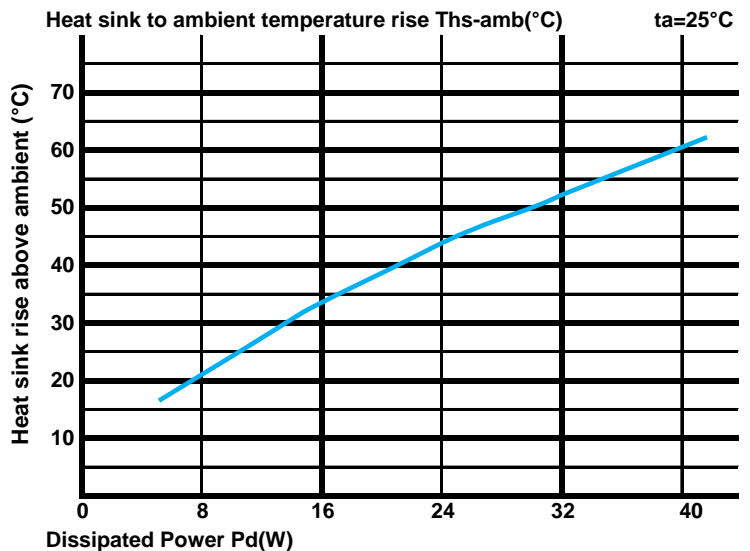
The thermal data table

* 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 ; η_L = Light efficiency of the LED module;

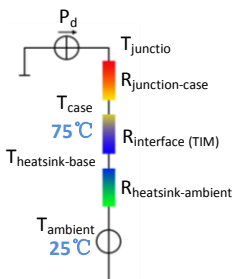
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		EtraLED-BRI-11020	
8.0		2.50	20.0
16.0		2.06	33.0
24.0		1.83	44.0
32.0		1.63	52.0
40.0		1.50	60.0



*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 temperature ;

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

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

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