



# LED

*GooLED*

**GooLED-LUN-11080 Pin Fin LED Heat Sink  $\Phi$ 110mm for Luminus**

### Features VS Benefits

- \* The GooLED-LUN-11080 Luminus Pin Fin LED Heat Sinks are specifically designed for luminaires using the Luminus 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 2,500 to 7,000 lumen.
- \* Thermal resistance range  $R_{th}$  1.14°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Luminus COB series.
- \* Diameter 110mm - standard height 80mm, 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 Luminus 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.



### Luminus LED Modules directly Mounting Options

#### Luminus COB series.

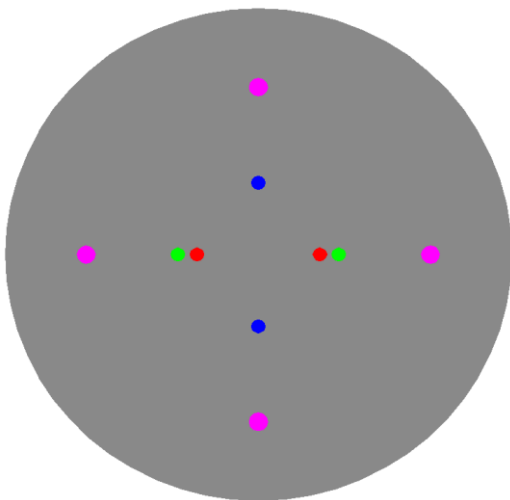
- CIM/CLM/CXM-14;
- With the Zhaga Book 3 holders for the green indicator marks.
- TE Connectivity Holder: 2213254-1;
- BJB Holder: 47.319.2021.50;
- Without the holders for the red indicator marks.
- Direct mounting with machine screws M3x6.5mm.
- With the LEDiL products:
- Lena series: CN12xxx; CN13xxx;

#### Luminus COB series.

- CXM-18;
- With the Zhaga Book 3 holders for the green indicator marks.
- TE Connectivity Holder: 2213258-1;
- BJB Holder: 47.319.2280.50;
- Direct mounting with machine screws M3x6.5mm.
- With the LEDiL products:
- Lena series: CN12xxx;

#### Luminus COB series.

- CLM-22; CXM-22;
- With the Zhaga Book 3 holders for the green indicator marks.
- TE Connectivity Holder: 2213480-1;
- BJB Holder: 47.319.2030.50;
- Without the holders for the blue indicator marks.
- Direct mounting with machine screws M3x6.5mm.
- With the LEDiL products:
- Lena series: CN12xxx; CN13xxx;
- Stella Series: FN13xxx-xx; FN14xxx-xx; FN15xxx-xx;
- Stella Series mounting hole for the pink indicator marks.
- Direct mounting with machine screws M4x8.5mm.



#### Mounting Options and Drawings & Dimensions

Example:GooLED-LUN-11080-B-1,2

Example:GooLED-LUN-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

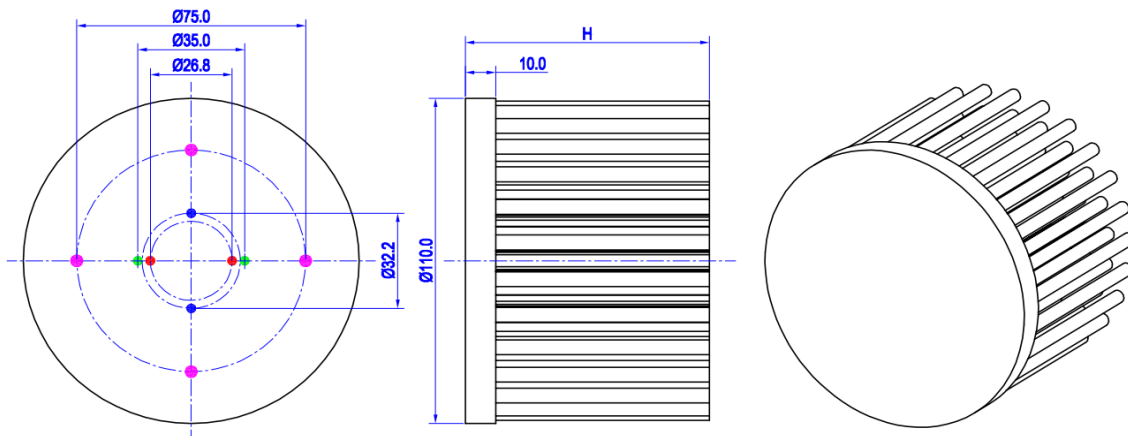
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means option 1 and 2 combined

#### 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.	LEDiL products		THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
			Stella Series	Lena series			
1	CIM/CLM/CXM-14;	/			M3	6.5mm	26.8mm/ 2-@180°
2		/			M3	6.5mm	32.2mm/ 2-@180°
3	CLM-22; CXM-22;	BJB Holder 47.319.2030.50	FN13xxx-xx; FN14xxx-xx; FN15xxx-xx;	CN12xxx; CN13xxx;	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
		TE Holder 2213480-1					
	CXM-18;	BJB Holder 47.319.2280.50		CN12xxx;			
		TE Holder 2213258-1					
CIM/CLM/CXM-14;	BJB Holder 47.319.2021.50	CN12xxx; CN13xxx;					
	TE Holder 2213254-1						
4	LEDiL Lens	/	Stella Series	/	M4	8.5mm	75.0mm/ 4-@90°



## GooLED

### GooLED-LUN-11080 Pin Fin LED Heat Sink Φ110mm for Luminus

#### The product data table

	Model No.	GooLED-LUN-11080
	Heatsink Size	Φ110xH80mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	617.0
	Dissipated power (T <sub>hs-amb</sub> ,50°C)	44.0 (W)
	Cooling surface area (mm <sup>2</sup> )	129119
	Thermal Resistance (R <sub>hs-amb</sub> )	1.14 (°C/W)

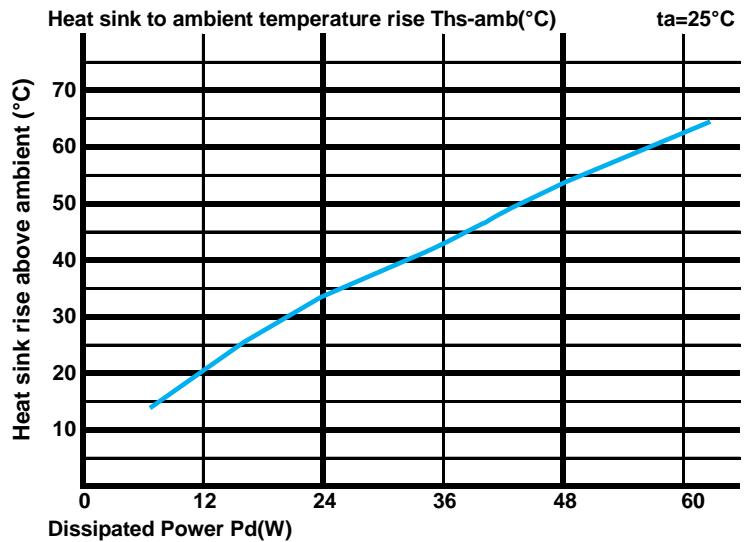
#### The thermal data table

\* 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: Pd = Pe x (1-ηL).

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

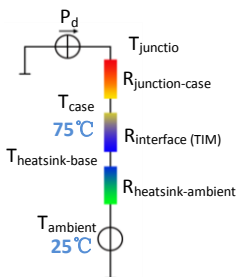
Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		GooLED-LUN-11080	
12.0		1.67	20.0
24.0		1.38	33.0
36.0		1.17	42.0
48.0		1.10	53.0
60.0		1.03	62.0



\*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:

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