GooLED

GooLED-NIC-5850 Pin Fin Heat Sink Φ58mm for Nichia

Features VS Benefits

* The GooLED-NIC-5850 Nichia Pin Fin LED Heat Sinks are specifically designed for luminaires using the Nichia 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 800 to 2,100 lumen.
* Thermal resistance range Rth 3.85°C/W.
* Modular design with mounting holes foreseen for direct mounting of Nichia COB series.
* Diameter 58.0mm - 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

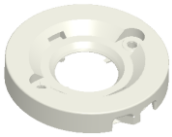
* Below you find an overview of Nichia COB's and LED modules which standard fit on the Pin Fin LED Heat Sinks.
* In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED Pin Fin LED Heat Sink.

NICHIA

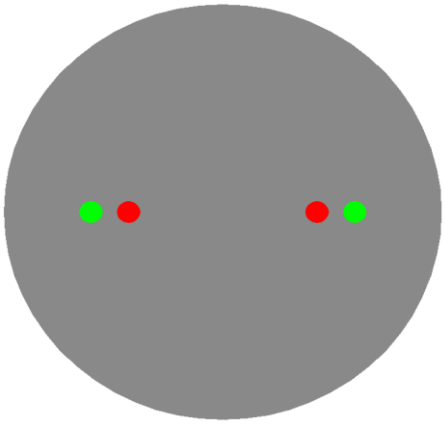
IDEAL

TE connectivity

BJB



LEDiL



Nichia LED Modules directly Mounting Options

Nichia COB LED modules name:

NFCWL036B;
NFCLL036B;
NFCWL060B;
NFCLL060B;

With the Zhaga Book 3 Holders:
Ideal Holder:50-2100NC;
TE LED Holder:2213382-2;
Direct mounting with machine screws M3x6.5mm, Green indicator marks.
With the LEDiL products:
Lena series: CN14xxx; C13xxx; C12xxx;
Ronda series: FN15xxx-xx;

Nichia COB LED modules name:

NVCWL024Z;
NVCLL024Z;
NVNWS007Z;
NJCWS024Z;

With the Zhaga Book 11 Holders:
BJB holder:47.319.6180.50;
TE LED Holder:2213118-1;
Direct mounting with machine screws M3x8mm, Red indicator marks.
With the LEDiL products:
Lena series: CN14xxx; C13xxx; C12xxx;
Ronda series: FN15xxx-xx;

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Mingfa TECH

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Mounting Options and Drawings & Dimensions

Example:GooLED-NIC-5850-B-1,2

Example:GooLED-NIC-58 1 - 2 - 3

1 **Height (mm)**

2 **Anodising Color**

B-Black

C-Clear

Z-Custom

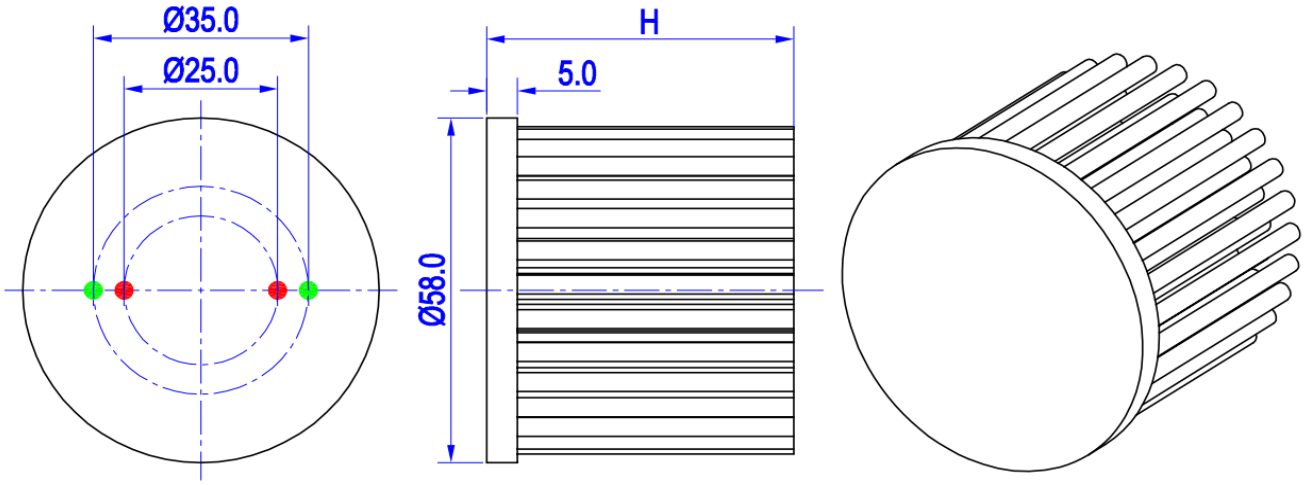
3 **Mounting Options - see graphics for details Combinations available**

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
			Lena series	Ronda series			
N	/	None	None	None	None	None	None
1	NVCWL024Z; NVCLL024Z; NVNWS007Z; NJCWS024Z;	BJB Holder 47.319.6180.50	CN14xxx; C13xxx; C12xxx;	FN15xxx-xx	M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
		TE Holder 2213118-1					
2	NFCWL036B; NFCLL036B; NFCWL060B; NFCLL060B;	Ideal Holder 50-2100NC			M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
		TE Holder 2213382-2					



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The product deta table

Model No.	GooLED-NIC-5850
Heatsink Size	Φ58xH50mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	108.0
Dissipated power (Ths-amb,50℃)	13.0 (W)
Cooling surface area (mm^2)	36775
Thermal Resistance (Rhs-amb)	3.85 (°C/W)

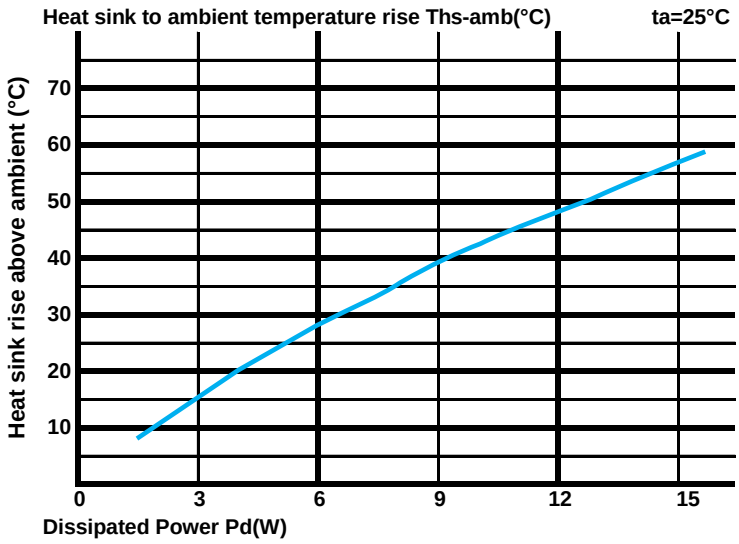
The thermal data table

* 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 effciency of the LED module;

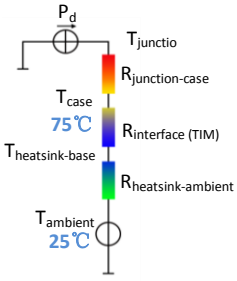
Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		GooLED-NIC-5850	
Dissipated Power Pd(W)	3.0	5.00	15.0
	6.0	4.67	28.0
	9.0	4.33	39.0
	12.0	4.00	48.0
	15.0	3.80	57.0



*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: θ =(Ths−Ta)/Pd

θ - Thermal Resistance [°C/W] ; Ths - Heatsink temperature ; Ta - 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 $R_{heatsink-ambient}$ [°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:

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

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