
GooLED

# GooLED-NIC-6830 Pin Fin Heat Sink Φ68mm for Nichia

## Features VS Benefits

* The GooLED-NIC-6830 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 4.0°C/W.
* Modular design with mounting holes foreseen for direct mounting of Nichia COB series.
* Diameter 68.0mm - standard height 30.0mm, Other heights on request.
* Forged from highly conductive aluminum.

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

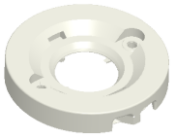
* Below you find an overview of Nichia COB's and LED modules which standard fit on the Pin Fin LED Heat Sinks.
* In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED Pin Fin LED Heat Sink.

NICHIA

IDEAL

TE connectivity

BJB



LEDiL

## Nichia LED Modules directly Mounting Options

**Nichia COB LED modules name:**

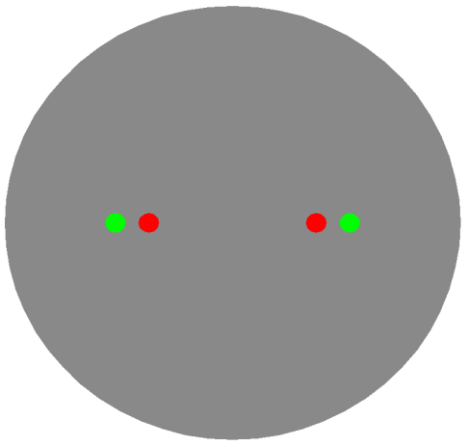
NFCWL036B;
NFCLL036B;
NFCWL060B;
NFCLL060B;

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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## Mounting Options and Drawings & Dimensions

**Example:GooLED-NIC-6830-B-1,2**

**Example:GooLED-NIC-68 1 - 2 - 3**

**1** **Height (mm)**

**2** **Anodising Color**

**B-Black**

**C-Clear**

**Z-Custom**

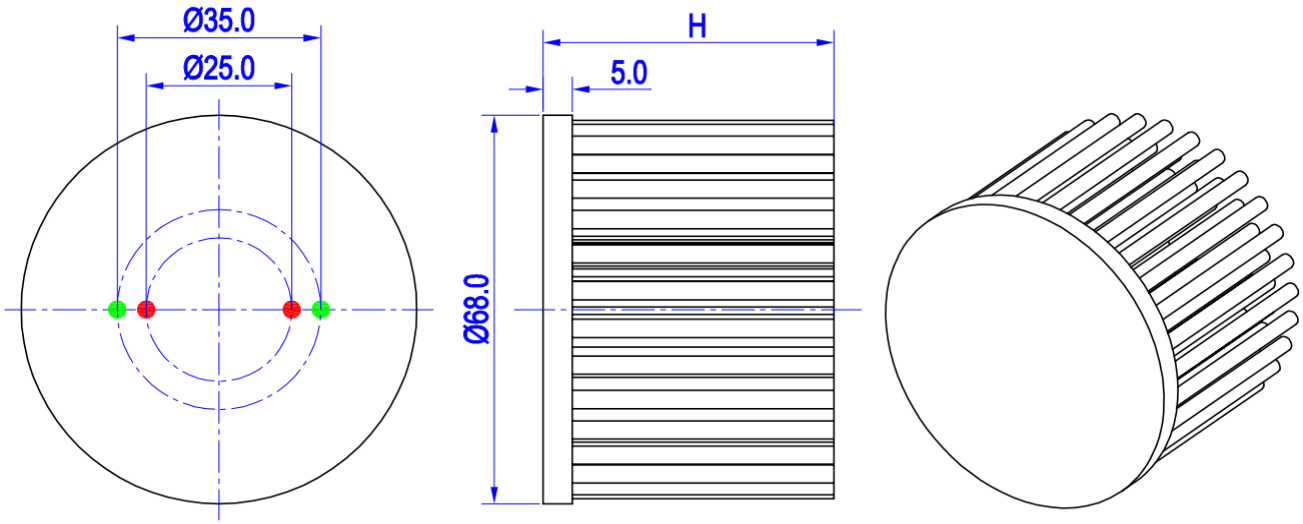
**3** **Mounting Options - see graphics for details Combinations available**

**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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## GooLED-NIC-6830 Pin Fin Heat Sink Φ68mm for Nichia

### The product deta table


| | |
|---|---|
| Model No. | GooLED-NIC-6830 |
| Heatsink Size | Φ68xH30mm |
| Heatsink Material | AL1070 |
| Finish | Black Anodized |
| Weight (g) | 108.0 |
| Dissipated power (Ths-amb,50℃) | 12.5 (W) |
| Cooling surface area ($mm^2$) | 36775 |
| Thermal Resistance (Rhs-amb) | 4.0 (°C/W) |

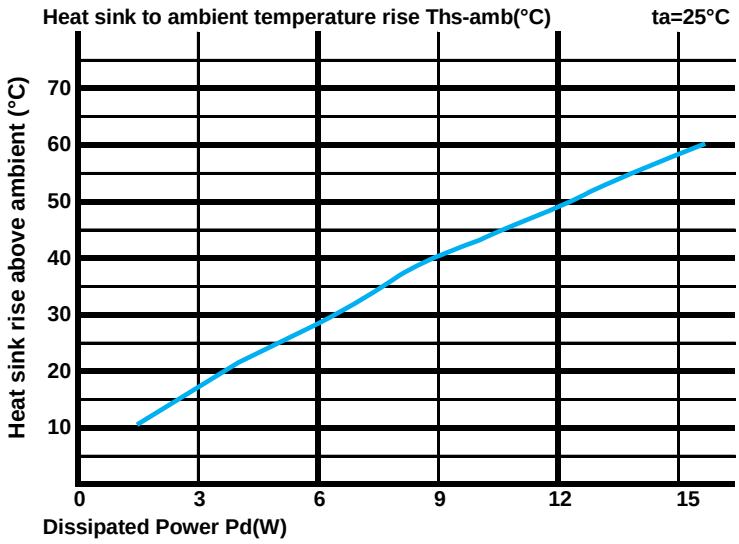
### The thermal data table

* 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;

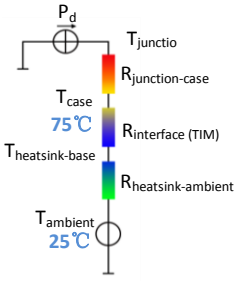
| Pd = Pe x (1-ηL) | | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|---|---|---|---|
| | | GooLED-NIC-6830 | |
| Dissipated Power Pd(W) | 3.0 | 5.67 | 17.0 |
| | 6.0 | 4.67 | 28.0 |
| | 9.0 | 4.44 | 40.0 |
| | 12.0 | 4.08 | 49.0 |
| | 15.0 | 3.87 | 58.0 |




*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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