



# LED

*GooLED*

**GooLED-PRO-4868 Pin Fin LED Heat Sink  $\Phi$ 48mm for Prolight Opto**

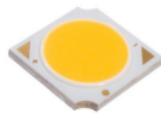
### Features VS Benefits

- \* The GooLED-PRO-4868 Prolight Opto Pin Fin LED Heat Sinks are specifically designed for luminaires using the Prolight Opto 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 600 to 1,800 lumen.
- \* Thermal resistance range Rth 4.35°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Prolight Opto COB series.
- \* Diameter 48.0mm - standard height 68.0mm 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 Prolight Opto 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.



A.A.G. STUCCHI  
Ideas are made of light



### Prolight Opto LED Modules directly Mounting Options

#### Prolight Opto COB G-II and COB Series:

- |                  |                  |
|------------------|------------------|
| PACJ-7xxx-xxxx;  | PACE-7xxx-xxxx;  |
| PACJ-14xxx-xxxx; | PACE-14xxx-xxxx; |
| PACJ-21xxx-xxxx; | PACE-21xxx-xxxx; |
| PACJ-28xxx-xxxx; | PACE-28xxx-xxxx; |

With the Zhaga Book 11 holders for the green indicator marks.

BJB holder: 47.319.6294.50;

AAG.STUCCHI: 8100-G2

Without the holders for the pink indicator marks.

Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:

Olivia series: FN14637-S

Ronda series: FN15xxx-xx;

Molly series: C15xxx;

### Prolight Opto LED Modules directly Mounting Options

#### Prolight Opto COB G-II and COB Series:

- |                  |                  |
|------------------|------------------|
| PACK-35xxx-xxxx; | PACF-40xxx-xxxx; |
| PACK-42xxx-xxxx; | PACF-35xxx-xxxx; |
| PACK-57xxx-xxxx; |                  |

With the Zhaga Book 3 holders for the green indicator marks.

BJB holder: 47.319.2021.50;

AAG.STUCCHI: 8101-G2

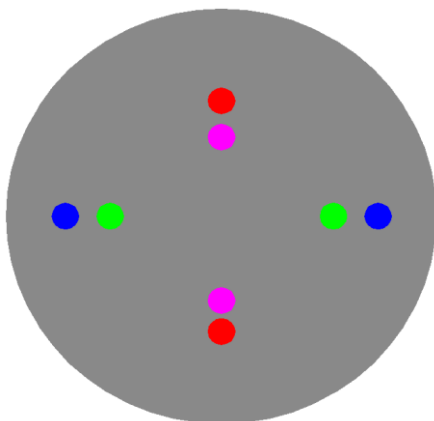
Without the holders for the red indicator marks.

Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:

Olivia series: FN14637-S

Ronda series: FN15xxx-xx;





*GooLED*

**GooLED-PRO-4868 Pin Fin LED Heat Sink  $\Phi$ 48mm for Prolight Opto**

**Mounting Options and Drawings & Dimensions**

Example:GooLED-PRO-4868-B-1,2

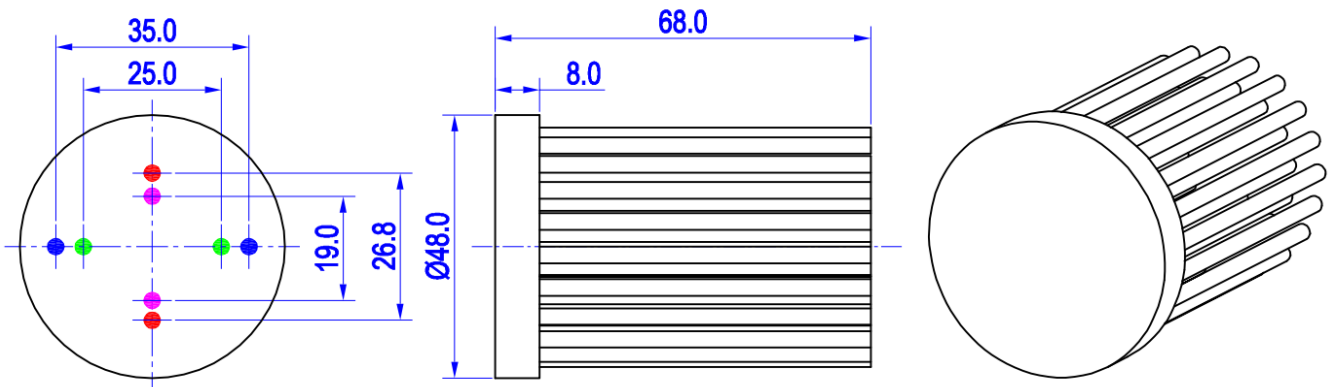
Example:GooLED-PRO-48 **1** - **2** - **3**

- 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            |
|-----------------|------------------------|--|----------------|---------------|--------------|--------|--------------|---------------------------------|
|                 |                        |  | Molly Series   | Olivia series | Ronda series |        |              |                                 |
| 1               | COB series (13.5*13.5) | /  | C15xxx;        | FN14637-S     | FN15xxx-xx;  | M3     | 6.5mm        | 19.0mm/ 2-@180°                 |
| 2               |                        | BJB Holder 47.319.6294.50<br>AAG.STUCCHI 8100-G2 |                |               |              | M3     | 6.5mm        | 25.0mm/ 2-@180° (Zhaga book 11) |
| 3               | COB series (19.0*19.0) | /  | C15xxx;        | FN14637-S     | FN15xxx-xx;  | M3     | 6.5mm        | 26.8mm/ 2-@180°                 |
| 4               |                        | BJB Holder 47.319.2134.50<br>AAG.STUCCHI 8101-G2 |                |               |              | M3     | 6.5mm        | 35.0mm/ 2-@180° (Zhaga book 3)  |



**GooLED**

**GooLED-PRO-4868 Pin Fin LED Heat Sink Φ48mm for Prolight Opto**

**The product data table**

|  |  |                 |
|--|--|-----------------|
|  | <b>Model No.</b>                             | GooLED-PRO-4868 |
|  | <b>Heatsink Size</b>                         | Φ48xH68mm       |
|  | <b>Heatsink Material</b>                     | AL1070          |
|  | <b>Finish</b>                                | Black Anodized  |
|  | <b>Weight (g)</b>                            | 93.0            |
|  | <b>Dissipated power (Ths-amb,50°C)</b>       | 11.5 (W)        |
|  | <b>Cooling surface area (mm<sup>2</sup>)</b> | 31383           |
|  | <b>Thermal Resistance (Rhs-amb)</b>          | 4.35 (°C/W)     |

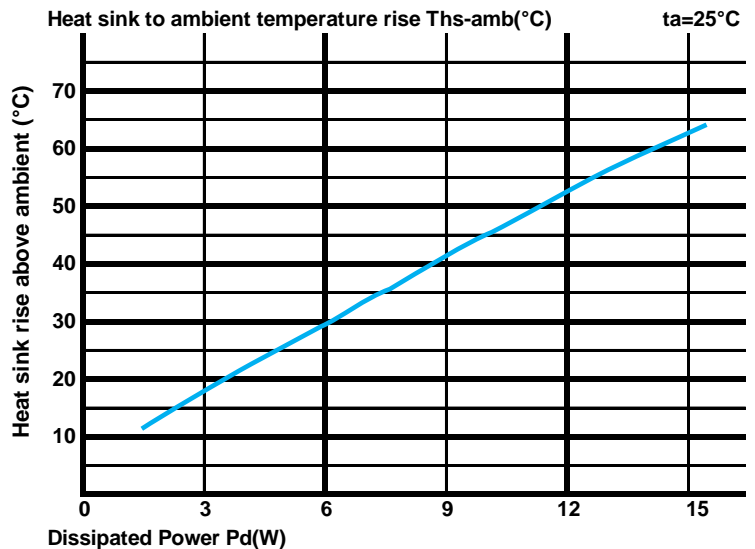
**The thermal data table**

\* 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;

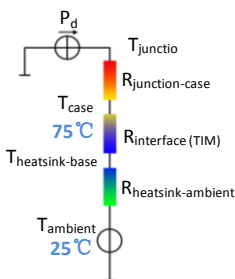
| Dissipated Power Pd(W) | Pd = Pe x (1-ηL) | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|------------------------|------------------|--|--|
|                        |                  | GooLED-PRO-4868  |  |
| 3.0                    |                  | 6.00   | 18.0   |
| 6.0                    |                  | 4.83   | 29.0   |
| 9.0                    |                  | 4.56   | 41.0   |
| 12.0                   |                  | 4.33   | 52.0   |
| 15.0                   |                  | 4.13   | 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:  $\theta = (Ths - Ta) / Pd$

$\theta$  - 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:

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