GooLED

GooLED-SEO-7830 Pin Fin Heat Sink Φ78mm for Seoul

Features VS Benefits

* The GooLED-SEO-7830 Seoul Pin Fin LED Heat Sinks are specifically designed for
  luminaires using the Seoul 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 1,000 to 2,700 lumen.
* Thermal resistance range Rth 3.03°C/W.
* Modular design with mounting holes foreseen for direct mounting of Seoul COB series
  and AC Modules.
* Diameter 78.0mm - 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 Seoul 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.

Seoul LED Modules directly Mounting Options

Seoul COB Series, Size 28×28mm.

SDW04F1C;	SDW84F1C;
SDW05F1C;	SDW85F1C;
SDW06F1C;	SDW86F1C;
SAW822xxx;	SDW94F1C;
SAW922xxx;	

With the Zhaga Book 3 holders for the green indicator marks.
BJB holder: 47.319.2030.50;   AAG.STUCCHI: 8102-G2
Without the holders for the blue indicator marks.
Direct mounting with machine screws M3x6.5mm.

Seoul COB Series, Size 19×19mm.

SDW02F1C;	SDW82F1C;
SDW03F1C;	SDW83F1C;
SDW92F1C;	

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.
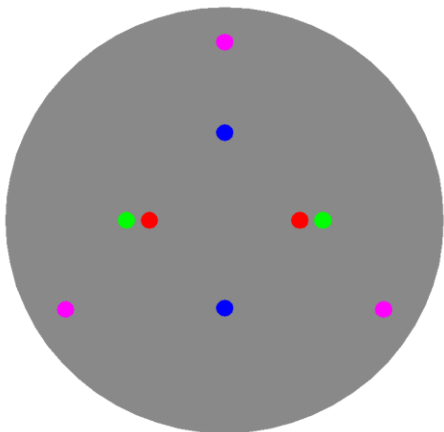Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:
Olivia series: FN14637-S;   FN14828-M;
Ronda series: FN15xxx-xx;

AC LED Modules, Size Φ70mm.

SMJD-2C16W4PD;	SMJD-2D16W4PD;
SMJD-2C16W4PE;	SMJD-2D16W4PE;
SMJD-2D12W4PD;	SMJD-3D16W4xx;
SMJD-2D12W4PE;	SMJD-3D16W4xx;

Direct mounting with 3 screws M2.5x6.5mm.
Pink indicator marks.

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Mounting Options and Drawings & Dimensions

Example:GooLED-SEO-7830-B-1,2

Example:GooLED-SEO-78 `1` - `2` - `3`

`1` **Height (mm)**

`2` **Anodising Color**

B-Black

C-Clear

Z-Custom

`3` **Mounting Options - see graphics for**
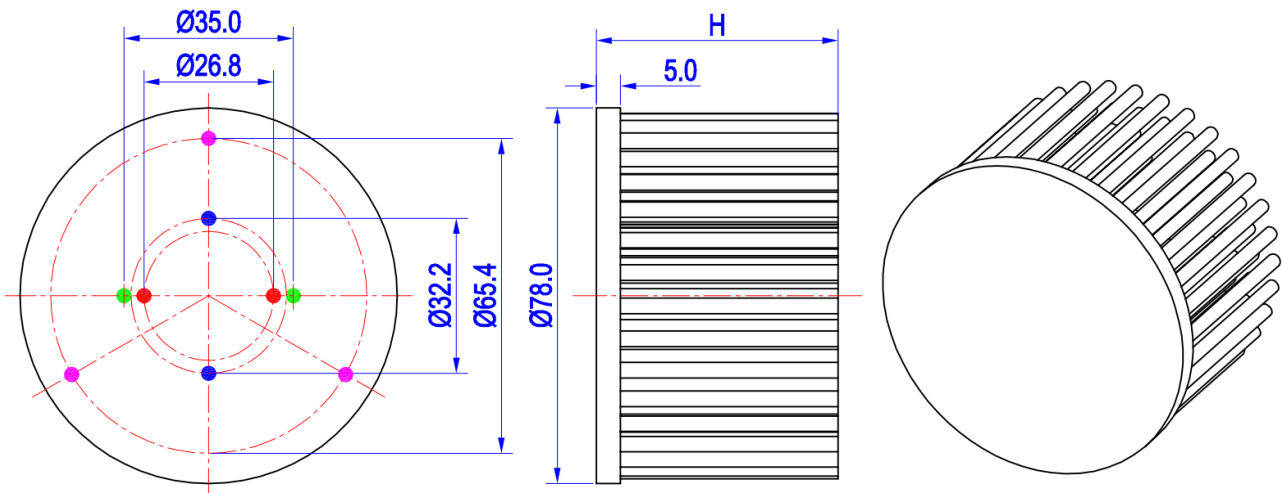**details Combinations available**
Ex.order code - 12
means option 1 and 2 combined

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
			Olivia series	Ronda series			
1	COB Size 19×19mm	/	FN14637-S; FN14828-M;	FN15xxx-xx;	M3	6.5mm	26.8mm/ 2-@180°
2	COB Size 28×28mm	/	/	/	M3	6.5mm	32.2mm/ 2-@180°
3		BJB Holder 47.319.2030.50	/	/	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
		AAG.STUCCHI 8102-G2					
	COB Size 19×19mm	BJB Holder 47.319.2021.50	FN14637-S; FN14828-M;	FN15xxx-xx;			
		AAG.STUCCHI 8101-G2					
4	AC Module	/	/	/	M3	6.5mm	65.4mm/ 3-@120°

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The product deta table

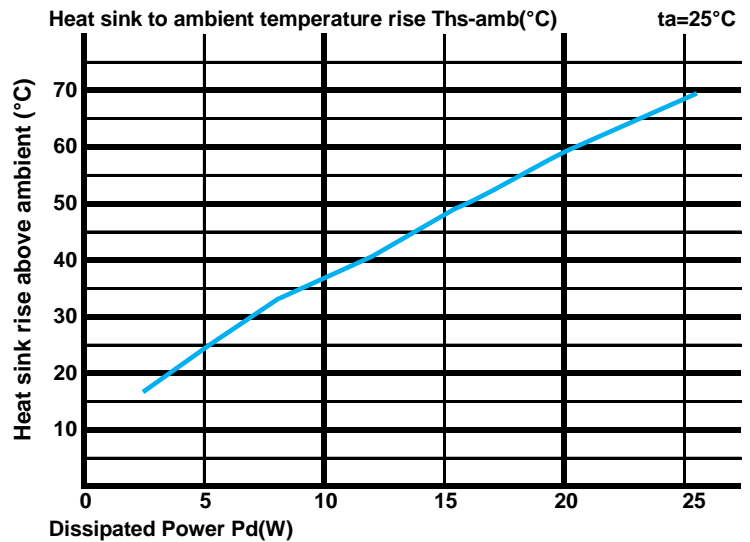| GooLED	Model No.	GooLED-SEO-7830
	Heatsink Size	Φ78xH30mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	138.0
	Dissipated power (Ths-amb,50℃)	16.5 (W)
	Cooling surface area (mm²)	46643
	Thermal Resistance (Rhs-amb)	3.03 (°C/W)

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-SEO-7830	
Dissipated Power Pd(W)	5.0	4.80	24.0
	10.0	3.60	36.0
	15.0	3.13	47.0
	20.0	2.95	59.0
	25.0	2.72	68.0

Heat sink to ambient temperature rise Ths-amb(°C)   **ta=25°C**

*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.
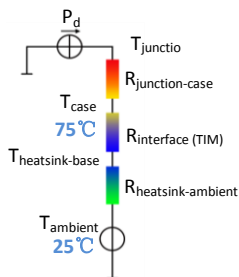
*Thermal resistance is a heat property and a measurement of a temperature difference by which an object or material resists a heat flow.

   Geometric shapes are different, the thermal resistance is different. Formula: $\theta = (Ths - Ta)/Pd$

   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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