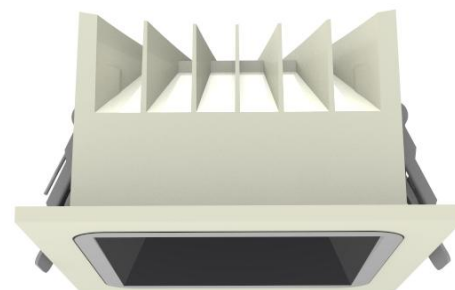


## Quartet

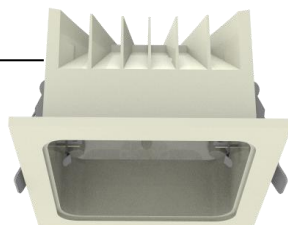
## Quartet-3001F Lighting Kits product brief

### Features & Benefits

- \* Mechanical compatibility with direct mounting of the COB products to the LED thermal body and thermal performance matching the lumen packages.
- \* For Down light designs from 900 to 1500 lumen.
- \* Thermal resistance range  $R_{th}$  1.13°C/W.
- \* Full accessory kit with LED cooler Body, PSU mounting shrapnel & lens holder.
- \* Other accessories like COB holder & lens separate available.
- \* Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's.
- \* Forged from highly conductive aluminum (ADC12).
- \* Dimension 115x115mm - Standard height 60mm, Other heights on request.
- \* 3 standard colors - white powder, black powder and gray powder.



Heatsink



Holder



PC Reflector



- 01) Bridelux: Vero 10 Vero SE 10 LED engines;
- 02) Cree: XLamp CXA 13xx, XLamp CXB 15xx Series engines;
- 03) Citizen: CLU026, CLU027, CLU028, CLU721, CLU711, CLU701 LED engines;
- 04) Edison: EdiLex III COB LED engines;
- 05) GE lighting: Infusion™ LED engines;
- 06) LG Innotek: 7W, 10W LED engines;
- 07) LumiLEDs: LUXEON 1202/1203 LED engines;
- 08) Lumens: Ergon-COB 1304, 15xx LED engines;
- 09) Luminus: CXM-6, CHM/CLM/CXM-9 LED engines;
- 10) Nichia: NVxxx024Z, NVxxx036Z, NFCWxxxB Series LED engines;
- 11) Osram: SOLERIQ® S9 LED engines;
- 12) Philips: Fortimo SLM LED engines;
- 13) Prolight Opto: PACJ-7xxx/14xxx/21xxx/28xxx-xxxx engines;
- 14) Samsung: LCxxxC Series, LCxxxD Series LED engines;
- 15) Seoul Semiconductor: SAWxxxxxx Series, DC COB LED engines;
- 16) Tridonic: SLE G5, SLE G6 LES10mm LED engines;
- 17) Vossloh-Schwabe: LUGA Shop and LUGA C LED engines;

### Order Information

Example: Quartet-3001F-WH

Quartet - **1** - **2**

**1**

Product model  
- 3001F

**2**

Finish  
- WH White  
- BK Black  
- GY Gray

#### 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.

Tel: +86-769-39023131

E-fax: +86-(020)28819702 ext:22122

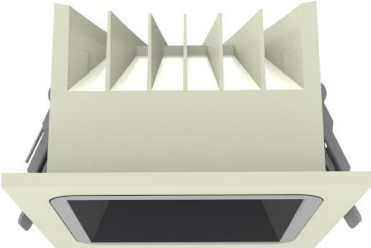
Email: sales@mingfatech.com

Http://www.heatsinkled.com

Http://www.mingfatech.com



## The product data table

|                                                                                   |                                                                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|  | <br><i>Quartet</i> |
| <b>Model No.</b>                                                                  | <b>Quartet-3001F</b>                                                                                 |
| <b>Heatsink Size</b>                                                              | <b>115x115x60mm</b>                                                                                  |
| <b>Heatsink Material</b>                                                          | <b>ADC12</b>                                                                                         |
| <b>Heatsink Finish</b>                                                            | <b>White/Black/Gray</b>                                                                              |
| <b>Weight</b>                                                                     | <b>307g</b>                                                                                          |
| <b>Dissipated power (Ths-amb,50°C)</b>                                            | <b>10 (W)</b>                                                                                        |
| <b>Beam Angle</b>                                                                 | <b>50°</b>                                                                                           |
| <b>Thermal Resistance (Rhs-amb)</b>                                               | <b>1.13 (°C/W)</b>                                                                                   |

\* 3D files are available in ParaSolid, STP and IGS on request

\* The thermal resistance  $R_{th}$  is determined with a calibrated heat source of 14mm×14mm central placed on the heat sink,  $T_{amb}$  40° and an open environment. Reference data @ heat sink to ambient temperature rise  $T_{hs-amb}$  50°C

The thermal resistance of a LED cooler is not a fix value and will vary with the applied dissipated power  $P_d$

\* Dissipated power  $P_d$ . Reference data @ heat sink to ambient temperature rise  $T_{hs-amb}$  50°C

The maximal dissipated power needs to be verified in function of required case temperature  $T_c$  or junction temperature  $T_j$  and related to the estimated ambient temperature where the light fixture will be placed. Please be aware the dissipated power  $P_d$  is not the same as the electrical power  $P_e$  of a LED module

To calculate the dissipated power please use the following formula:  $P_d = P_e \times (1 - \eta_L)$

$P_d$  - Dissipated power

$P_e$  - Electrical power

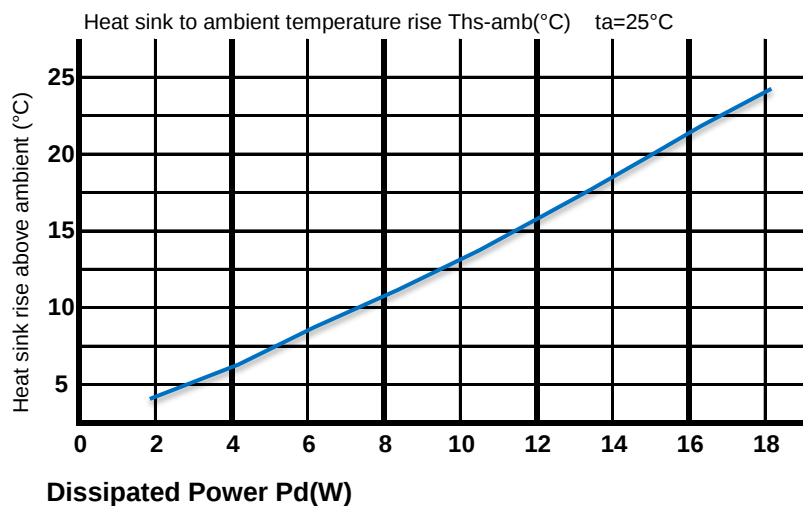
$\eta_L$  = Light efficiency of the LED module

## Quartet

## Quartet-3001F Lighting Kits assembly & introduction

### The thermal data table

| 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) |
|------------------------|----------------|-------------------------------------------------------|---------------------------------------------------|
|                        |                | Quartet-3001F                                         |                                                   |
| 2                      |                | 1.50                                                  | 3.4                                               |
| 4                      |                | 1.30                                                  | 6                                                 |
| 6                      |                | 1.17                                                  | 8.2                                               |
| 8                      |                | 1.15                                                  | 10.8                                              |
| 10                     |                | 1.13                                                  | 13.3                                              |
| 12                     |                | 1.12                                                  | 15.8                                              |
| 15                     |                | 1.10                                                  | 19.5                                              |



\* Please be aware the dissipated power Pd is not the same as the electrical power Pe of a LED module.

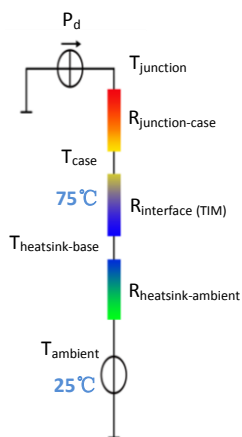
\*To calculate the dissipated power please use the following formula:  $P_d = P_e \times (1 - \eta_L)$ .

Pd - Dissipated power ; Pe - Electrical power ;  $\eta_L$  = Light efficiency of the LED module;

\*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] ;  $T_{hs}$  - Heatsink temperature ;  $T_a$  - 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:

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