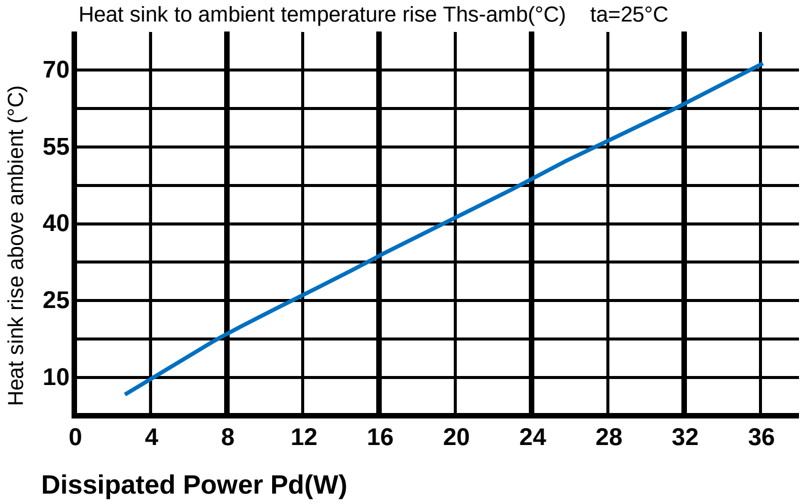
Orbit

Orbit-152 Lighting Kits thermal data

The thermal data table

Pd=Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb(°C/W)	Heat sink to ambient temperature rise Ths-amb(°C)
		Orbit-152	
Dissipated Power Pd(W)	5	2.34	12.7
	10	2.10	23
	15	1.97	32.5
	20	1.87	41.4
	25	1.84	51
	30	1.78	59.5
	35	1.75	68.3



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

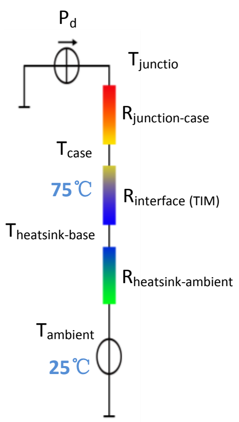
*To calculate the dissipated power please use the following formula: Pd = Pe x (1-ηL).

Pd - Dissipated power ; Pe - Electrical power ; ηL = Light effciency of the LED module;

*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:

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

Tel:+86-769-39023131
E-fax:+86-(020)28819702 ext:22122
Email:sales@mingfatech.com
Http://www.heatsinkled.com
Http://www.mingfatech.com