



THE ULTIMATE THERMAL SOLUTION

# LED System Cooling Solutions

## *Product Guide*



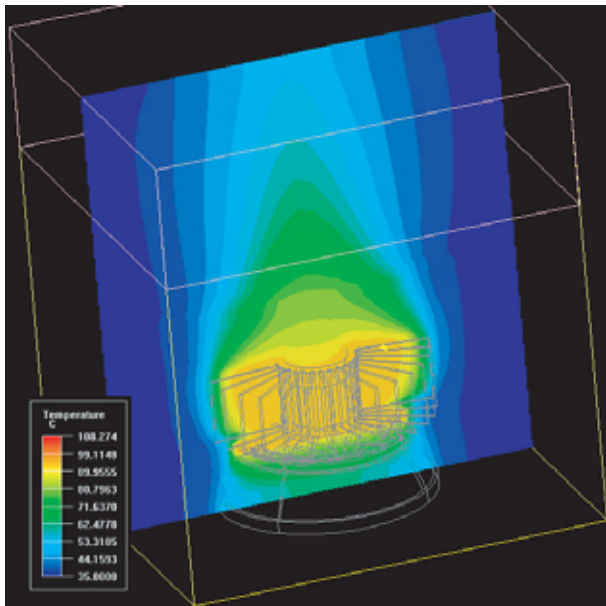
***Innovation, Speed, Customer Satisfaction***



THE ULTIMATE THERMAL SOLUTION



## Company Introduction



With the evolution of LED lighting applications, a well-designed thermal management becomes one of the necessities when developing LED lighting system. Cooler Master's highly experienced R&D team designed series of cooling solutions especially for LED devices used in street lights or brake single lights for vehicles, As a certified partner of Osram, we have confidence to satisfy all client requirements, makes your LED devices more reliable, longer life expectancy and optimal Performance.

# Indoor Lighting

**Sunflower**



**Stacked-Heatpipe**



**MR-16**



**Down Light**



# Indoor Lighting

## Sunflower

### **ED-E0-C052015000-S006**

Application: Embedded light  
Heat sink: Sunflower-liked aluminum extrusion  
Dimension: 52mm(Diameter) x 15mm(H)  
Maximum LED power: 6.8W  
Weight: 43.7g  
Fastener: Screw / Clip  
Convection: Natural convection

Performance:  
 $T_a = 30\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 83.4\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 9.1\text{ }^{\circ}\text{C/W}$  (Thermal resistance)



### **ED-E0-C052030000-S010**

Application: Embedded light  
Heat sink: Sunflower-liked aluminum extrusion  
Dimension: 52mm(Diameter) x 15mm(H)  
Maximum LED power: 10W  
Weight: 65.2g  
Fastener: Screw / Clip  
Convection: Natural convection

Performance:  
 $T_a = 30\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 85\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 5.5\text{ }^{\circ}\text{C/W}$  (Thermal resistance)



# Indoor Lighting

## Stacked-Heatpipe

### **ED-SP-C052080000-S009**

Application: Embedded light  
Heat sink: AL stacked fin + 6mm heat pipe x1  
Dimension: 52mm(Diameter) x 80mm(H)  
Maximum LED power: 9W  
Weight: 122.6g  
Fastener: Screw  
Convection: Natural convection

Performance:  
 $T_a = 30\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 83.4\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 5.95\text{ }^{\circ}\text{C/W}$  (Thermal resistance)



## MR-16

### **ED-E0-C052053000-S006**

Application: Embedded light  
Heat sink: Aluminum extrusion  
Dimension: 52mm(Diameter) x 53mm(H)  
Maximum LED power: 6W  
Weight: 50.6g  
Fastener: Screw  
Convection: Natural convection

Performance:  
 $T_a = 30\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 85\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 9.2\text{ }^{\circ}\text{C/W}$  (Thermal resistance)



# Indoor Lighting

## Down Light

### **DL-SP-R102080074-S018**

Application: Down Light

Heat sink: AL stacked fin + 6mm heat pipe x1

Dimension: 102mm(L) x 80mm(W) x 74mm(H)

Maximum LED power: 18W

Weight: 300g

Fastener: N/A

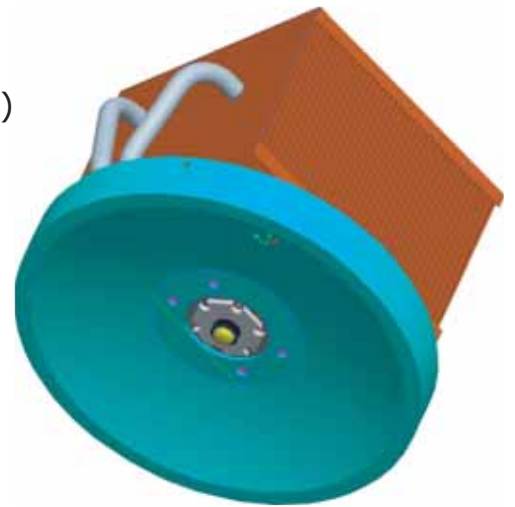
Convection: Natural convection

Performance:

$T_a = 30 \text{ 'C}$  (Ambient temperature)

$T_b = 85 \text{ 'C}$  (Metal substrate temperature)

$R_{th,ba} = 3.1 \text{ 'C/W}$  (Thermal resistance)



# Outdoor Lighting



**Street Light**



**Wall Wash Light**

# Outdoor Lighting

## Street Light

### **SL-E0-R500300055-M070**

Application: Street light  
Heat sink: Aluminum extrusion  
Dimension: 500mm(L) x300mm(W) x55mm(H)  
Maximum LED power: 70W  
Weight: 5.1kg  
Fastener: Screw  
Convection: Natural convection

Performance:  
 $T_a = 40\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 85\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 0.64\text{ }^{\circ}\text{C/W}$  (Thermal resistance)



### **SL-EP-R50027255-M100**

Application: Street light  
Heat sink: AL extrusion + 6mm heat pipe x4  
Dimension: 500mm(L) x272mm(W) x55mm(H)  
Maximum LED power: 100W  
Weight: 6.5Kg  
Fastener: Screw  
Convection: Natural convection

Performance:  
 $T_a = 40\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 85\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 0.42\text{ }^{\circ}\text{C/W}$  (Thermal resistance)





# Outdoor Lighting

## Wall Wash

### **WL-E0-R39015050-M108**

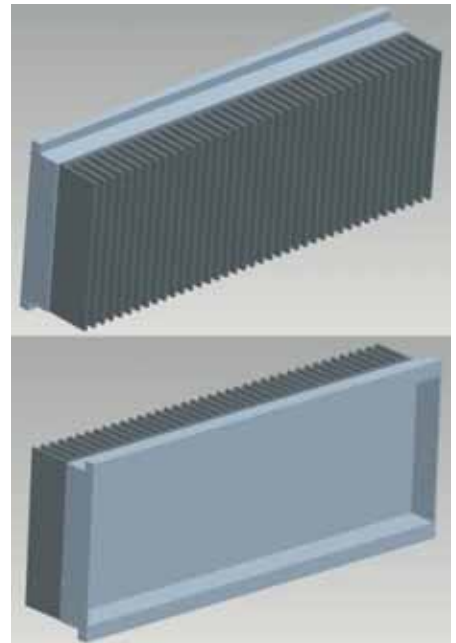
Application: Wall wash lamp  
Heat sink: Aluminum extrusion  
Dimension: 390mm(L) x 150mm(W) x 50mm(H)  
Maximum LED power: 108W  
Weight: 4.5kg  
Fastener: Screw  
Convection: Natural convection

Performance:

Ta = 30 °C (Ambient temperature)

Tb = 71.75 °C (Metal substrate temperature)

Rth,ba = 0.39 °C/W (Thermal resistance)



### **WL-E0-R218058050-M064**

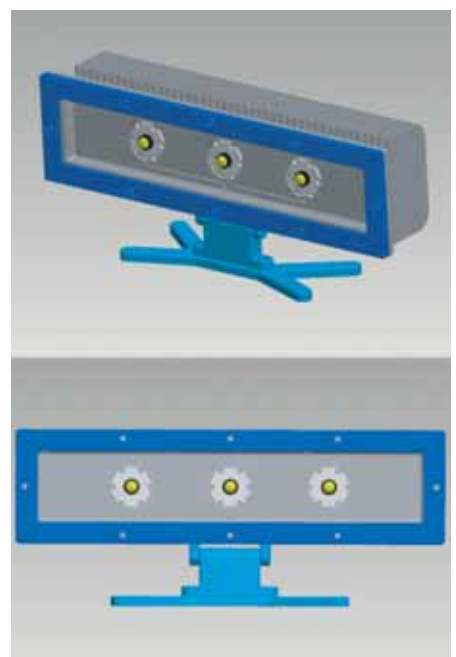
Application: Wall wash lamp  
Heat sink: Aluminum extrusion  
Dimension: 218mm(L) x 58mm(W) x 50mm(H)  
Maximum LED power: 64W  
Weight: 1.78kg  
Fastener: N/A  
Convection: Natural convection

Performance:

Ta = 30 °C (Ambient temperature)

Tb = 85 °C (Metal substrate temperature)

Rth,ba = 0.86 °C/W (Thermal resistance)



# Light Engine



**Sunflower**



**Stacked-Heatpipe**

# Light Engine

## Sunflower

### **LE-EP-C052035000-S010**

Application: Light Engine  
Heat sink: AL stacked fin + 6mm heat pipe x1  
Dimension: 35mm(Diameter) x 104mm(H)  
Maximum LED power: 12W  
Weight: 110g  
Fastener: N/A  
Convection: Natural convection

Performance:  
 $T_a = 30\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 85\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 4.6\text{ }^{\circ}\text{C/W}$  (Thermal resistance)

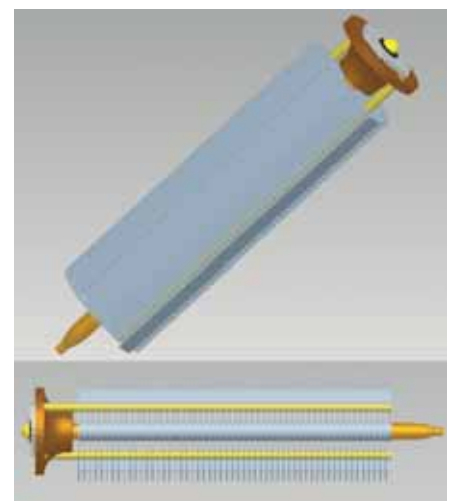


## Stacked-Heatpipe

### **LE-SP-C035143000-S010**

Application: Light Engine  
Heat sink: AL stacked fin + 6mm heat pipe x1  
Dimension: 35mm(Diameter) x 143mm(H)  
Maximum LED power: 12W  
Weight: 65g  
Fastener: N/A  
Convection: Natural convection

Performance:  
 $T_a = 30\text{ }^{\circ}\text{C}$  (Ambient temperature)  
 $T_b = 85\text{ }^{\circ}\text{C}$  (Metal substrate temperature)  
 $R_{th,ba} = 4.6\text{ }^{\circ}\text{C/W}$  (Thermal resistance)





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