

3W or 5W Emitter on  
Standard MCPCB Option



















**LZ1-1xxx0x**



## Key Features

- Typical Thermal Resistance for MCPCB adds only 2°C/W
- Multiple mounting and attachment options
- MCPCB contains Zener Diode for ESD protection

## Available Products

Colors	3W Part Number	Emitter Link	5W Part Number	Emitter Link
Red	LZ1-10R103		LZ1-10R105	
Deep Red	n/a		LZ1-10R205	
Green	LZ1-10G103		LZ1-10G105	
Blue	LZ1-10B203		LZ1-10B205	
Amber	LZ1-10A103		LZ1-10A105	
Cool White	LZ1-10CW03		LZ1-10CW05	
Neutral White	LZ1-10NW03		LZ1-10NW05	
Warm White	LZ1-10WW03		LZ1-10WW05	
Dental Blue	n/a		LZ1-10DB05	
UV	n/a		LZ1-10UA05	

[Click on Emitter Link for emitter data sheet.](#)

## Description

The LZ1-1xxx0x Standard MCPCB option provides a convenient method to mount LedEngin's 3W or 5W emitters. The six recessed features allow the use of M3 or #4 screws to attach the MCPCB to a heat sink. The MCPCB has three sets of "+" (Anode) and "-" (Cathode) solder pads for electrical connections. The MCPCB also contains a Zener diode for enhanced ESD protection.

## R<sub>θJ-B</sub> Lookup Table

Table 1:

Product	Emitter R <sub>θJ-C</sub>	+	MPCPB R <sub>θC-B</sub>	=	Emitter + MPCPB R <sub>θJ-B</sub>
3W	11°C/W	+	2°C/W	=	13°C/W
5W	5.5°C/W	+	2°C/W	=	7.5°C/W

Note for Table 1:

- R<sub>θJ-B</sub> is the combined thermal resistance from the LED die junction to the Aluminum core on MPCPB (R<sub>θJ-C</sub> + R<sub>θC-B</sub> = R<sub>θJ-B</sub>).

## Emitter on Standard MPCPB Dimensions (mm)

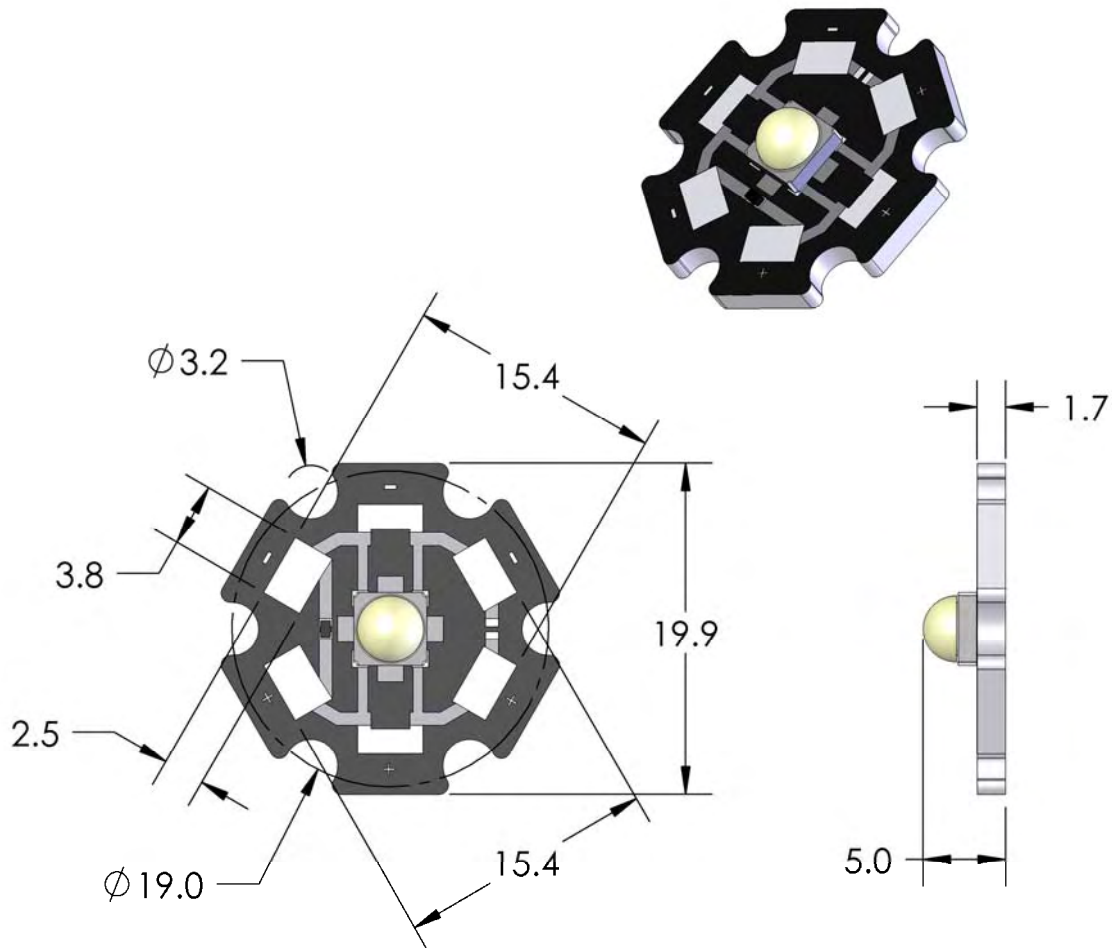


Figure 1: Standard MPCPB outline dimensions (mm).

Note for Figure 1:

- Unless otherwise noted, the tolerance = ± 0.2 mm.
- Slots in MPCPB are for M3 or #4 mounting screws.
- LedEngin recommends plastic washers to electrically insulate screws from solder pads and electrical traces.
- Electrical connection pads on MPCPB are labeled “+” for Anode and “-” for Cathode.
- LedEngin recommends using thermally conductive tape or adhesives when attaching MPCPB to a heat sink.

## Company Information

The LZ1-1xxx0x LED emitter on MCPCB is developed, manufactured, and marketed by LedEngin, Inc., located in Santa Clara, CA. LedEngin is a global leader in advanced high-power LED emitters and light-source modules. LedEngin provides total solutions from 3W to 15W in single packages with ultra-small footprints in all colors from Cool White, Neutral White, Warm White, Red, Green, Blue, Amber, RGB, RGBA, Deep Red, Dental Blue and UV. LedEngin supports customers to generate solid-state lighting designs that conserve natural resources. LedEngin is focused on differentiated Ultra High-Brightness LED solutions for diverse global markets using its patent-pending package designs and manufacturing processes. LedEngin offers catalog as well as full custom solutions to enable flexible system designs for its customers. LedEngin is dedicated to long-term win-win partnering with its customers and suppliers.

LedEngin reserves the right to make changes to improve performance without notice.

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