

10W Emitter on Standard MCPCB Option **LZ4-2xxx10**



Key Features

- Typical Thermal Resistance for MCPCB adds only 2°C/W
- Multiple mounting options
- MCPCB contains 4 Zener Diodes for enhanced ESD protection

Available Products

Table 1:

Colors	10W Part Number	Emitter Link ^[1]	Pin Out Table ^[2]
Red	LZ4-20R110		Table 3
Deep Red	LZ4-20R210		Table 3
Green	LZ4-20G110		Table 3
Blue	LZ4-20B210		Table 3
Amber	LZ4-20A110		Table 3
Cool White	LZ4-20CW10		Table 3
Neutral White	LZ4-20NW10		Table 3
Warm White	LZ4-20WW10		Table 3
RGB	LZ4-20MC10		Table 4
RGBA	LZ4-20MA10		Table 5
Dental Blue	LZ4-20DB10		Table 3
Dental Blue + UV	LZ4-20D110		Table 6
UV	LZ4-20UA10		Table 3

Notes:

1. Click on Emitter Link for emitter data sheet.
2. See appropriate MCPCB pin out table on Pages 3 and 4.

Description

The LZ4-2xxx10 Standard MCPCB option provides a convenient method to mount LedEngin's 10W emitters. The six recessed features allow the use of M3 or #4 screws to attach the MCPCB to a heat sink. The MCPCB also contains Zener diodes for enhanced ESD protection.

R θ_{J-B} Lookup Table

Table 2:

Product	Typical Emitter R θ_{J-C}	+	Typical MCPCB R θ_{C-B}	=	Typical Emitter + MCPCB R θ_{J-B} ^[1]
10W	2.7°C/W	+	2°C/W	=	4.7°C/W

Note for Table 2:

1. R θ_{J-B} is the combined thermal resistance from the LED die junction to the Aluminum core on MCPCB (R θ_{J-C} + R θ_{C-B} = R θ_{J-B}).

Emitter on Standard MCPCB Dimensions (mm)

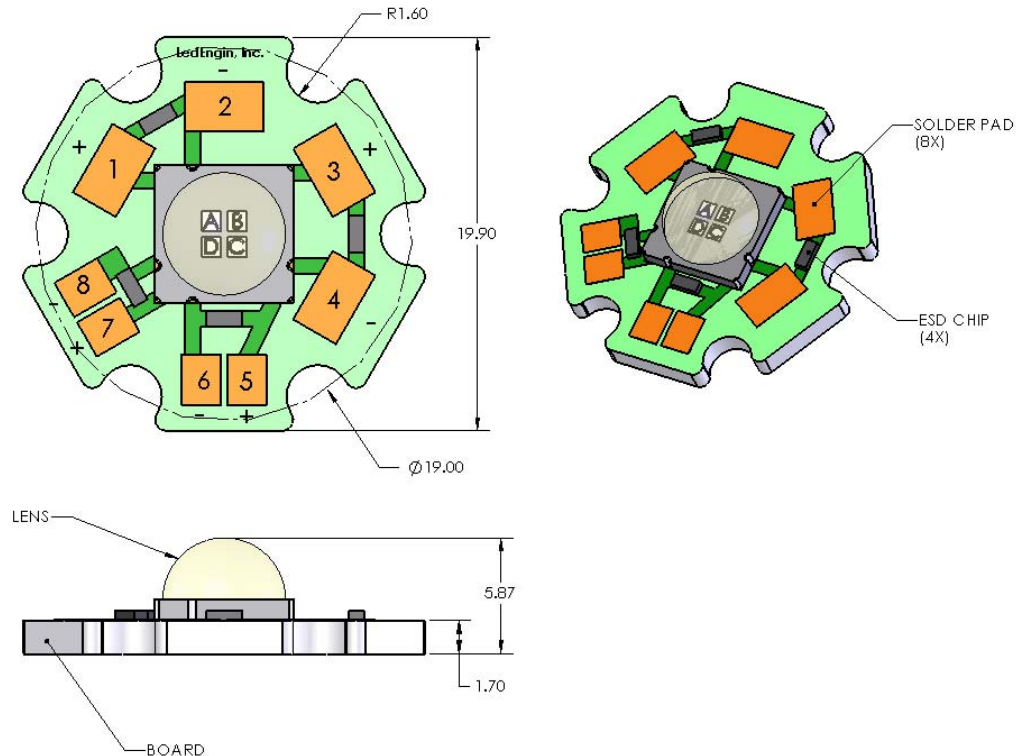


Figure 1: Standard MCPCB outline dimensions (mm).

Note for Figure 1:

1. Unless otherwise noted, the tolerance = ± 0.20 mm.
2. Slots in MCPCB are for M3 or #4 mounting screws.
3. LedEngin recommends using plastic washers to electrically insulate screws from solder pads and electrical traces.
4. Electrical connection pads on MCPCB are labeled "+" for Anode and "-" for Cathode for each LED die.
5. LedEngin recommends using thermally conductive tape or adhesives when attaching MCPCB to a heat sink.

Single Color MCPCB Pin Out

[LZ4-20R110, LZ4-20R210, LZ4-20G110, LZ4-20B210, LZ4-20A110, LZ4-20CW10
LZ4-20NW10, LZ4-20WW10, LZ4-20DB10, LZ4-20UA10]

Table 3:

Pad #	LED Die	Function
1	A	Anode
2	A	Cathode
3	B	Anode
4	B	Cathode
5	C	Anode
6	C	Cathode
7	D	Anode
8	D	Cathode

RGB MCPCB Pin Out

[LZ4-20MC10]

Table 4:

Pad #	LED Die	Color	Function
1	A	Green 2	Anode
2	A	Green 2	Cathode
3	B	Red	Anode
4	B	Red	Cathode
5	C	Green 1	Anode
6	C	Green 1	Cathode
7	D	Blue	Anode
8	D	Blue	Cathode

RGBA MCPCB Pin Out

[LZ4-20MA10]

Table 5:

Pad #	LED Die	Color	Function
1	A	Blue	Anode
2	A	Blue	Cathode
3	B	Red	Anode
4	B	Red	Cathode
5	C	Green	Anode
6	C	Green	Cathode
7	D	Amber	Anode
8	D	Amber	Cathode

3 Dental Blue + 1 UV MCPCB Pin Out

[LZ4-20D110]

Table 6:

Pad #	LED Die	Color	Function
1	A	UV	Anode
2	A	UV	Cathode
3	B	Dental Blue 1	Anode
4	B	Dental Blue 1	Cathode
5	C	Dental Blue 2	Anode
6	C	Dental Blue 2	Cathode
7	D	Dental Blue 3	Anode
8	D	Dental Blue 3	Cathode

Company Information

The LZ1-2xxx10 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, Warm White, Neutral White, Red, Green, Blue, Amber, RGB, RGBA, 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.

Please contact Sales@ledengin.com or (408) 492-0620 for more information.