

LOW PROFILE LEDs

ZLP-SERIES

ZLP-SERIES:

ZLP-42-5XX - 1 Watt - 10mm wide x 42mm long
 ZLP-42-5XX2 - 2 Watt - 15mm wide x 42mm long
 ZLP-42-5XX3 - 3 Watt - 19mm wide x 42mm long
 ZLP-90-12XX - 3.5Watt - 12mm wide x 90mm long
 XX - Color Temperature (CW, NW or WW)



COLOR TEMPERATURE

The four different sizes of the ZLP-series LEDs are available in Cool White, Neutral White and Warm White. Please contact JKL for your specific color requirements.

SOLDERING

There are soldering pads on each end of the substrate for direct electrical wiring or for board to board connections. Soldering iron temperature should be between 650°F and 750°F to avoid damaging the LEDs.

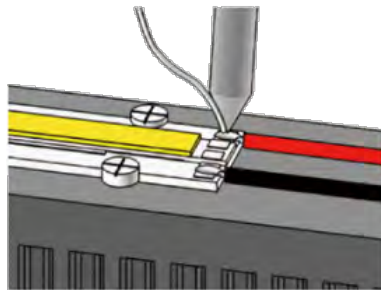


FIG. 1 - WIRE SOLDERING

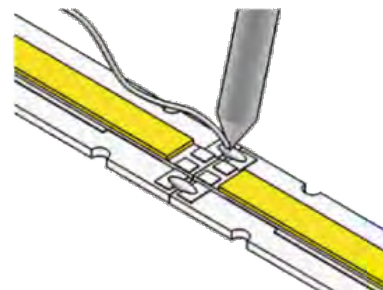
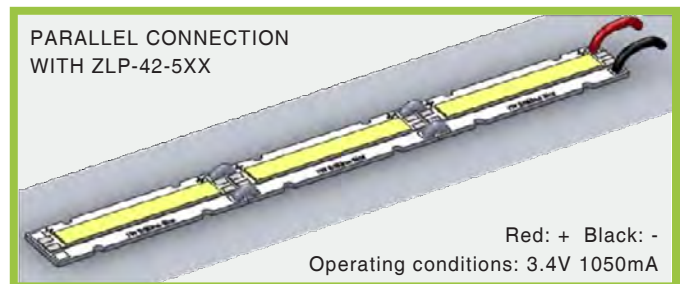
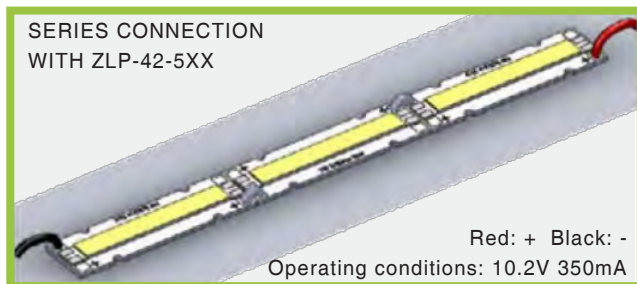


FIG. 2 - BOARD TO BOARD SOLDERING

CONNECTION TYPES

There are two different ways to connect the ZLP Low Profile LED to a driver- the serial connection and the parallel connection. The maximum number of substrates that can be connected is three units, regardless of whether you attach them in series or parallel.



RoHS Compliant
 ISO9001 Certified

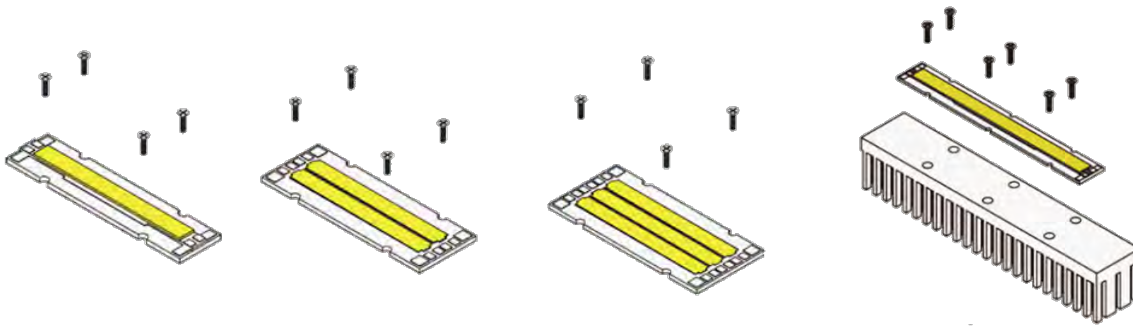
Quality Lighting Solutions

JKL[®]
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Since 1972

ZLP-SERIES



ASSEMBLY

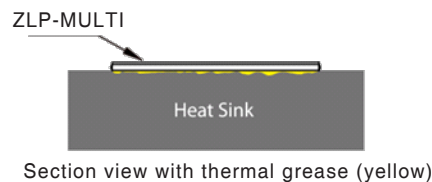
The ZLP Low Profile LED bars can be secured to a heat sink with M2 screws. To ensure optimal usage, it is essential to use all 4 or 6 screw mounting notches, depending on the model. Thermal grease or other thermally conductive material should be used between the LED substrate and the heatsink.

RECOMMENDED HEATSINK GUIDELINES

Wattage	Surface Area	Fins	
		Thickness	Pitch
1 Watt	30 - 40cm ²	>1.5mm	>2.5mm
2 Watt	40 - 50cm ²		
3 Watt	50 - 90cm ²		

THERMAL DESIGN

An effective thermal design relies on heat conduction and dissipation. The conduction path which heat travels is dependent on material properties, while dissipation depends on the surface area of the heat sink. It is important to provide a firm heat conduction path for the LEDs. One common method is applying thermal grease, which provides a direct thermal path from heat source to heat sink device. JKL can recommend several thermal grease vendors.



RECOMMENDED THERMAL GREASE PARAMETERS

Characteristics	Value	Unit
Thermal Conductivity	>3.0	W/mk
Thickness	≤0.1	mm

APPLYING DRIVERS

The ZLP Low Profile LED bars are current-driven and the current requirements of each individual product can be found on the specification sheet. Contact JKL for product and vendor suggestions for drivers.

CAUTIONS

LEDs are electrostatic sensitive devices (ESD). Take appropriate precautions during handling and installation of the strips.



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