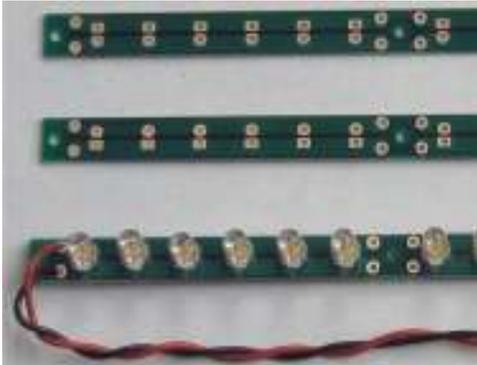


PBS18 18 LED Light Strip Array PCB

The PBS18 is a high-quality, multi-purpose LED light strip PCB for high-performance LED lighting applications using thick copper pads, double-sided and through-hole design for high reliability, good LED cooling and performance. The PCB is designed for 3/5mm LEDs, but SMD LEDs up to 3.7mm wide will fit onto the solder pads. Unlike other pre-made LED light strips that have limited selection and power, the PBS18 LED PCB allows for mixing of various LED types and wiring methods.

Features:

- 18 LED light strip array, 5/3mm LEDs
- 18 LEDs parallel or 3 banks of 6-series pattern
- Compact, symmetrical design
- High performance design for LED applications
- Large copper pads/area for heat dissipation
- Mounting holes
- Multi-purpose design
- Semi-rigid FR4 PCB material.

Benefits:

- Good heat transfer for peak LED performance
- Extends LED life

Applications:

- Landscape and area lighting
- Décor or night lighting
- Replace light bulb lighting
- Configurable for external LED/electronic uses
- High-brightness indicator light



PBS18 LED light strip with white LEDs . Light strip mounted inside a picture frame for accent lighting.

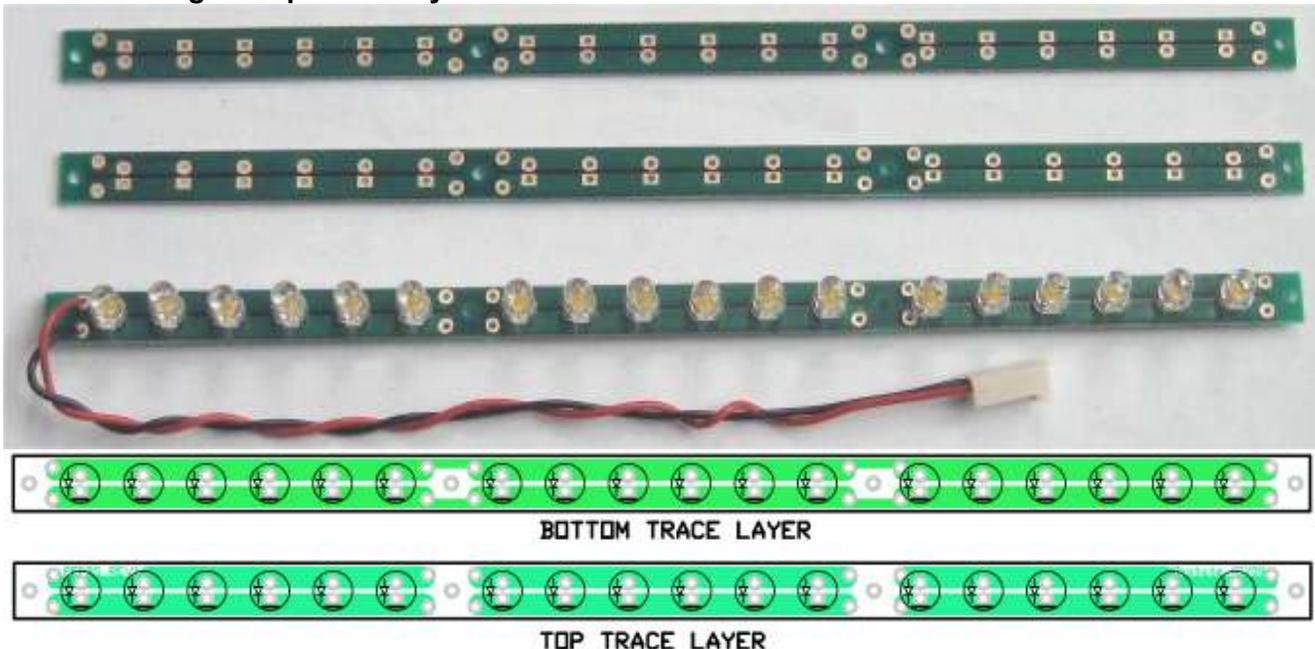
Technical Specifications:

Printed circuit board:

LED's: 3/5mm, SMD
 0.1" hole spacing
 Thickness: 1/16"
 Material: FR4 glass fibre
 Plating: 2 oz copper
 Layers: Double-sided
 Finish: Silver-plating
 Soldermask: Green both sides
 Routing: V-Scored
 Dimension: 0.36"x8.21"

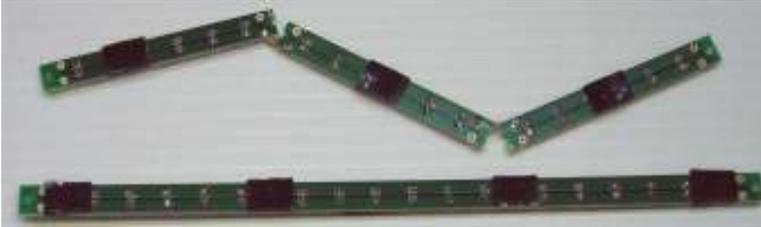
Weight: 6 grams (0.21 Oz)
 Soldering: Through-hole plated
 Mounting hole: 4x 3/32" holes.
 Hole spacing: 2.68" C-C
 Temperature: -30°C to 50°C
 Maximum power: 2W total
 Compliance: ROHS, lead-free power

NOTE: AN EXTERNAL LED DRIVER OR LIMITING RESISTOR IS REQUIRED TO REGULATE POWER TO THE LED ARRAY.

PBS18 LED light strip assembly.


NOTE: The LED silkscreen legend is for reference only. There is no silkscreen legend on the actual PCB.

1. Determine and measure the input operating voltage (regulated power supply recommended).
2. Determine the LED voltage drop to match the operating voltage. Eg. If the input voltage is 12VDC and using white LEDs, the most efficient operation is to have 3 LEDs in series. $3 \times 3.4V = 10.2V$ drop across LED array. Two 10 ohms, 1/4W resistors work well.
3. Determine LED array pattern. The LED light strip can have series or parallel LED wiring. Each bank has 6 LEDs. The LED strip is pre-set with all 18 LEDs in parallel connection. For series connection, scratch off the small traces near the mounting holes on the bottom trace layer. Criss-cross with a jumper wire or rotate the center LEDs opposite direction.
4. The LED strip requires a limiting resistor or a LED driver to prevent overloading. The limiting resistor can be used to replace the small traces near the mounting holes in series or parallel connection. Match resistor or LED driver with LED array power.
5. Solder LEDs. The LED PCB is designed to cool the LEDs. A high-quality, high-wattage soldering iron is required for good solder joints. Solder power leads. Test LED array.

Sample Uses

Double-sided tape for mounting.



PCB strip for shapes and letters.



LED strip array inside aluminum U-channel for rigidity and covering.



LED light strip for lighting.

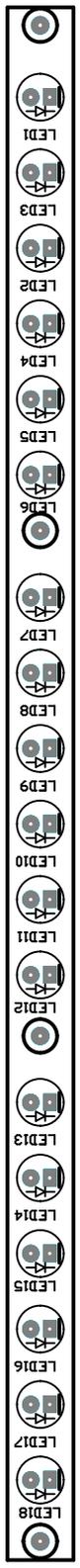
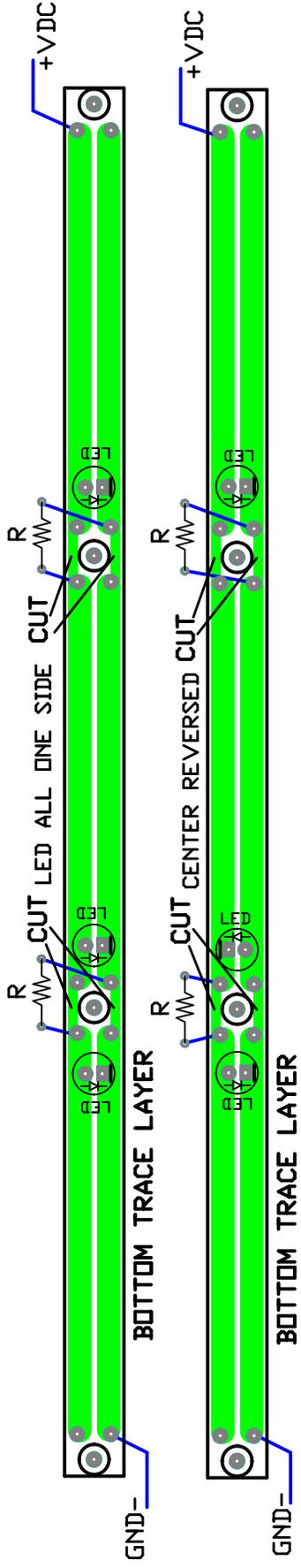


Door entrance lighting.

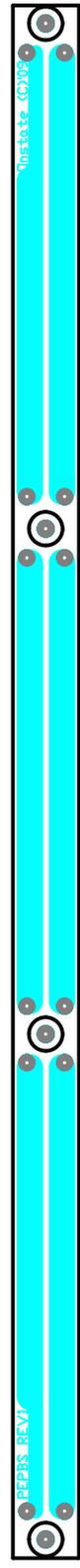


Corridor lighting with PIR motion sensor.

SERIES WIRING CONNECTION



COMPONENT LAYOUT



TOP TRACE LAYER