

Equipment Installation Manual PRE-WIRED SPTLEDS**** Under Glare-Shield Lighting

SPT LED Strips (14V or 28V)

Installation Instructions

Thank you for your purchase of Superior Panel Technology's LED Strip. You will find that the SPT LED Strips provide a very nice white, fully dimmable lighting that significantly improves the lighting of a cockpit. When used under a glare-shield, the SPT LED Strip will improve the visibility of instruments, nomenclature of switches, breakers and will aid in the reading of charts and maps. The flexible SPT LED Strip can also be used to light up other areas such as baggage compartments or under-the-seat lighting to illuminate the floor.

The installation tips listed below are for installing the SPT LED Strips under a glareshield. Similar procedures are used when placing it in other areas.

- 1. The source of power should be protected by a two amp circuit breaker or fuse. We recommend the use of our pulse-width-modulating dimming kit (part number SPTPWMLEDS) for smooth continuous dimming of the lamps. Use a dedicated dimming circuit for the LED Strips for optimal light control.
- 2. SPT makes kits for both 14 and 28 volt systems. Verify that you have the correct kit by looking at your part number.

A part number of SPTLEDSW28 would indicate:



<u>Supply voltage wiring:</u> The RED wire is for input (+) voltage (if using the SPTPWM dimmer, the red wire connects to the YELLOW output screw terminal). Connect the BLACK wire to a secure aircraft ground.

- 3. The LED Strip Lamps come with 18" leads. Place 1/8" heat shrink tubing on the section of wires from the lamp to the through hole in the instrument panel "the short section that will be visible from the underside of the glare-shield".
- 4. Drill a 1/4" hole in the appropriate place for the wires to pass through the panel. This is normally centered near the top of the panel. Use caution when drilling through your panel. Nothing will ruin your day more than accidentally drilling though a rigid oxygen line or wire bundle. If you are drilling through an overlay, be sure to hold it down while drilling to prevent it from cracking. A thin peace of wood with the 1/4" hole drilled in it can be used as a guide to protect the panel, keep the bit from walking and hold the overlay down. The best bit for this operation is a Unibit step bit.

- 5. You need to temporarily position the LED Strip under the glare-shield and mark its footprint. Do this by placing it under the glare-shield and tape it down with masking tape. Place masking tape around the outside perimeter of the SPT LED Strip. Remove the LED strip and then use a cleaning solvent like isopropyl alcohol/water mixture (rubbing alcohol) or heptane to clean the surface where you will be mounting it. After that, coat this area with adhesive primer by using the small adhesive primer ampoule that is included in your kit. Apply the primer by breaking the barrier in the ampoule where shown on the container and allow it to wick into the brush end. Coat the area within the rectangular area bordered by the masking tape. Allow the primer to thoroughly dry (10-20 minutes).
- 6. It is recommended that a <u>very small dap</u> of adhesive (Poly-Bond, Gorilla Glue or other adhesive/sealant) be applied to the ends and center (on the black heat shrink).
- 7. Remove the release liner on the LED Strip and adhere it to the glare-shield using the masking tape as a guide.

Additional tips:

- Leave a service loop of the wire on the backside of the panel where it passes though the top of the panel.
- Although flexible lengthwise, the SPT LED Strips will not make compound curves. Take your time to temporarily position the strips first with masking tape before applying the adhering them permanently into place.



This image shows the SPT Glow Strips. The SPT LED Strip would look similar.