

OLD DOMINION RAILWAYS – LGB TRAINS

ESU 50703 INTERIOR LED LIGHTS STRIP (Translated German to English)

TECHNICAL SPECIFICATIONS

Supply voltage 4-24V = / ~

Constant brightness from 6V

Current consumption max. 90mA

Dimensions 380mm x 15mm

GENERAL PROPERTIES

The ESU LED wagon interior lighting 50703 uses the latest technology to with their 16 yellow and 16 warm white Light-emitting diodes (LEDs) provide an even and warm light. Thanks to the small

dimensions they are for Gauges 0 to G can be used universally. The following properties distinguish ESU's interior lighting in particular:

- Built-in constant voltage source for evenly bright light, independent of the track voltage;
- Individually adjustable brightness: Yellow LEDs and white LEDs can be set separately will;
- The lights can be shortened to almost any length;
- A "Power Pack" energy store for bridging longer periods of power interruptions is already built-in.
- Any interior lighting brings a red tail light with;
- Suitable for DC and AC voltage as well as digital voltage;
- An ESU LokPilot Fx V3.0 (52621) can be plugged directly onto the 21MTC interface.

WARNINGS

- The LED interior lights are exclusively for installation in Model railways.
- All connection work only at with the operating voltage switched off.
- Stick to the connection necessarily to the ones shown here principles.
- Protect from moisture; Do not bend the lights unnecessarily, to avoid damage.
- The color of the LEDs and their Brightness can be in the frame the manufacturer tolerances slightly vary.

INSTALLATION

The lighting should be first cut to required length. For this the lighting at one of the marked in Fig. 1, already pre-scored areas with the break off point. When reducing the light strip length, make sure no electrical components and the electrical conductor tracks are not damaged; make the break only at the marked circuit board breaks! Alternatively use a saw to cut at the break points.

Removed sections can be used to connect to other interior light strips but do not exceed 32 LEDs.

If not required, remove the tail lights. If necessary, shorten the already soldered supply cables to the required length. All left and right connection points are already on the circuit board connected with each other. That's why one cable per side is sufficient. A page is left with the wheel grinder, the other side with the right wheel slider of the wagons connected. The polarity does not matter, each lighting owns an internal rectifier. For wagons with live couplings the two supply lines alternatively with the connect coupling contacts.

The simplest attachment of the lighting strip under the wagon roof is to use double-sided adhesive tape. Alternatively, you can also use the interior decoration according to suitable anchor points. Toilet rooms are often perfect location.

BRIGHTNESS ADJUSTMENT

With the help of those shown in Fig. 2 adjustment slider can adjust the brightness of the yellow and white LEDs be customized as desired. By skillful brightness adjustment, the desired color mix can be achieved.

POWER PACK/POWER CAPS

The »Power Pack energy storage system, which is already installed, ensures that even with prolonged power interruption (e.g. before red signals) the lighting function is retained. No wiring is required, the function works fully automatically.

TAIL LIGHT

The rear light can be used on both ends of lighting strip. Be careful when soldering to ensure that the correct polarity of the cable. To control the circuit board digitally by on/off switch, you need to connect the light board to a LokPilot Fx V3.0 decoder, ESU No. 52621. The LokPilot decoder is multi-protocol capable and can be under DCC, Motorola or analogue alternating current. To install it, simply remove the dummy plug from the circuit board and insert the decoder on it. Pay attention to the correct one polarity and correct seating of the decoders!

Without changing the programming, the interior lighting can then be switched with F1 and the tail light with the light button F0 (depending on the direction of travel).

ESU LED LIGHT STRIP – WIRING EXTENSION LIGHTS TO THE BOARD

There are no polarity concerns when powering the LED Strip with DCC current (but there is when using DC Analog Power). Here are my testing results when connected to my Massoth DCC Command Station's 19 volts DCC output to the two Brown Wires on the LED Light Strip:

1. Using the Photo Below:
 - a. 2 Output Terminals on the end of the board produce 9.5 volts DCC;
 - b. The rgnd Output Terminal and r+ Output Terminal produce 10.5 volts DCC;
2. You can solder wires to broken off sections of the ESU LED Light Strip or to 12v. LED light bulbs to any of the ESU Board's rgnd and r+ Output Terminals to power them. I tested a screw-in LED light bulb and the two wires will activate when the wires are connected to either terminal, but the bulb is brighter when switching the wires. Switch the wires back and forth to determine which connection is brighter and then solder the wires in place.

