

Instructions

Art-Nr: 7027 E-locomotive lighting E151 E103 E10 E40 E39 white
Art-Nr: 7037 E-locomotive lighting E151 E103 E10 E40 E39 yellow

1. These parts are not suitable for small children. There is a danger of swallowing.
2. The product can be seen in figure 1 in version 7027. These instructions are part of the product. Please retain them well. Do not worry about the yellow component having a white LED, and the white component having a yellow LED. Even if letting the white component shine, it appears a bit odd. Only inside the body and behind the light conductor, the white light appears as supposed without a bluish cast.
3. This component is designed for voltages up to 10 volt. The component can not be used on digital trains. Only employ the component for its intended usage. Incorrect application and overvoltage can destroy the product. We do not assume any liability for any damages caused by incorrect usage.
4. All the parts of the component are firmly soldered. The small LED sticking out in front is the most damageable part of the whole circuit. Please do not try to pick and handle it with any tools, avoid any impacts and do not try to squeeze it into the body. If you find any of the soldering points damaged, do not try to resolder them yourself. The small LEDs are extremely sensitive to heat. Soldering for too long or at too high temperatures will destroy the LEDs. If anything of the component is damaged, better contact your local dealer, he might be able to help.
5. These lighting electronics will only work if the original lighting has been working before. If the original bulb has not been working before, you should first repair your locomotive. Try with another bulb. You won't need it anymore in the locomotive afterwards, but you can use it for a different purpose afterwards. It is absolutely necessary to do a function test of the locomotive to make sure the original locomotive lighting is working correctly. Only then you can be sure that the new lighting electronics consisting of the two small electronic components will be working correctly as well.
6. For the installation of the electronics open the locomotive by removing the body.
7. Remove the original lamp by holding the bulb and pulling it out to the front. The easiest way to do this is with the help of some tweezers.
8. Now take one of the electronic components out of its package. The small light-colored and square condensator is pointing upwards, the LED is pointing into running direction. Now insert the component into the socket where the bulb has been before, figure 2. Take care that the component is being pushed completely to the back, figures 3 and 4.
9. If the component does not stay inside firmly or even falls out, the contact sheets of the socket have to be bent very carefully with the help of some tweezers. The current-carrying sheets should not be bent sideways. In the lower area, they are pointing backwards with an angle of almost 90 degrees. There always has to be a distance between the upper and the lower contact sheets, figure 2. In absolutely no case the contacts should touch each other.

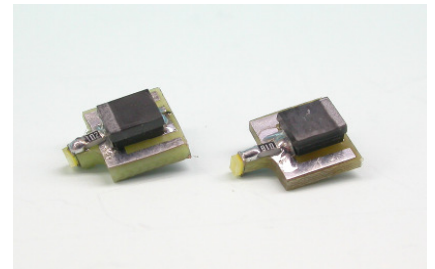


figure 1: The components for E-locomotives 103 or 151 or 10 or 40 or 39

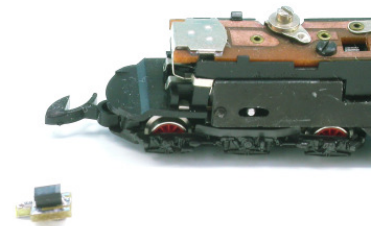


figure 2: A component before installation



figure 3: Correct installation of the component



figure 4: Done with the installation



figure 5: Like this it should look like....

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10. Now do a function test by putting the locomotive on the tracks and letting it run into the direction the lighting electronics is pointing. If the LED is shining, everything is fine. If the LED does not shine, take the component out again and install it at the other side of the locomotive, following the same procedure as before.
11. Now take the second component and insert it into the socket still vacant as described under points 7, 8, and 9.
12. Now do another function test. In each running direction the respective LED should be shining.
13. If everything is working all right, carefully put the body back on. Watch out that nothing gets jammed and that the body closes completely by locking into the tappets at the metal undercarriage.
14. A last function test now shows the terrific improvement. Almost independently from the running voltage, the lights at the outside of the locomotive body now are shining brightly and in an enjoyable color.
15. The only requirement for the new lighting electronics is the use of a pulse-modulated or pulse-width-modulated running controller, as nowadays is used everywhere in the Z-model world. You will get another specially nice effect when using our controller, since thanks to an additional function it still lets the lights shine when the train is standing.
16. We are proud that with our new Z-model train technique we have come another step closer to the original trains.
17. High Tech Modellbahnen manufactures its products with the greatest possible care. We issue a guarantee and warranty according to legal regulation. Should you find any new product you just bought defective, please contact your local dealer.
18. It can always happen that something gets damaged by inappropriate use or simply breaks. Since the parts are very small, it is not advisable trying to repair broken parts by yourself. Please contact your local dealer who might be able to save them instead of a self-repairing try that might end up in a total economic loss.

Now enjoy your new locomotive lighting and always have fun with your model trains.

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