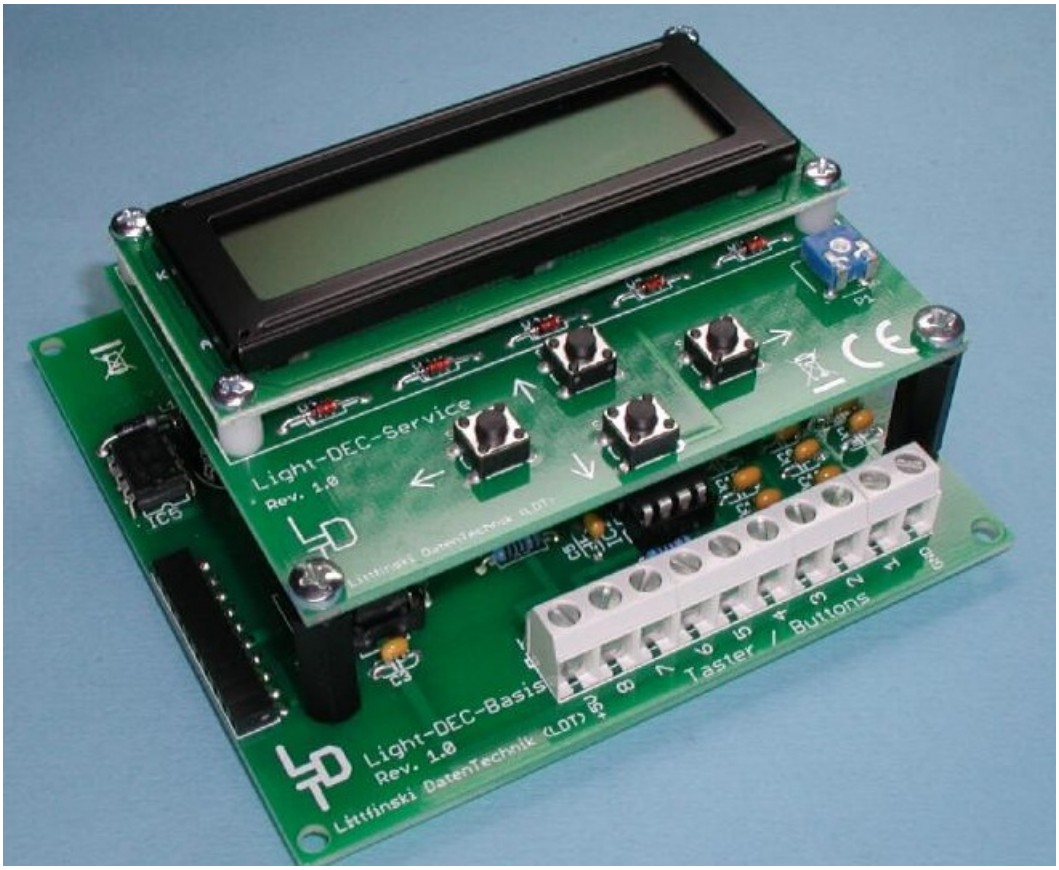
LDT 050032 Light Display Module Instruction Manual

Contents

LDT 050032 Light Display Module



Operating Instruction

Light-Display-F Part-No.: 050032

At least one Light-Display-Module and one Light-Interface (LI-LPT or LI-LAN) will build together the hardware for the PC-Layout-Light Control Light@Night. The connection of a Light-Display-Module to a Light-DEC-Basis-Module will create the basic unit for the

Layout Light Control Light-DEC.
Light-Display Modules contain 40 light outputs with a possible current load of 0.5 Ampere on each output. The lighting effects (neon lamps, flashing blue lights, light chains, traffic lights, and many others) can be assigned to 40 outputs.

Suitable for analog and digital model railways

This product is not a toy! Not suitable for children under 14 years of age! The kit contains small parts, which should be kept away from children under 3! Improper use will imply the danger of injury due to sharp edges and tips! Please store this instruction carefully.

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Introduction/Safety instruction

You have purchased the Light-Display-Module for the Light Control Light@Night and Light-DEC for your model

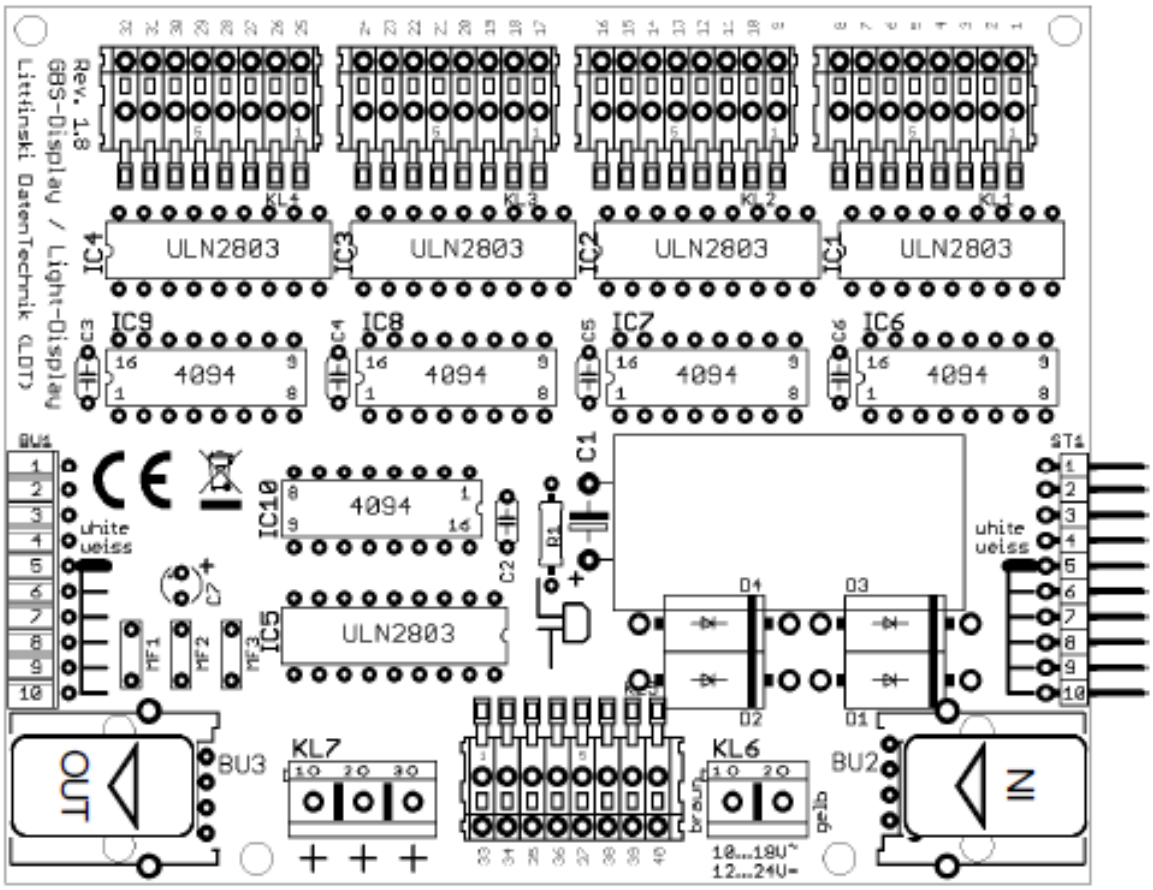
railway. The Light-Display-Module is a high-quality product that is supplied within the assortment of Littfinski DatenTechnik (LDT). We are wishing you a good time using this product. The finished module comes with 24 month’s warranty.

- Please read the following instructions carefully. The warranty will expire due to damages caused by disregarding the operating instructions. LDT will also not be liable for any consequential damages caused by improper use or installation.
- Also, note that electronic semiconductors are very sensitive to electrostatic discharges and can be destroyed by them. Therefore, discharge yourself before touching the modules on a grounded metal surface (e.g. heater, water pipe, or protective earth connection) or work on a grounded electrostatic protection mat or with a wrist strap for electrostatic protection.
- We designed our devices for indoor use only.

Connect the Light-Display-Module

- **Attention:** Before starting the installation switch off the drive voltage by pushing the stop button or disconnecting the main supply.
- The Light-Display Modules contain a large capacitor which has to be completely discharged before the Light-Display-Module can be connected or disconnected. Please wait a couple of minutes after switching off the supply transformer before you connect or disconnect the Light-Display-Module.

Connect the Light-Display-Module to the Light-Interface (LI-LPT or LI-LAN), to the Light-DEC-Basic-Module or to the already available Light-Power- or Light-Display-Modules via the 10-poles pin-plug-bar. The pin bar shall not be inserted in an offset position to the socket bar. The modules are correctly inserted whenever the PC boards are flashed at the top and at the bottom. The pictures at the rear side of this instruction show the correct position of the modules. Light-Power- and Light-Display-Module do not need to be connected directly to each other. It is as well possible to connect the module via the “Kabel L@N” or via the screened and therefore interference-protected “Kabel Patch” (from Light-Power Version 1.2 and Light-Display Version 1.7). Light-Display Modules contain 40 outputs with a maximum load of 0.5 Ampere each. They are particularly suitable for switching light sources such as incandescent model railway lamps or light-emitting diodes (LED).



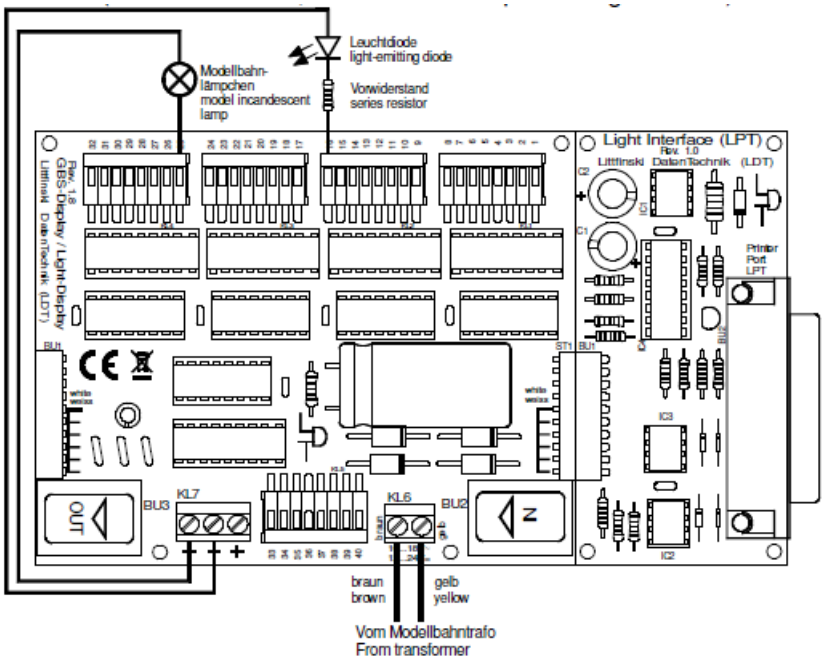
The voltage supply to the Display-Modules

Each Light-Display-Module will get the voltage from a model railway transformer via the clamp KL6. The supply voltage can be between 10 and 18 Volt AC or between 12 and 24 Volt DC. If you use mainly light-emitting diodes on your layout it is possible that one 52VA transformer can supply more than one Light-Display-Module. Picture 3 at the rear side of this instruction shows how to arrange the supply of one transformer to two Light–Display-Modules. Please attend always to the same polarity (marked brown and yellow) at the clamp KL6 of the connected Light-Display-Module. If you use incandescent lamps for illumination one 52VA transformer can supply one Light-Display-Module. Also in this case please attend always to the same polarity (marked brown and yellow) at the clamp KL6 of the connected Light-Display-Module (Picture 4 at the rear side of this instruction).

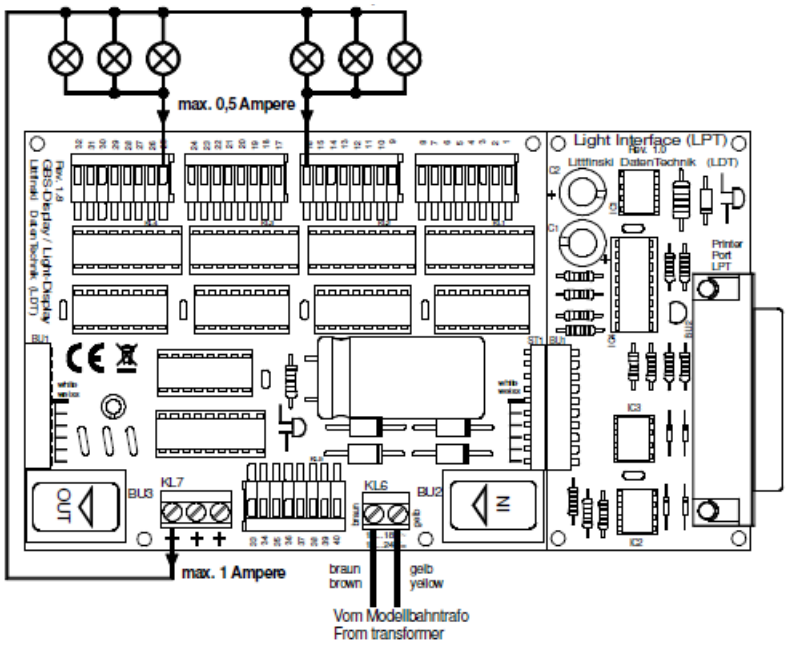
Connect the Illumination

Each Light-Display-Module contains 40 outputs. Model incandescent lamps can be directly connected. LEDs require a serial resistor (about 4,7kOhm, depending on the input voltage on KL6).
Each output can be loaded up to max. 0.5 Ampere. For clamping a connection cable onto one of the 40 outputs please press carefully down the white lever and insert the cable from the top into the clamp. If the Light-Display-Module will be supplied with AC-voltage is the DC-voltage at the 40 outputs about (1,414 * input voltage) – 1.4 Volt. An AC input voltage of e.g. 15 Volt (on KL6) will give a DC voltage of about 20 Volt at the outputs. If the Light-Display will be supplied with DC voltage on KL6 the output DC voltage will be lower by about 1.4 Volt related to the input voltage. The interrelation between input and output voltage will be shown on table 1 at the rear side of this instruction. The common positive pole for all outputs is clamp KL7 (Picture 1 at the rear side). The common positive pole contains three inputs which can be loaded with 1 Ampere each. Distribute the common positive connection of the lamps and leds even to the three positive clamps KL7 (Picture 2 at the rear side).

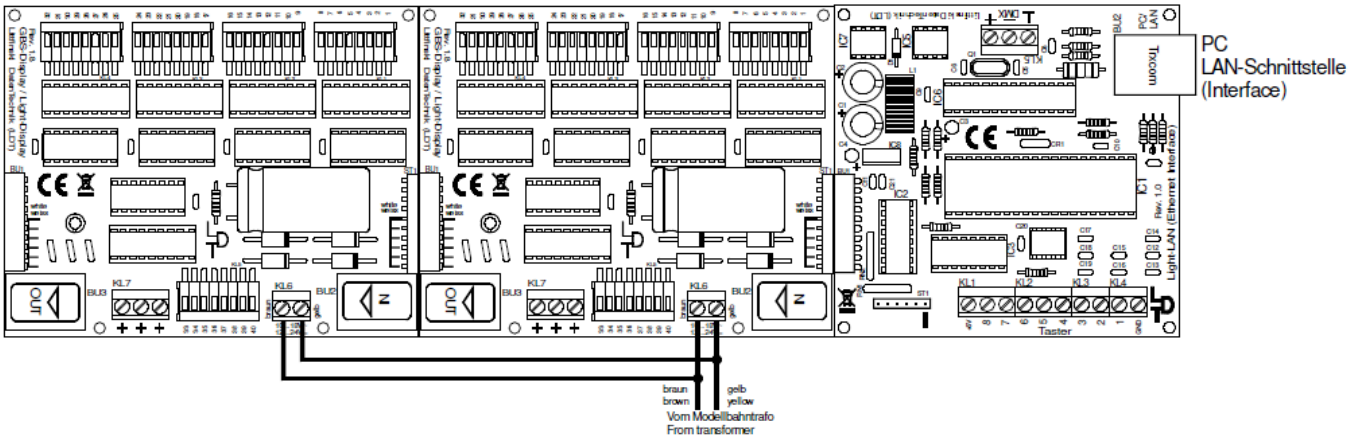
Picture 1: Incandescent lamps can be connected directly. For Light Emitting Diodes it is absolutely required to use a serial resistor (about 4.7kOhm, related to the input voltage at KL6).



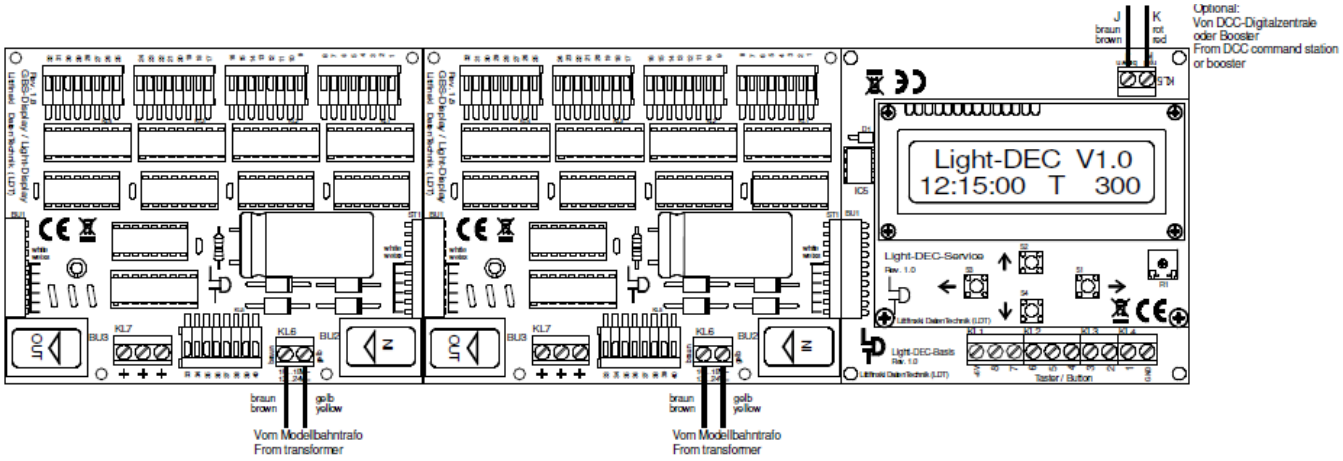
Picture 2: Each of the 40 light outputs can be loaded by up to max. 0.5 Ampere. Each input of the three positive clamps (KL7) can be loaded with max. 1 Ampere.



Picture 3: If you illuminate your layout mainly with Light Emitting Diodes one 52 VA transformer can supply more than one Light-Display-Module. In this case, attend always to the same polarity (marked brown and yellow) at the clamp KL6 of the connected Light-Display-Modules.



Picture 4: If you illuminate your layout with incandescent lamps one 52VA transformer can supply one Light-Display-Module. If possible please use only transformers from the same manufacturer and attend to the same polarity (marked brown and yellow) at the clamp KL6 of the connected Light-Display-Modules.



Colored sample connections can be found on our website www.ldt-infocenter.com in the section "Sample Connections".

Table 1

Input Voltage (KL6)	Output Voltage	Input Voltage (KL6)	Output Voltage
AC-Voltage	DC-Voltage	DC-Voltage	DC-Voltage
10 V AC	12.7 V DC		
12 V AC	15.6 V DC	12 V DC	10.6 V DC
15 V AC	19.8 V DC	15 V DC	13.6 V DC
16 V AC	21.2 V DC		
18 V AC	24.0 V DC	24 V DC	22.6 V DC

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Documents / Resources

	LDT 050032 Light Display Module [pdf] Instruction Manual 050032 Light Display Module, 050032, Light Display Module, Display Module, Module

References

- de:ldt-infocenter [LDT]