

Light-Power-Module for the Light Control Light@Night and Light-DEC

Light-Power-F Part-No.: 050062

>> finished module <<

At least one **Light-Power-Module** and one **Light-Interface (LI-LPT or LI-LAN)**, will build together the hardware of the **PC-Layout-Light-Control Light@Night**.

If a **Light-Power-Module** will be connected to a **Light-DEC-Basic-Module** it will be the basic unit for the **Layout Light Control Light-DEC**.

Light-Power-Modules contain **24 light outputs** with a max. **current-load of 2.5 Ampere** each.

The **light effects** (e.g. neon lamps, emergency flash lights, light chains, traffic lights and many others) can be assigned individually to each of the **24 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 danger of injuring due to sharp edges and tips! Please store this instruction carefully.



Introduction/Safety instruction:

You have purchased the **Light-Power-Module** for the **Light-Control Light@Night** and **Light-DEC** of the assortment of **Littfinski DatenTechnik (LDT)**.

We are wishing you having a good time using this product.

The finished module comes with **24 month warranty**.

- Please read the following instructions carefully. 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.

Connecting Light-Power-Module:

- **Attention:** Before starting the installation switch off the drive voltage by pushing the stop button or disconnect the main supply.

Connect the **Light-Power-Module** to the **Light-Interface (LI-LPT or LI-LAN)**, to the **Light-DEC-Basic-Module** or to **already available Light-Power- or Light-Display-Modules** via the **10-poles pin-plug-bar**. Take care that there is **no offset** between pin-bar plug and pin-bar socket.

The **modules are correct connected** if the pc-board will be **flush at top and bottom**. The **picture 1** at the rear side of this instruction shows the correct connection 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-Power-Modules contain **24 outputs** with a possible max. current load of **2.5 Ampere** each. With reason to the possible **high current output** they are suitable for switching simultaneous many **incandescent model railway lamps** e.g. switching **simultaneously light poles of one street**.

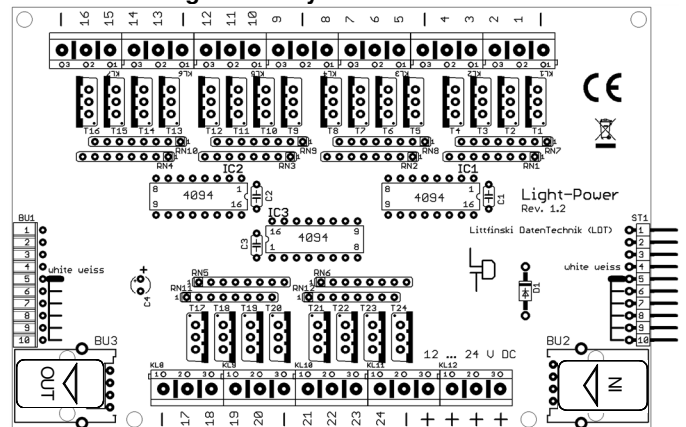
Light-Power-Module and Light@Night:

The **PC-Layout-Light-Control Light@Night** consists of one **Light-Interface (LI-LPT or LI-LAN)** and from the **PC-Software Version 2.0** of up to **7 Light-Modules** with **max. 280 light outputs**. A mixed application of **Light-Power- and Light-Display-Modules** is possible. **Light-Display-Modules** contain **40 outputs** each. Each output can cover a maximum load of **0.5 Ampere**.

Light-Power-Module and Light-DEC:

Via one **Light-DEC-Basic-Module** can be up to **160 light control outputs** with max. **7 Light-Modules** controlled. Therefore is it possible to **combine any desired Light-Power- and Light-Display-Module**. **Light-Display-Modules** provide **40 outputs** with a possible current load of **0.5 Ampere**.

If there are more than **160 light outputs** required is it possible to **install further Light-DEC-Systems**.



Voltage supply to the Light-Power-Modules:

The **Light-Power-Modules** have to be supplied with **12 to 24 Volt DC**. The **positive pole** of the **direct current voltage** has to be connected to one of the **positive clamps** of the **Light-Power-Module**. As the **four clamps** of the **Light-Power-Module** are connected to each other it is unimportant which clamp will be used.

The **picture 1** at rear side of this instruction shows how to **connect the negative pole** of the **direct current** to **all clamps** which are **marked with “-“**. This is required to prevent the destruction of the printed circuit at the **Light-Power-Module** during high current load.

The used voltage level of the **direct current** depends to the **incandescent model lamps** which shall be connected to **Light-Power-Module**. The voltage layout of incandescent model lamps is mostly **16 Volt**.

Feed the **Light-Power-Module** either by a **direct current transformer** or even better by a **switched mode mains power supply (picture 2)** which is able to supply a considerable higher current output. Suitable **switched mode mains power supply** e.g. with **15 Volt** can be purchased by **Conrad (www.conrad.com)** and **Reichelt Electronic (www.reichelt.de)**.

Please consider to implement a sufficient **dimension** of the **wires** in correspondence to the required **current load**. The **table 1** at the rear side of this instruction shows the **correlation** between **current load, wire cross section** and **cable length**.

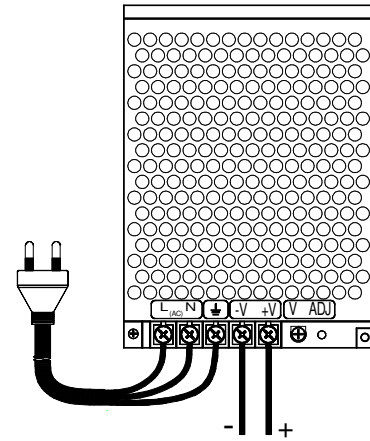
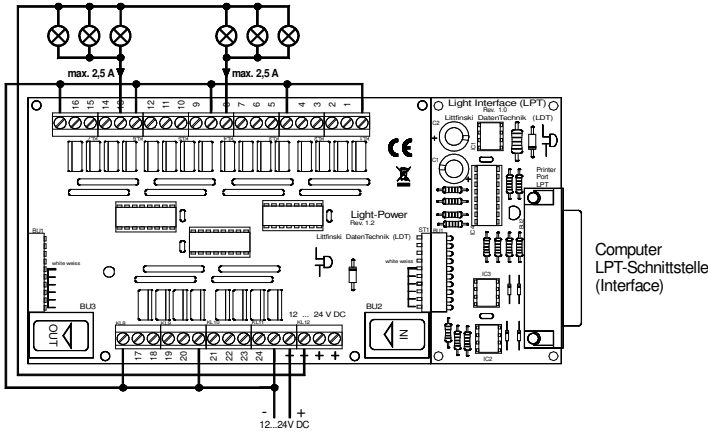
Connecting the lights:

The **common pole** for all lamps is the **positive pole**. This connection is available within the **four positive clamps** of the **Light-Power-Module**.

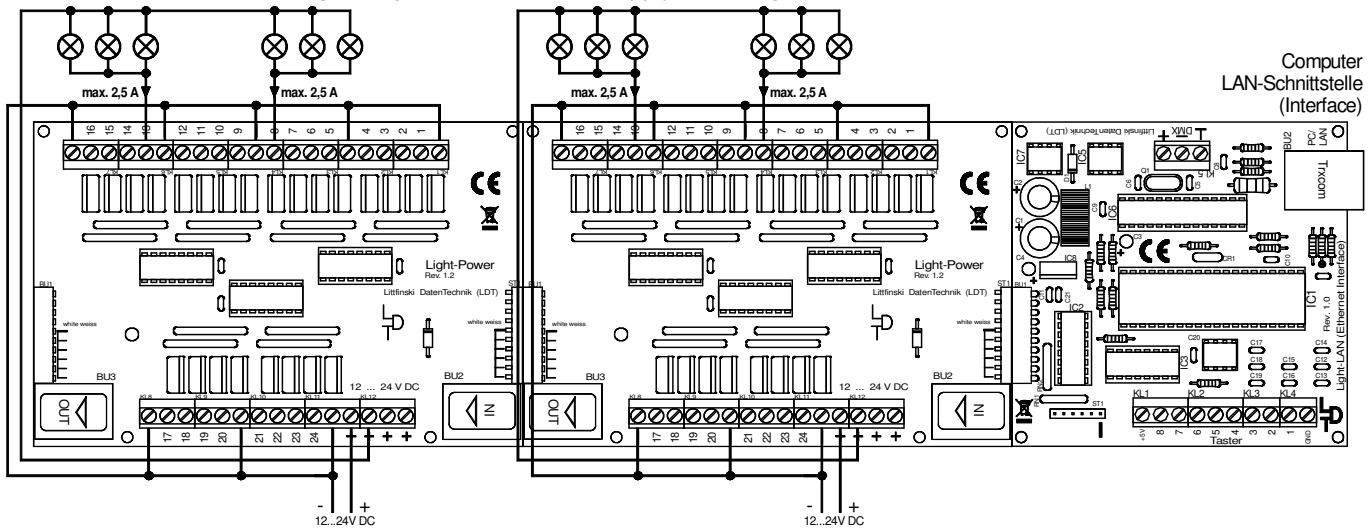
All consumers will be switched to **negative** via the **24 outputs** of the **Light-Power-Module**. The **maximum current** at each **output** can be up to **2.5 Ampere**.

Picture 1: The **Light-Power-Module** has to get a **direct current supply** of between **12 and 24 Volt**. Each of the **24 outputs** can cover a maximum load of **25 Ampere**.

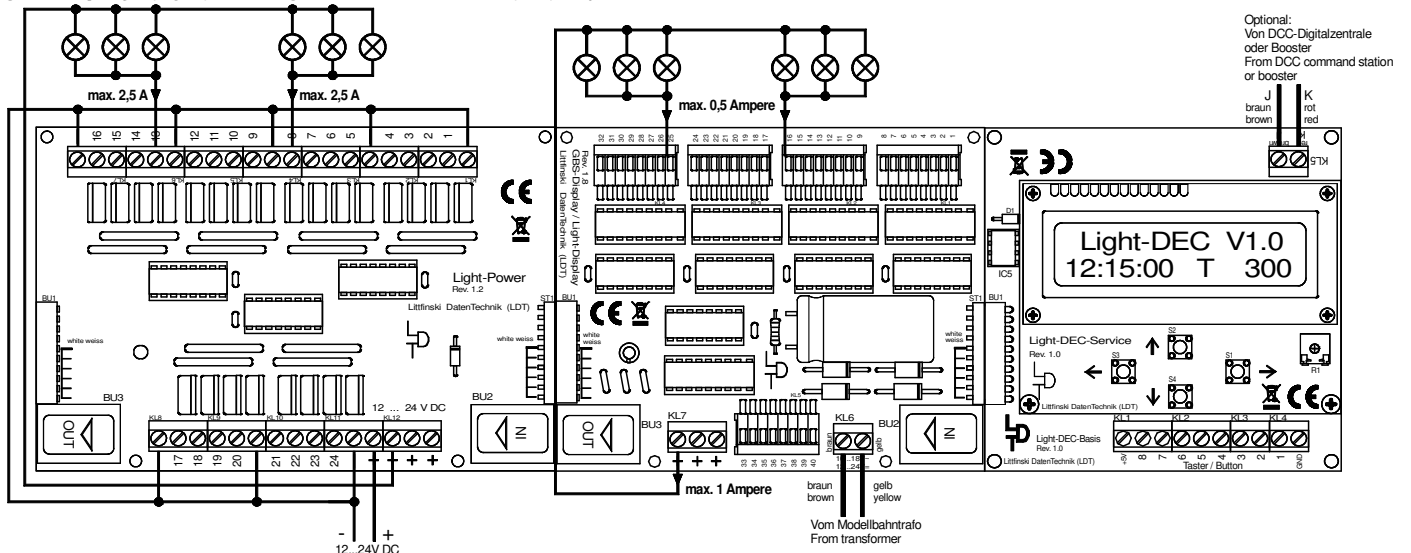
Picture 2: **Switched mode mains power supply** are especially suitable for the supply to the **Light-Power-Modules** because of the possibility to supply a higher current level. **Switched mode mains power supply** can be purchased by **Conrad- (www.conrad.com)** and **Reichelt Electronic (www.reichelt.de)**.



Picture 3: Attend to the **correct polarity** of the DC-current supply at the **Light-Power-Modules**.



Picture 4: The **Layout-Light-Control Light-DEC** consists of one **Light-DEC-Basic** and of up to **7 Light-Modules**. Mixed usage of **Light-Display-** (right) and **Light-Power-Modules** (left) is possible.



Colored sample connections are available at our Web-Site www.ldt-infocenter.com within the section **“Sample Connections”**.

Table 1:

current	wire cross section 0.5 sq. mm	wire cross section 0.75 sq. mm	wire cross section 1.5 sq. mm	wire cross section 2.5 sq. mm
1 Ampere	7.0 meter	10.5 meter	21.0 meter	35.0 meter
2 Ampere	3.5 meter	5.3 meter	10.5 meter	17.5 meter
3.5 Ampere	2.0 meter	3.0 meter	6.0 meter	10.0 meter
4 Ampere	1.8 meter	2.6 meter	5.3 meter	8.8 meter
5 Ampere	1.4 meter	2.1 meter	4.2 meter	7.0 meter

Made in Europe by
Littfinski DatenTechnik (LDT)
 Bühler electronic GmbH
 Ulmenstraße 43
 15370 Fredersdorf / Germany
 Phone: +49 (0) 33439 / 867-0
 Internet: www.ldt-infocenter.com
 Subject to technical changes and errors.
 © 09/2022 by LDT