



# Light-Power-Modul for the PC-Light Control Light@Night

Light-Power Part-No.: 050062

>> finished module <<

At least one **Light-Power-Module** and the **Light-Interface** for the parallel interface of a computer will build together the hardware for the **PC-Light Control Light@Night**.

It is possible to connect up to **7 Light-Power-Modules** which contain **24 light outputs** each with a max. **current load of 2,5 Ampere** of each output to every **Light-Interface**.

The **lighting effects** (neon lamps, gas street lamps, flashing blue light, 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 tins! Please store this instruction carefully.



## Introduction/Safety instruction:

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

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

The finished module comes with a **2 years limited 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.

## Connecting Light-Power-Module to the Light-Interface or to already available Modules:

- **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** or to **already available Light-Display- or Light-Power-Modules** via the **10-poles pin-plug-bar**.

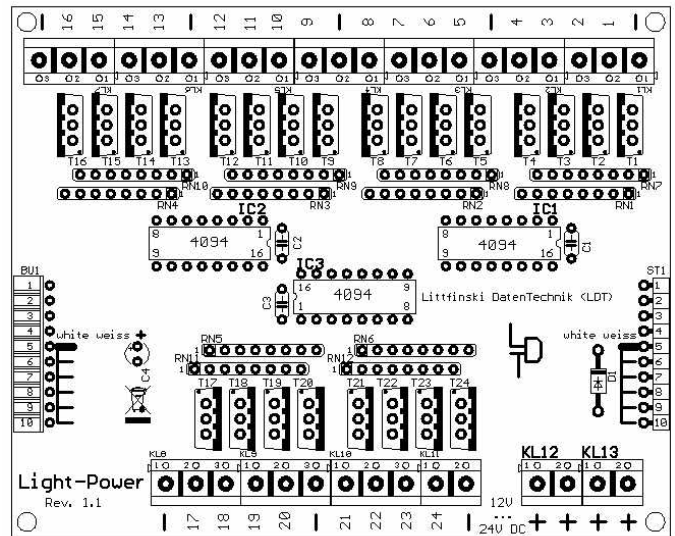
Take care that there is **no offset** between pin-bar plug and pin-bar socket.

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.

The **PC-Light-Control Light@Night** consists of **one Light-Interface** and from the **PC-Software Version 2.0** of up to **7 Light-Modules**. A mixed application of **Light-Display- and Light-Power-Modules** is possible. **Light-Display-Modules** contain **40 outputs** each. Each output can cover a maximum load of **0,5 Ampere**. **Light-Power-Modules** contain **24 outputs** each and can cover a max. load of **2,5 Ampere** on each output.

If the **PC-Light-Control Light@Night** contains **7 Light-Power-Modules** with 24 outputs each is it possible to control and switch up to **168 light outputs individually with various different light effects**.

If **7 Light-Display-Modules** with 40 outputs each will be used up to **280 light sources** can be **controlled**. If there will be a **summary of 7 Light-Display- and Light-Power-Modules** used in combination this will make it possible to **switch between 144 and 264 light outputs** via the PC-software **Light@Night**.



## Voltage supply to the 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 is it 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 supplies** (**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](http://www.conrad.com)) and **Reichelt Electronic** ([www.reichelt.de](http://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**.

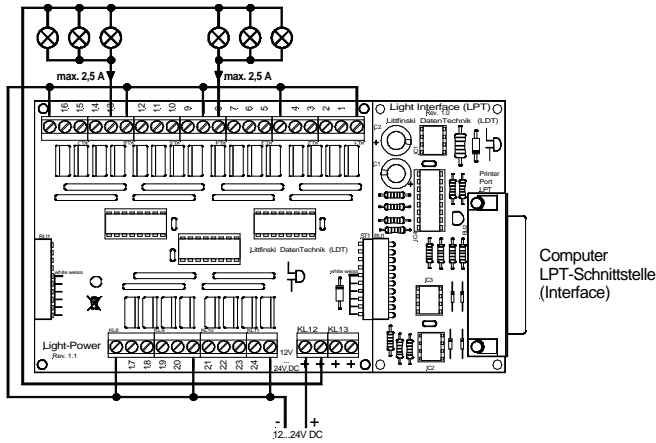
Detailed information about this subject can be found at the **manual** of the **Light@Night Software** at the section "About electric, wiring and power consumption".

## Connecting the lights:

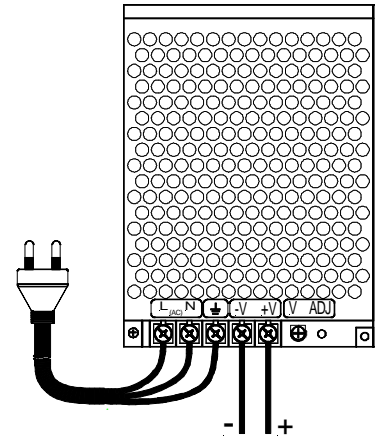
The **common pole** for all lamps is the **positive pole**. This connection is available within the **four positive clamps** of the **Light-Power-Module**.

All consumer 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**.

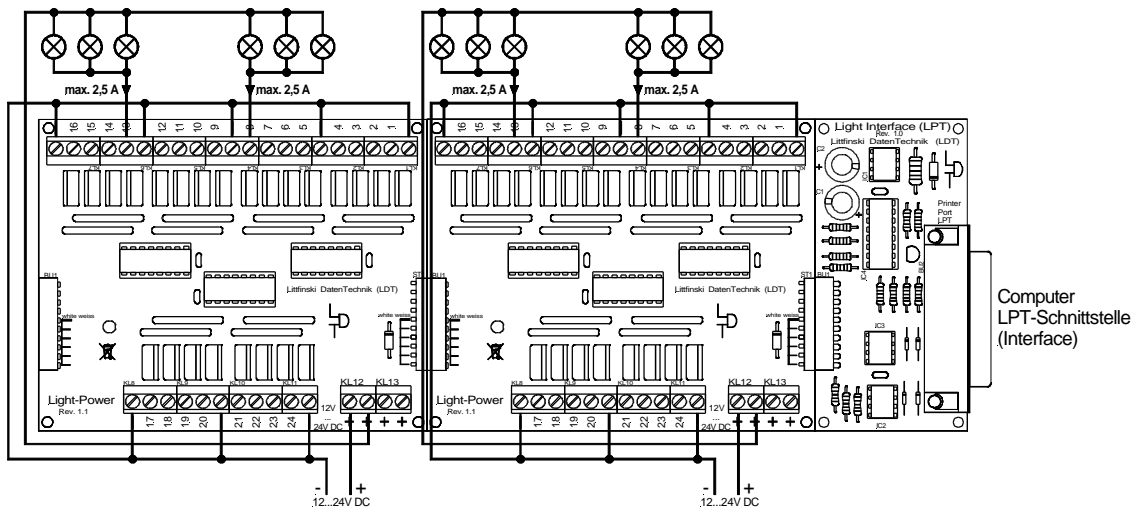
**Picture 1:** The **Light-Power-Module** has to get a **direct current supply** of between **12 and 24 Volt**. Each of the **24 outputs** can cover a maximum load of **2,5 Ampere**.



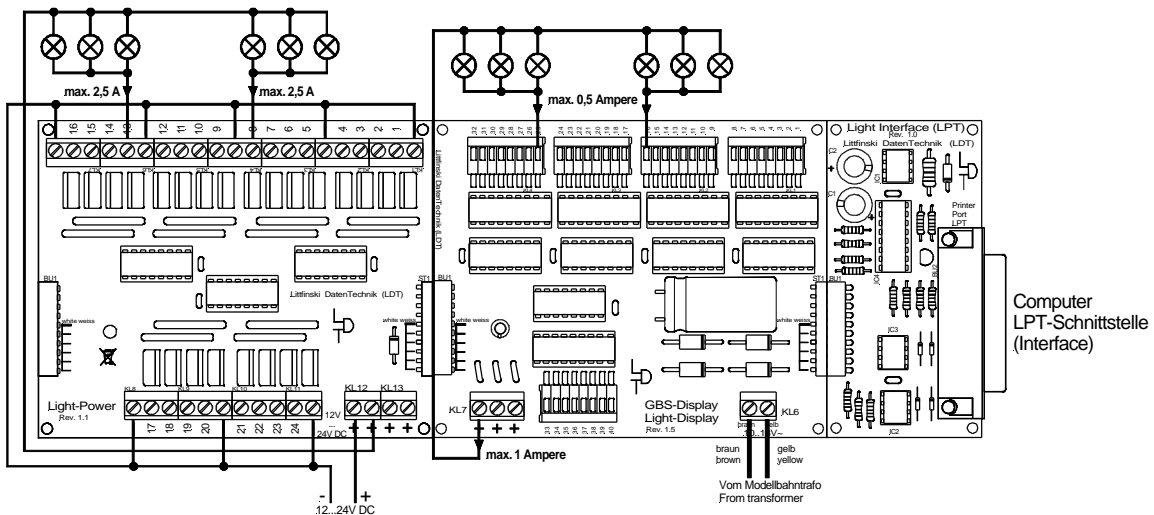
**Picture 2:** **Switched mode mains power supplies** are especially suitable for the supply to the **Light-Power-Modules** because of the possibility to supply a higher current level. **Switched mode mains power supplies** can be purchased by **Conrad** ([www.conrad.com](http://www.conrad.com)) and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



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



**Picture 4:** The **PC-Light-Control Light@Night** consist of **one Light-Interface** and from **PC-Softwareversion 2.0** 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](http://www.ldt-infocenter.com) within the section **"Sample Connections"**.

**Table 1:**

current	wire cross section	wire cross section	wire cross section	wire cross section
	0,5 sq mm	0,75 sq mm	1,5 sq mm	2,5 sq mm
1 Ampere	7,0 meter	10,5 meter	21,0 meter	35 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

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