



## 1. Warning notices

Please check the LED tubes carefully for completeness  
Store the tubes in a cool dry place.  
No part of the tube may be modified or removed.  
The tube should only be changed by a qualified electrician in accordance with the installation instructions.



### **Warning**

There is the risk of electric shock.

Dangerous voltages  
Installation and servicing must only be done by a qualified electrician.



No change is permitted to the structure of the light fitting when the retrofit LED tubes are fitted.

Only suitable for operation with a conventional ballast or 230V.

This lamp may not be suitable for use in all applications where a traditional fluorescent lamp has been used. The temperature range of this lamp is more restricted. In cases of doubt regarding the suitability of the application the manufacturer of this lamp should be consulted.

The use of the lamp is only permitted in a suitable light fitting.

Information:

This lamp is designed for general lighting service (excluding for example explosive atmospheres).

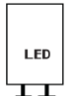
This lamp is not suitable to be used in emergency luminaires designed for double-capped fluorescent lamp(s).

No advice is given if modifications are made to the document because of technical improvements.

The total efficiency and light distribution of a device is determined by the design of the site.



Dimming not allowed



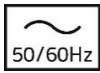
LED replacement starter (use only with lichtline LED starter)



Lamp not suitable for emergency operation



Lamp to be used in dry conditions or in a luminaire that provides protection



Lamp suitable for 50 Hz or 60 Hz operation

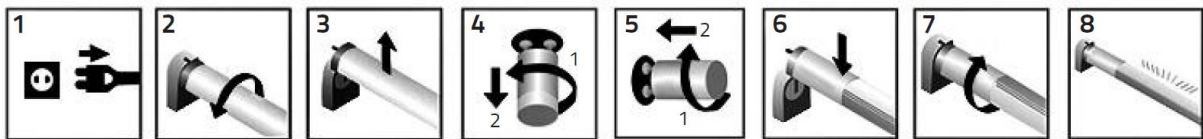
## 2. Fitting instructions for conversion

Connection example as specified in DIN EN 62776:2015

Modification of the wiring: No

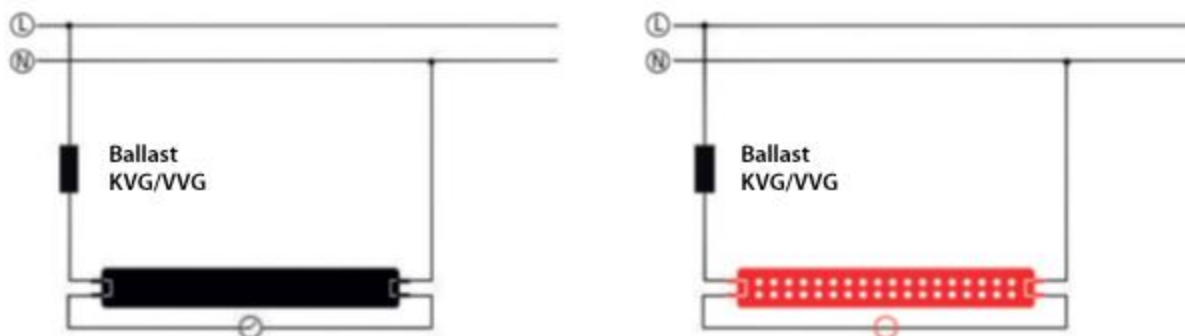
LED starter bridge: Yes, in exchange for conventional starter

Schematic arrangement for the replacement of a fluorescent tube by a retrofit LED tube:

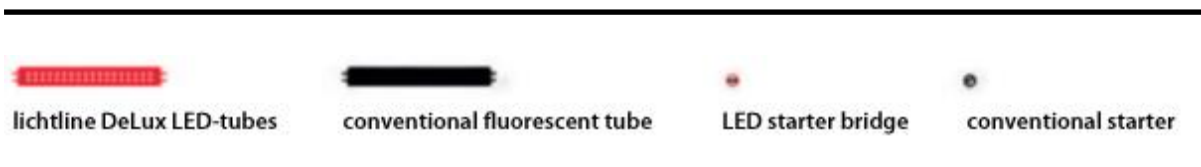
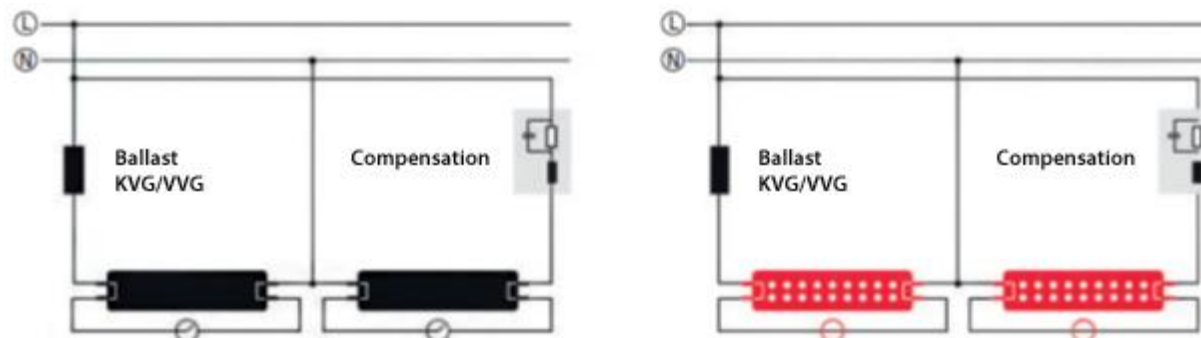


1. Switch off electricity
2. Turn conventional lamp 90°
3. Remove conventional lamp
4. Remove the starter
5. Click the LED replacement starter into the starter holder
6. Insert the LED lamp into the lampholder
7. Secure the position by turning the lamp by 90°
8. Switch on electricity and check for lamp starting

A) KVG / VVG single circuit



B) KVG / VVG twin circuit



Should the installed LED tubes flicker after the conversion or no longer light after a short time, the compensation device may be the cause of this. Please contact us if this happens.

c) KVG / VVG tandem circuit and EVG installation

The installation with KVG / VVG tandem circuit should only be done by an electrician. Instructions in the internet under:  
[www.lichtline.com/Service/Downloads/Produkt-handbuecher](http://www.lichtline.com/Service/Downloads/Produkt-handbuecher)

### 3. Change / FAQs

What needs to be done with very old sockets?

- It must be possible to turn the socket easily - no gripping or grating
- The socket must not be cracked
- Care must be taken with IP 65/67 sockets, that the inner rubber seal does not come between contact and LED tubes, it must sit tight in the socket or be removed.



If one of these points occurs the socket must be replaced by a new one otherwise a lot of heat or smoke may be generated.

If the socket is old and/or already burnt, it's essential to replace it with a new socket!

### 4. Replace fluorescent tube with LED tube

- A 390 mm 5W T8 LED-tube replaces a 390 mm T8 fluorescent tube
- A 438 mm 6W T8 LED-tube replaces a 438 mm T8 fluorescent tube
- A 590 mm 8-10W T8 LED-tube replaces a 590 mm T8 fluorescent tube
- A 900 mm 13W T8 LED-tube replaces a 900 mm T8 fluorescent tube
- A 970 mm 15W T8 LED-tube replaces a 970 mm T8 fluorescent tube
- A 1200 mm 18-22W T8 LED-tube replaces a 1200 mm T8 fluorescent tube
- A 1500 mm 20-30W T8 LED-tube replaces a 1500 mm T8 fluorescent tube

### 5. Scope of supply

- Installation instructions
- DeLUX LED-tube
- lichtline LED-starter

### 6. Contact

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