

## METOLIGHT® LED-Tube Series T5-DC

T5-LED-Tube for use with 12 to 30 VDC

### Ideal for Camping, Caravan, Boats, Cars, Trucks, Solar, Battery

METOLIGHT T5-DC series LED tubes are designed as a retrofit for T5 fluorescent tubes in luminaires with DC power supply between 12 and 30 VDC. They replace energy-saving existing T5 fluorescent tubes, which are operated via a separate electronic ballast to DC voltage. The existing ECG must be removed, which saves even more energy and, for example, batteries can supply the LED tubes much longer with energy. The LED tubes series METOLIGHT T5-DC are ideal for use in mobile environments such as in trucks, caravans, camping, boats, PV systems or batteries etc.



#### Important note:

These T5-DC LED tubes must not be operated directly on 230 V AC (as usual with T8 tubes), but only on DC voltage between 12 and 30 VDC.

The electrical connection is made on both sides (is not only on one side, as usual with T8 tubes), whereby the mounting direction does not matter (positive / negative pole can be exchanged).

The pins on each side are internally bridged.

An integrated protection circuit protects the LED tube against overtemperature and short-time overvoltage.

The installation of the LED-T5-DC tube must, however, be carried out with the power supply switched off.

The METOLIGHT T5-DC LED tubes are equipped with highly efficient SMD chips with over 130 lm/W. The matt PMMA cover distributes the light over 140 °. Optionally we deliver these tubes also with clear cover.

The T5-DC LED tubes are available in lengths of 212 / 288 and 517 mm in the light colors 3000K (warm white), 4000K (neutral white) and 6000K (cold white). Other lengths and colors on request.

#### Special features:

- Integrated protection circuit against overvoltage and overtemperature
- Soft-start circuit to protect the integrated components
- Compatible for DC DC power sources between 12 and 30 VDC
- Fits all common G5 sockets - only 16 mm tube diameter
- Easy installation - mounting direction does not matter
- Energy-saving through high-efficient LED chips with over 140 lm / W

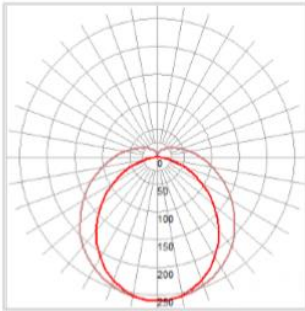
#### Important:

- Never connect to mains voltage or magnetic or electronic ballast
- If dimmers are required: Only use METOLIGHT LED DC-dimmer



## Common technical data:

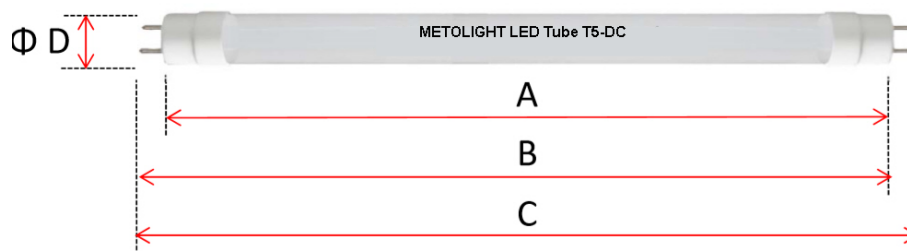
Input power connection	12 ~ 30 VDC
LED-Efficacy	>130 lm/W
LED CRI	Ra > 80
Light beam angle	>140°
LED tube diameter	16 mm
Socket	G5
Environment conditions	-20~+45°C – 10~80%rH



## Special technical data:

item-No.	Matchcode	Power	Replaces	Light colour	Lumen	Length
105251	LEDtube-021-5CWM-4W-DC	4 W	CFL 6 W	6000K	500	212 mm
105252	LEDtube-021-5NWM-4W-DC	4 W	CFL 6 W	4000K	500	212 mm
105253	LEDtube-021-5WWM-4W-DC	4 W	CFL 6 W	3000K	400	212 mm
105254	LEDtube-028-5CWM-5W-DC	5 W	CFL 8W	6000K	650	288 mm
105255	LEDtube-028-5NWM-5W-DC	5 W	CFL 8W	4000K	650	288 mm
105256	LEDtube-028-5WWM-5W-DC	5 W	CFL 8W	3000K	500	288 mm
105257	LEDtube-052-5CWM-7W-DC	7 W	CFL 13W	6000K	900	517 mm
105258	LEDtube-052-5NWM-7W-DC	7 W	CFL 13W	4000K	900	517 mm
105259	LEDtube-052-5CWM-7W-DC	7 W	CFL 13W	3000K	700	517 mm

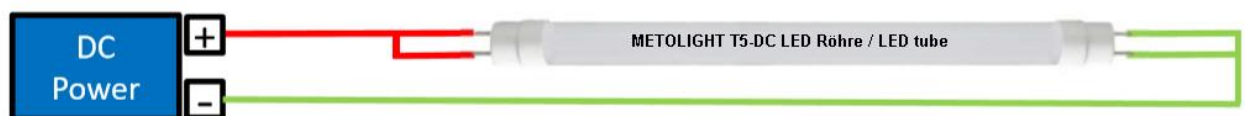
## sizes:



Typ	A	B	C	D
LEDTube-021	212 mm	218 +/- 1,2 mm	226 +/- 1,5 mm	16 mm
LEDTube-028	288 mm	294 +/- 1,2 mm	302 +/- 1,5 mm	16 mm
LEDTube-052	517 mm	523 +/- 1,2 mm	531 +/- 1,5 mm	16 mm

## Electrical connection:

DC-Anschluss bei einer LED Röhre - DC power connection one LED tube



Einbaurichtung ist egal - Installation direction does not matter

DC-Anschluss bei mehreren LED Röhren parallel - DC power connection with multiple LED tubes parallel



If 2 or more tubes: always connect parallel, never in serial connection!

## Installation notes:

### Do not change tubes while luminaire is powered on!

If a fluorescent tube was previously installed, the existing ballast (magnetic or electronic) must be removed by a qualified electrician and the two G5 sockets must be rewired.

The positive and negative poles of the DC power supply must each be connected to a G5 socket. Never connect the positive pole and the negative pole in a single socket!

**Defective or difficult to turn G5 sockets must be replaced.**



Any converted luminaire must undergo tests to prove that the luminaire is safe. It is recommended to use DIN VDE 0701-0702 "Inspection after repair, modification of electrical equipment - Electrical equipment retest - General requirements for electrical safety". The converted luminaire must be provided with a new nameplate.

### Installation instructions for luminaires with electronic ballast (only by qualified electricians!)

1. Power off the luminaire
2. Remove existing CFL tube
3. Remove existing electronic or magnetic ballast
4. Check G5 sockets: defect or hard turnable sockets must be replaced
5. With AC-DC-driver or battery power:
  - a. Connect Plus pole to one G5 socket
  - b. Connect Minus pole to opposite G5 socket
6. Label the converted luminaire with note: „Only for LED tubes 12 ~ 30VDC“
7. Insert **METOLIGHT®** LED-tube Type T5-DC
8. Power on the luminaire

## Applications:



RV



YACHT



CAMPING



DC outlet



CLOSET



CABINET

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**LED-TUBE-T5DC-DB-E.DOC, VERSION DEZ-21**

