

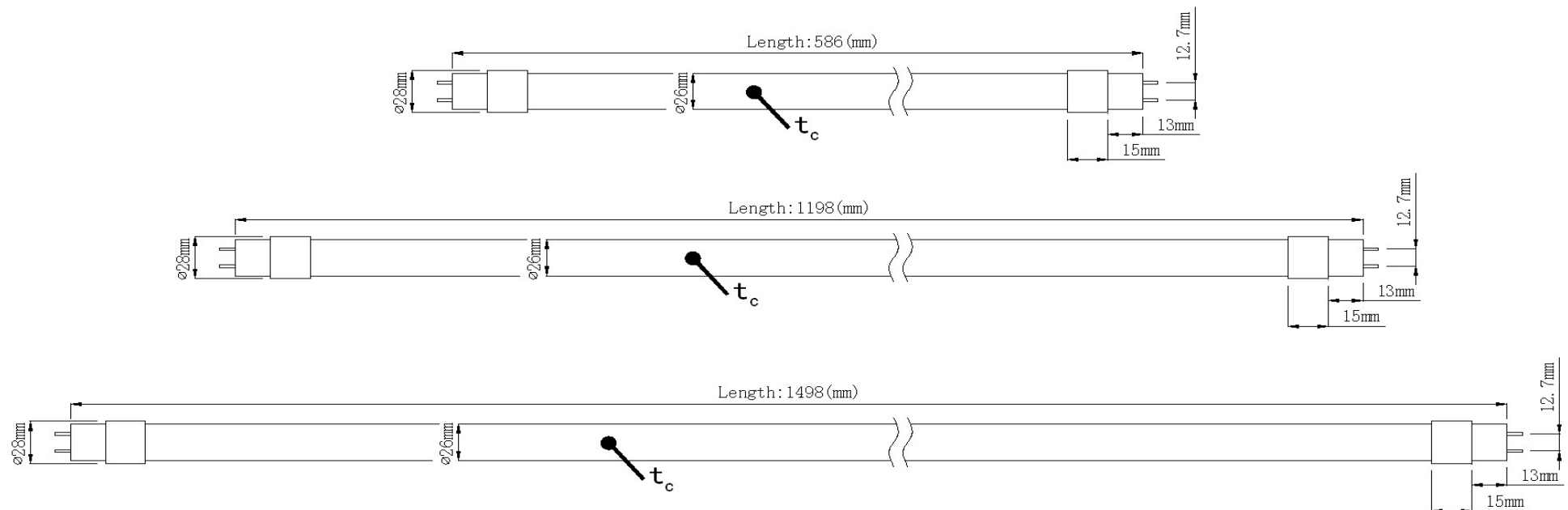
## LED rotary fluorescent tube instructions

### 1. Product description:

LED fluorescent tubes are equipped with super bright white LED with unique radiating aluminous for outer shell structure with advantages of faster heat emission, low temperature, and long life span. LED fluorescent tube is the same in appearance and size comparing with the traditional fluorescent lamp and can be easily replaced. The key features of LED tubes are energy super saving and environmental benefits.

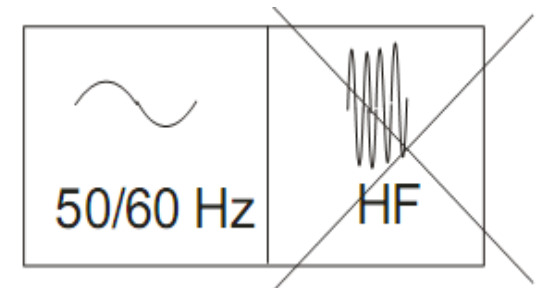
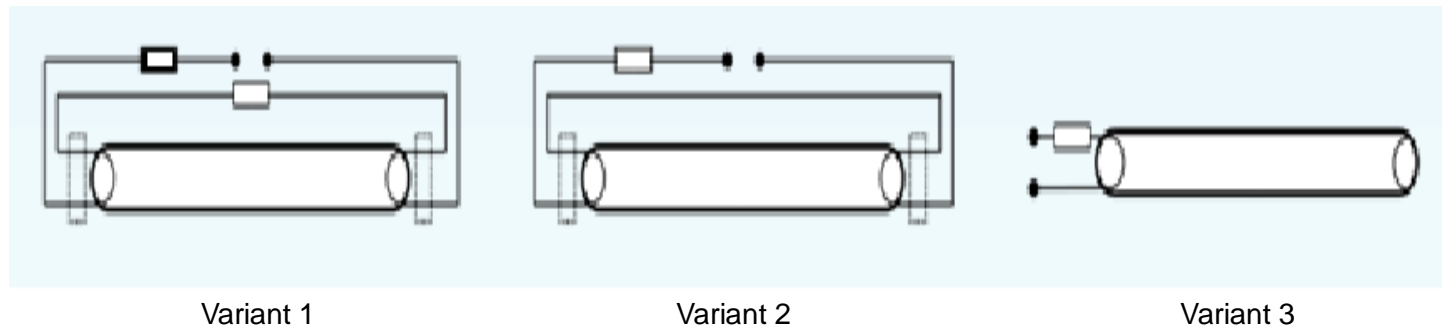
### 2. Product benefits:

- Equipped with ultra bright and low light declined SMD 3528, with high luminous efficiency, wide Angle, good light uniformity;
- Unique radiating aluminous structure, good heat conductive and dissipation ability;
- Without flicker or stroboscopic effects, rapid start;
- Pure spectrum, high CRI (color rendering index), and no radiation such as ultraviolet or infrared light;
- Wide voltage input with short- and open-circuit overload protection functions;
- Rotatable LED tube with rotary Angle  $\pm 90^\circ$ ;
- Range of color choice is as wide as 2800 ~ 6500 K;
- No mercury, lead or any other harmful substances.



**Important notice:**

This product is a single ended conductive LED rotary fluorescent tube, with professional designed internally installed power supply, may have directly input voltage AC100 ~ 240 V, and can be installed directly in T8 fluorescent tube holder (Lamp panel). LED rotary fluorescent tube shall not be used in a lamp holder with electronic ballast (HF); if it is necessary, rewiring is required; before taking out the original fluorescent tube and installing LED lamp, please thoroughly note kinds of electrical appliance subject to be changed or rewired; please carefully check configuration of the lamp holder. The LED rotary fluorescent tube wiring diagram as follows:



### 3. Option 1 – The original lamp with internally installed inductance rectifier.

#### *Benefits:*

- LED luminaires can be installed instead of fluorescent tube very easily and safely;
- The lamp certificate is still effective;
- No direction request when inserting LED sunlight tube;
- The lamp fixture still can be used into fluorescent tube, need to reinstall after normal start only;

#### *Disadvantages:*

- Power loss of inductance rectifier remains.

#### **A retrofitted lamp circuit diagram with inductance rectifier as shown in figure 4.**

The internally installed inductance rectifier can put into use as its current certification is still effective. The power loss is about 1 W to 2 W.

If the original starter is not changed, the LED luminaire will start to flicker. Please shut down immediately to avoid the product breach.

LED luminaires can be used for lamps with multiple starters.

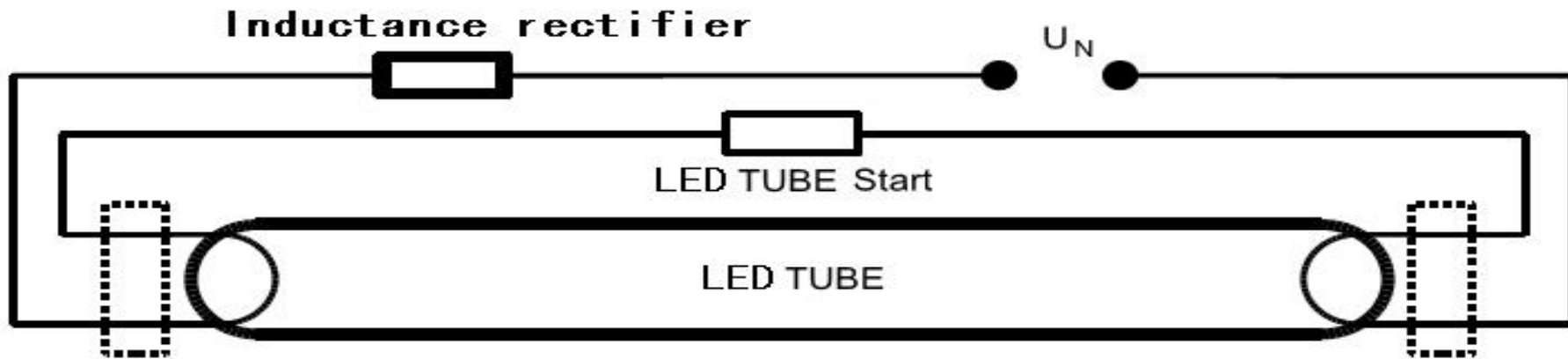


Figure 4

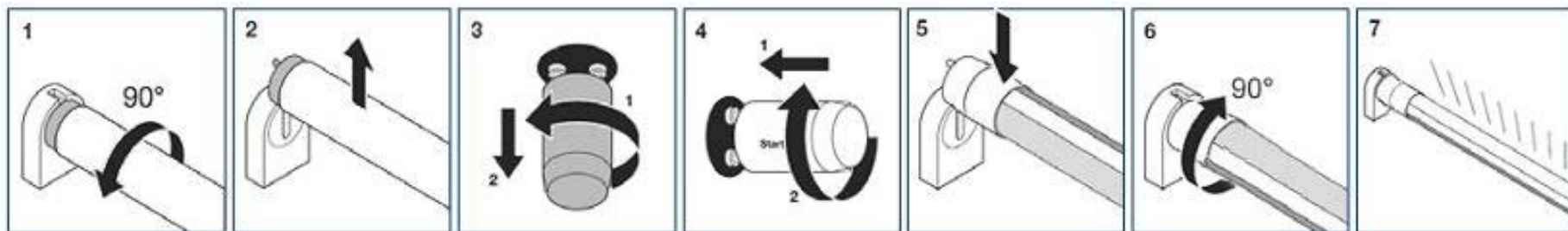


Figure 5

**Figure 5: Installation guidance**

1. Make sure the supply voltage disconnected, turn the conventional tube on 90°
2. Remove the conventional lamp
3. Replace the old starter and fluorescent tube
4. Insert LED professional starter LED tube into lamp-socket
5. Insert LED tube into lamp-socket
6. Turn the tube on 90°
7. Inspect the light distribution angle of the whole lamp

**Note:** LED starter is used with fuse 250 V, 2A.

Double lamp luminaires can be refitted analogue to single lamp luminaires as shown in figure 6.

Figure 6: A wiring circuit diagram of a retrofitted double lamp luminaires with inductive ballast

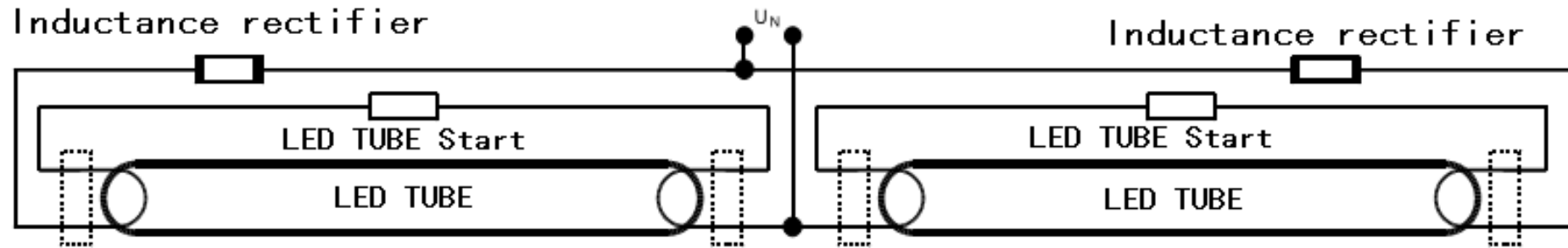


Figure 6

Installation operation schematic diagram for lamps with internally installed inductance rectifier as follows:



Switch off the power supply (1)



Get LED starter ready for replacement (5)



Check whether the lamp has built-in inductance rectifier and AC starter (2)



insert LED starter (6)



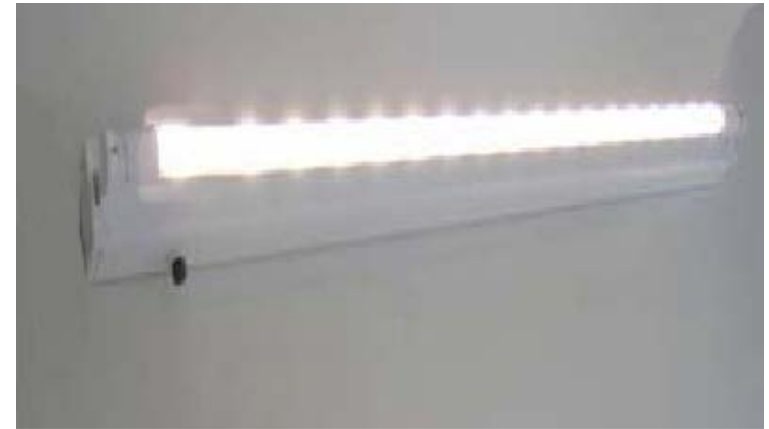
Remove AC starter (3)



insert LED tube (7)



Remove the fluorescent tube (4)



connect power supply (8)

#### 4. Option 2 – Retrofitting a luminaire (direct connection)

##### *Benefits:*

- save more resources;
- increased power factor ( $\cos \varphi$ );
- no direction requirement when insert LED luminaire;

##### *Disadvantages:*

- the certification of lamp is invalid;
- shall be exclusively operated rewiring by qualified person.

Figure 7: Lamp circuit diagram with straight voltage connection.  
All electrical wires should meet current national standards.

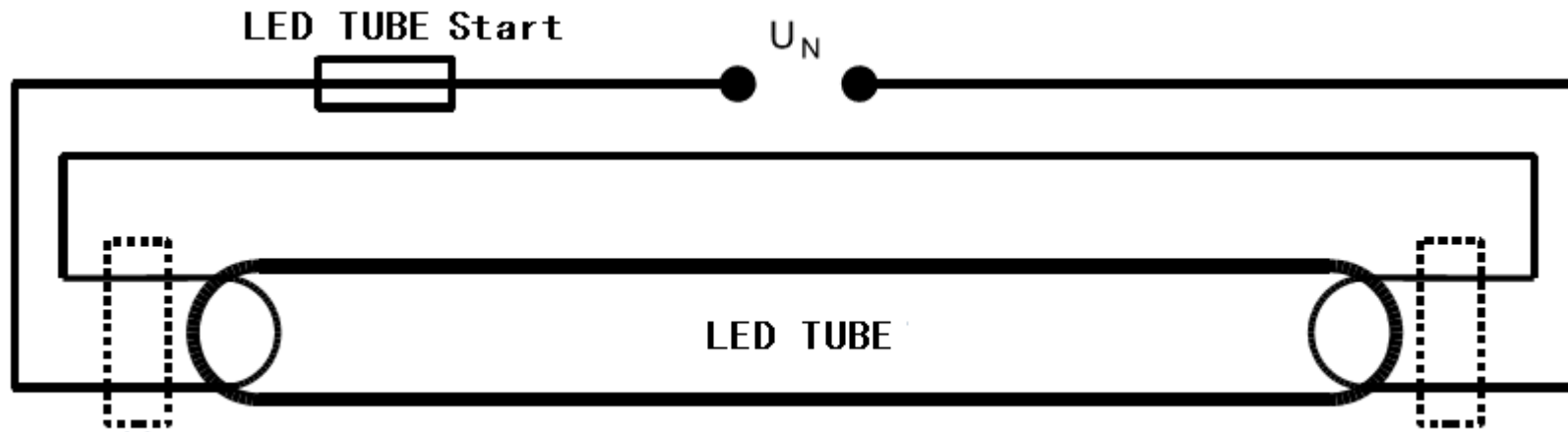


Рисунок 7

**Installation instructions:**

The product installation, repair, maintenance, disassembling must be operated by professional workers only to avoid any accident

1. Make sure the supply voltage is disconnected
2. Remove the conventional lamp
3. Remove power factor calibrating capacitor (if installed) to improve the power factor
4. Rewire the luminaire as shown in the circuit diagram above
5. Use LED tube starter or a fuse (250 V, 2A)
6. Insert LED tube into lamp holder and inspect the light distribution angle.

**Note:** to avoid LED tube damage starter and fuse (250V, 2A) are necessary for installation protection.

**Double lamp luminaires can be refitted analogue to single lamp luminaires;**

A direct wiring circuit diagram of a retrofitted double lamp luminaires as shown in figure 8.



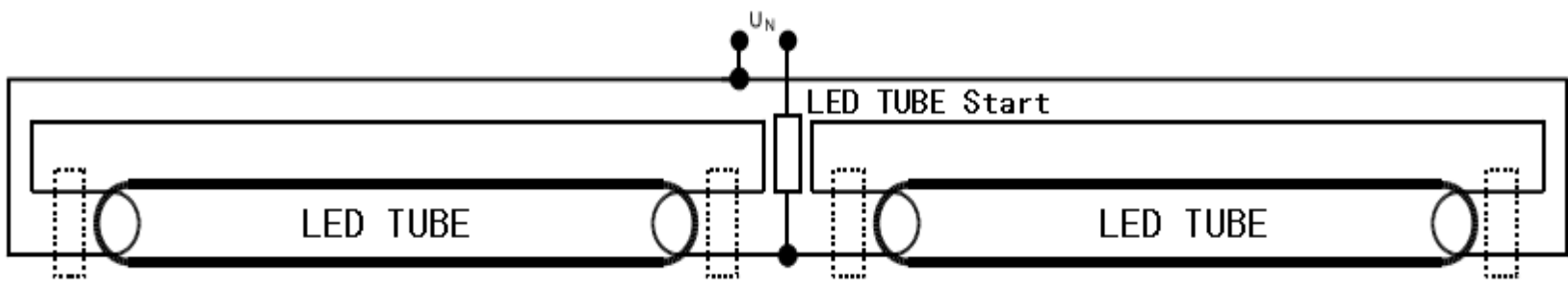


Figure 8

Installation operation schematic diagram for direct connection lamps (control device removed) as follows as figure 9



Figure 9

## 5. Option 3 – Single-sided direct wiring

### Benefits:

- Easier wiring of existing or new luminaires than the abovementioned direct wiring process.

### Disadvantages:

- Wrong orientation of the LED tube may lead to short circuits.

The circuit diagram for single side direct wiring voltage connection lamps as shown in figure 10.

To operate a fluorescent lamp the rewiring must be undone; it can be wired connection without control device for new or existing lamp as well; All wires should meet current international standards.



Figure 10.

### Installation instructions:

The installation, repair, maintenance, disassembling must be operated by professional workers to avoid any accident.

1. Make sure the supply voltage disconnected
2. Remove the conventional lamp
3. Remove power factor calibrating capacitor (if installed) to improve the power factor
4. Rewire the luminaire as shown in the circuit diagram above
5. Use LED tube starter or a fuse (250V, 2A).
6. Insert LED tube into lamp holder and inspect the light distribution angle.

**Note:** Starter and fuse (250V, 2A) are necessary for installation protection; Do not insert fluorescent lamps, and LED luminaires in wrong orientation, otherwise, they will be damaged or corrupted.

**Double lamp luminaires can be refitted analogue to single lamp luminaires**

A single sided direct wiring circuit diagram of a retrofitted double lamp luminaires as shown in figure 11

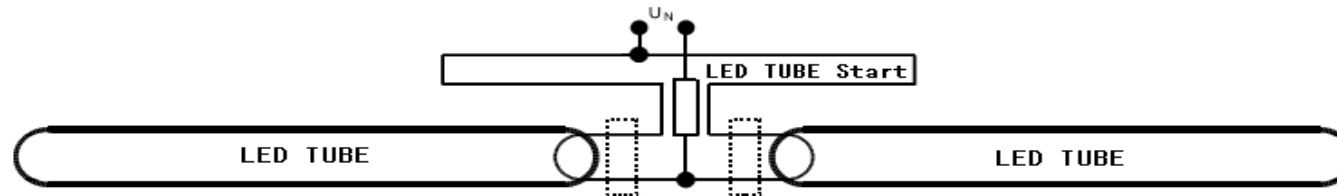


Figure 11

Installation operation schematic diagram for single end direct connectional lamp (control device removed) as follows (fig. 12).



Рис. 12