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Parameter comparisons between LED Daylight Tube and fluorescent tube

As a part of LED lamps family, LED Tube has the advantages in whatever irradiance principle and functions which other traditional light sources can't compare with. Thus LED lighting will be an inevitable trend in the field of house Lighting in the 21st century. LED Tube embodies its advantages compared with traditional fluorescent Tube:

1. Energy saving: made of some LEDs with micro low power (0.05W), 1/4 power assumption of traditional fluorescent Tube.

2. Green: powered by direct current and constant current or constant voltage, stable power, non-jump and change in light, protect eyes. Powered by Alternating Current Ballast without frequency

3 Pollution free: adopts semiconductor as light source which can avoid any pollution generating from traditional tubes including Hg steam, heavy metal and fluorescence powder etc. No pollution and noxious material.

4 Installation: LED tube adopts single end wiring method, no need fixture, powered by both of built in or exterior power supply, convenient to fix up, having all factors that will lower your cost. While exterior ballast and fixture are must factors for traditional tubes, which waste lots of your time and money.

5. Aseismatic: LED daylight tube adopts aluminium fixture, outfit with silica gel mat which has heat -diffusion, insulated, damp resistance advantages. Traditional daylight tube is made of glass, easy broken when fallen down.

6. Long life-span: The life-span of LED daylight tube is 5-10 times as long as the traditional fluorescent tube's.

7. Length: The length of LED daylight tube is optional. The single tube can be 0.2-3 meters, but only 0.3-1.2 meters for traditional fluorescent tube.

8. Brightness adjustable: LED daylight tube use DC power supply, the brightness can be changed while adjusting the value of current or voltage.

Traditional fluorescent tube is difficult to control brightness due to its ballast existence.

9.Maintenance: LED tube uses constant power supply. Even though some LEDs damaged and its state is short circuit, it will not influence others LEDs function. You can also change this bad LED through repair.

The ordinary daylight lamp will not work anymore or be repaired again once filament is damaged or leaking air. And it also pollute environment.

10. There will not be any moths hovering around the tube, as LED lighting does not emit ultraviolet.

The ordinary one has many moths flying around.

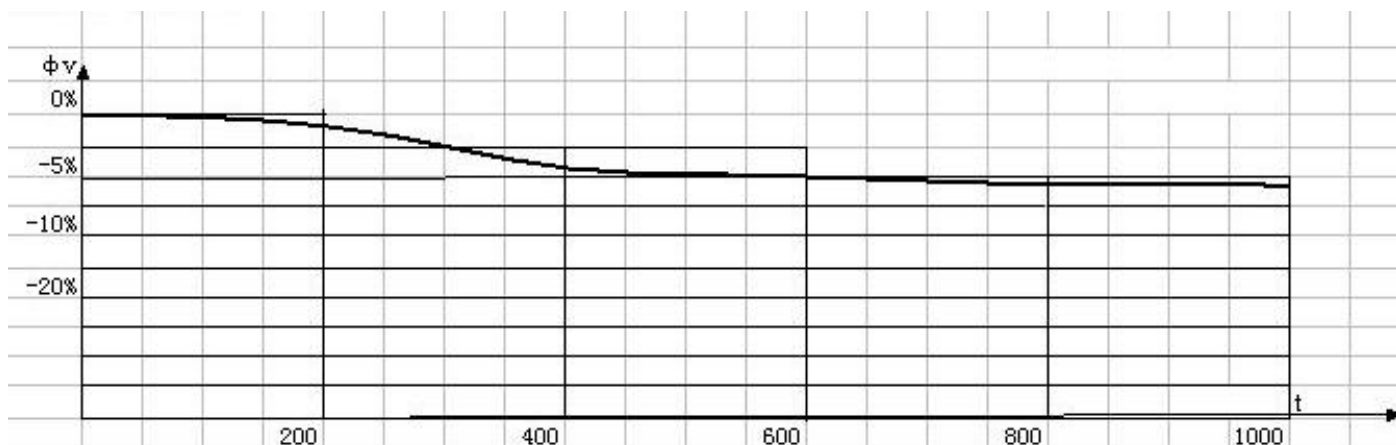
PRODUCT PERFORMANCE			
Commodity	LED fluorescent lamp	LED fluorescent lamp	LED fluorescent lamp
Mode NO	TC60	TC120A	TC150
LED Quantity	174PCS	276PCS	342PCS
Material	glass	glass	glass
Light Color	white	white	white
Operating Voltage	220V	220V	220V
Wattage	8W	15W	18W
Color Temperature	6000-6500K	6000-6500K	6000-6500K
Lumen	560LM	1050LM	1260LM
※ Operating Voltage: AC220V ※Working Enviroment:-25℃ To +70℃ ※Applied indoor , door use			

一、 Real example of comparision of projects(calculation based on equal area—1000 square meters

Apellation	working hours	amount	unit price	Product sum	Power consumption per year	Electri city charge	Total charge per year
40W (68.5W) fluorescent lamp	12 hours	180pcs	\$3	\$540	54005.4	\$7020.7	\$7560.7
15W (16.5W) LED fluorescent lamp	12 hours	180pcs	\$38	\$6840	1308.6	\$1691	\$8531
	Energy saving rate76%, lifespan is 7 years, efficient income per year is\$5329.7, total economization from tube replacement is \$1620,total possible income is \$32087.9. fluorescent tube exchange rate is 2 years a time						

All calculation is based on the unit price of electricity in China \$0.13 kW.h.

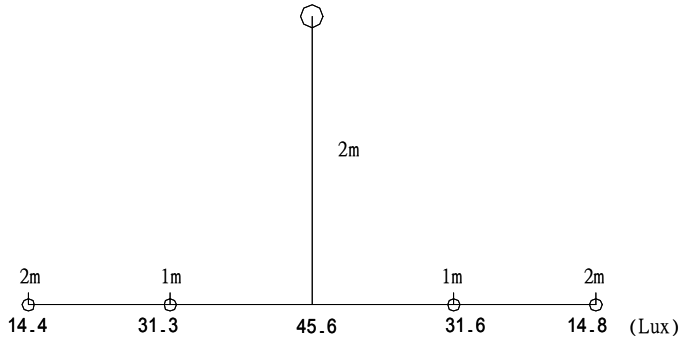
The cost paid to buy LED tubes will be got back from the



0.6 meter fluorescent lamp the diagram of illumination intensity

LED daylight tube(8W)

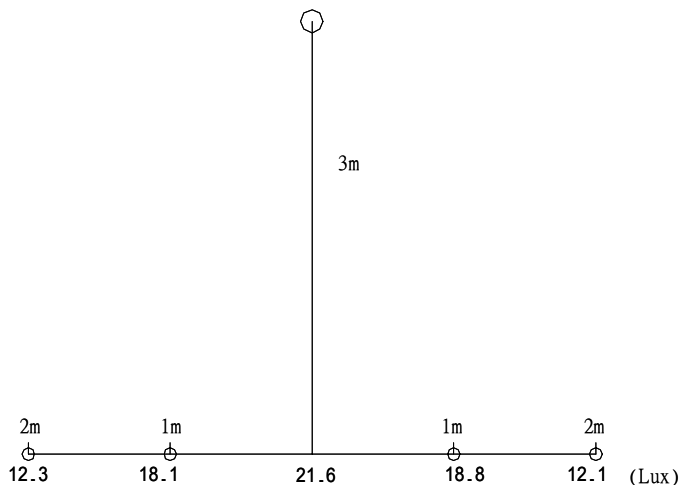
Phillip 18W daylight lamp.(25W consumption)



LED daylight tube(8W)

29.1 40.6 49 43.1 28.6

Phillip 18W daylight lamp(25w consumption)



LED daylight tube(8W)

19.3 22.8 24.5 24.1 20.8

Phillip 18W daylight lamp(25w consumption)

0.6m daylight tube, height 1.6m from the ground, luminous flux area is 37.33 square meters

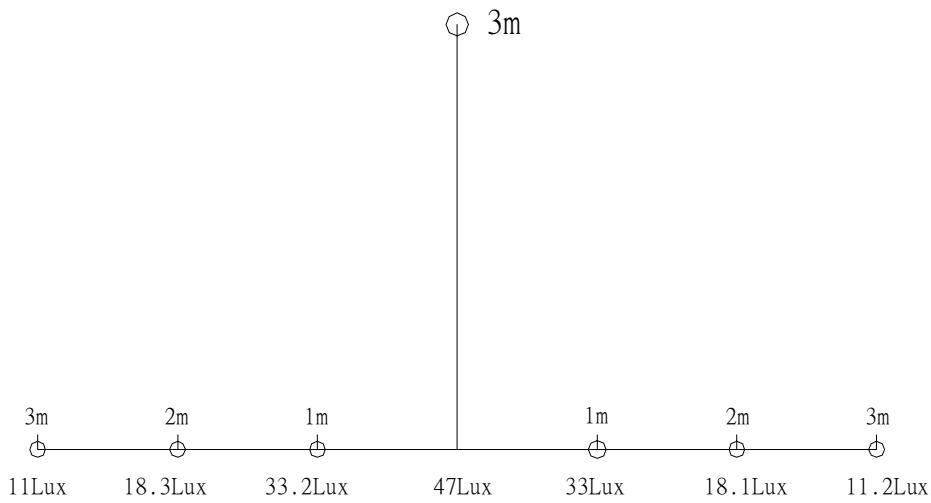
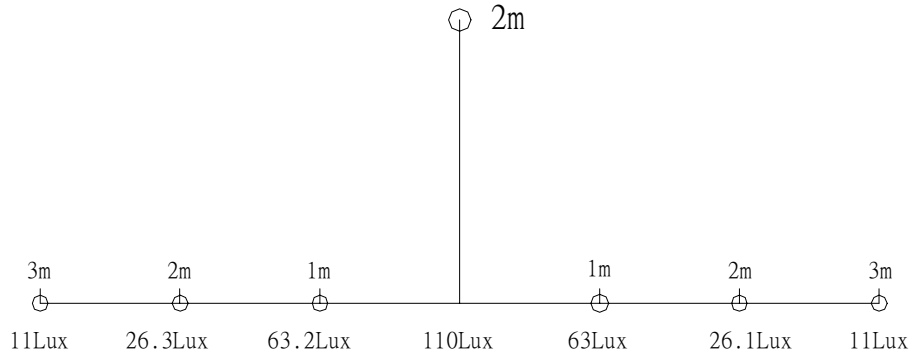
0.6m daylight tube, height 2m from the ground, luminous flux area is 56.19 square meters



1.2 meter fluorescent lamp the diagram of illumination intensity

LED daylight tube brightness testing diagram

Voltage:226V Total power:20.2W Effective power:17.5W power factor:0.872

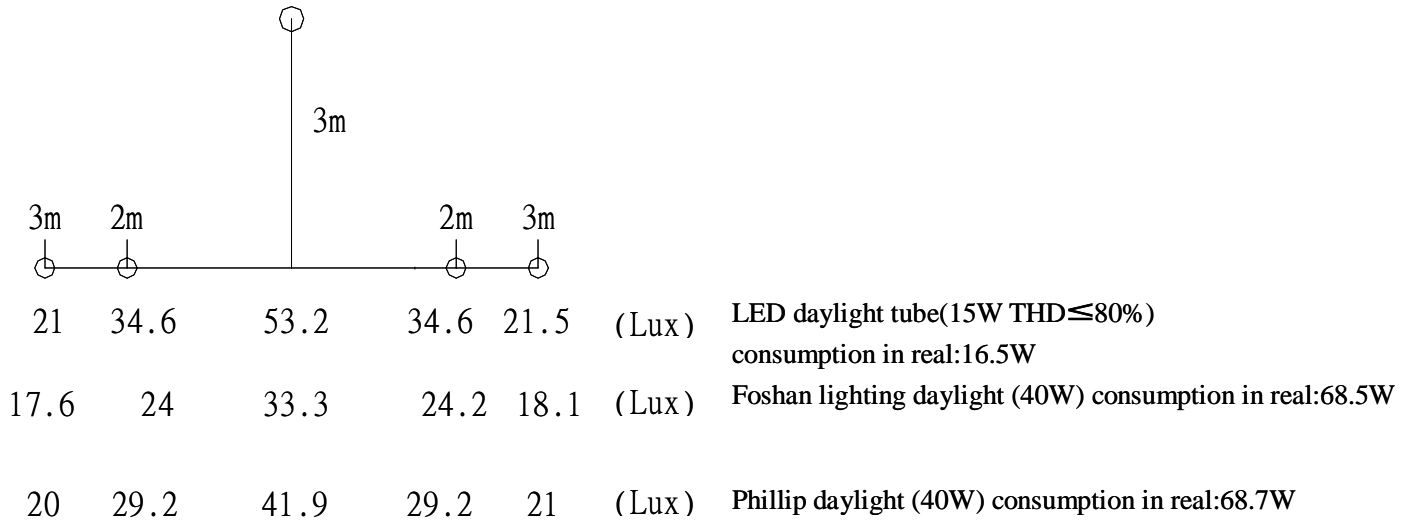


1.2m daylight tube, height 1.6m from the ground, luminous flux area is 37.35 square meters

1.2m daylight tube, height 2m from the ground, luminous flux area is 56.29 square meters



Lighting Effect comparison of LED daylight tube and traditional daylight tube



1.5m daylight tube, height 1.6m from the ground, luminous flux area is 56.19 square meters
 height 2m from the ground, luminous flux area is 58.38 square meters



**Conclusion: The more hours you use LED Daylight Tubes, the more money you will save;
 The earlier you replace your traditional tubes, the less pollution and damage to our earth.**

**Use this formula to calculate how much you can save from LED Daylight Tube:
 Take 15W's LED tube replacing 60W Philips fluorescent tube for instance**

$$\begin{aligned}
 \text{Total economization sum} &= \text{total hours} \times 67W \times \text{unit price of electricity} - \text{total} \\
 &\quad \text{hours} \times 15W \times \text{unit price of electricity} \\
 &= \text{total hours} \times \text{unit price of electricity} \times 52W \\
 &= \text{?!!!!}
 \end{aligned}$$