



# LED Lighting Tube Energy-Saving Series

Your Energy Saving Solution Partner

Bright × Health



明亮均勻



安全穩定



節能環保



減排省電

Comparison Of Energy Saving Data of New LED Tube  
全新 LED Tube 的 節能數據對比

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# 關於我們 / About us

iLighting Global Enterprise Co., Ltd.

智能環球企業有限公司



iLighting Global Enterprise Co., Ltd., founded in 2007, is a professional lighting company integrating design, manufacturing and supply. The company is committed to the research, development, manufacturing and sales of energy saving and environmental protection products.

Having been engaged in the lighting industry for 15 years, OEM and ODM services can be provided for customers. We can customize various lighting products with high luminous efficiency, high visibility and high configuration, as well as environmental protection and energy-saving lighting solutions according to customer needs.

智能環球企業有限公司成立於2007年，是一家集設計、製造、供應於一體的專業照明公司。公司致力於節能環保產品的研發、製造和銷售。公司從事照明行業15年，可為客戶提供OEM和ODM服務。我們可以根據客戶需求定制各種高光效、高可視度、高配置的照明產品以及環保節能的照明解決方案。



High Quality  
LED Lighting



Customized



System-wide  
Energy Management



Green



Low Carbon



Energy Saving

## Company Brands



Engineering & Specialty  
工程與專業



Commercial Application  
商業應用



Retail Market  
零售市場



Decorative Lighting  
裝飾照明



Intelligence & Lighting Control  
智能照明控制





Engineering & Specialty  
工程與專業



Commercial Application  
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Retail Market  
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Decorative Lighting  
裝飾照明



Intelligence & Lighting Control  
智能照明控制

# Our Products

## Apply to Engineering & Specialty

adheres to engineering and professionalism, strictly controls product quality, and brings you products with the highest cost performance while pursuing stable product functions.

堅持工程化、專業化，嚴格把控產品質量，在追求產品功能穩定的同時，為您帶來最高性價比的產品。



## Certificate Authentication

The products have successively obtained more than 100 CE and lighting professional standard certificates. Since the establishment of our company, Our company, has successively obtained more than 10 short-term patents in Hong Kong and more than 10 national patent certificates in mainland China.

產品先後獲得100多項CE及照明專業標準證書。公司自成立以來，先後獲得十多項香港短期專利和十多項中國大陸國家專利證書。



CE | RoHS | Patents

# 10 Main Series

Our produces and operates 10 series of products, including LED Tube&Batten, Kitchen&Cabinet, Down Light&Spot, HighBay&Street, IOT LED Light Bulb&Track, which have gained consumer recognition and maintained good cooperative relationships with numerous businesses.

我們生產經營LED燈管&燈條、廚房&櫥櫃、筒燈&射燈、工礦燈&路燈、物聯網LED燈泡&軌道等10個系列產品，獲得了消費者的認可，並與眾多商家保持了良好的合作關係。

**Series 1**  
Tube & Batten

**Series 2**  
Kitchen & Cabinet

**Series 3**  
Down Light & Spot

**Series 4**  
Bulb

**Series 5**  
Panel & Track

**Series 6**  
HighBay & Street

**Series 7**  
Solar & Wall

**Series 8**  
Driver & Switch

**Series 9**  
IOT LED Light

**Series 10**  
Control & intelligent

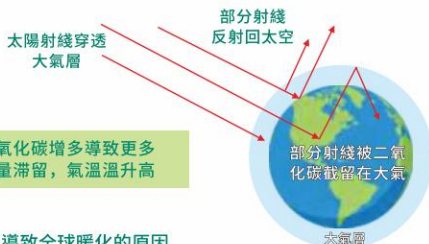


Our company focuses on the energy saving of lights, production, development and sales of LED lights, high-lumen high-lumen LED and LED microwave lamps. Compared with incandescent, fluorescent and quartz bulbs, LED lights are more energy efficient and energy-saving.

我司專注於燈光的節能，生產研發和銷售LED燈、高流明高流明LED以及LED微波燈管。相比白熾燈、熒光燈及石英燈泡，LED燈更具能源效益，更節能。



# Global Warming 全球暖化



二氧化碳增多導致更多  
熱量滯留，氣溫升高

## 導致全球暖化的原因

室氣體主要來自化石能源的燃燒過程  
例如燃燒煤、石油等化石燃料的燃燒  
運輸工具和工業設備等運行  
過度伐木

## 全球暖化的影響

持續的全球暖化將導致一系列破壞性的影響  
海平面上升  
對動植物的生態系統造成破壞  
影響氣候變化，導致極端氣象發生

## 全球氣候暖化的控制

能源供應方面：發展可再生能源，例如太陽能、風能、氫能等  
能源需求方面：發展並使用節能技術如空調系統的熱回收和  
高效照明系統技術；提升節約能源的意識等  
提倡使用高燃油效率的汽車，同時開發更清潔的燃料和替代



# Energy Audit and Carbon Audit

能源審核與碳審計 全球各國在節能減排，其中業界在配合推動環保



## 什麼是能源審核？

能源審核是對建築物能源使用情況所作的定期檢查，以提高能源使用效率。

能源審核程式一般包括：

- 分析和評估系統/設備的能效表現
- 確定"能源管理機會"
- 評估節能潛力
- 推薦節能措施

## 能源審核的好處

能源審核是一種非常有效的能源管理工具。

能源審核 = 省錢 \$ + 環境保護 + 可持續發展

- ✓ 提高能源效益和節約能源
- ✓ 減少能源消耗
- ✓ 延長設備/系統的使用壽命
- ✓ 最終節約金錢
- ✓ 減少污染物和副產品排放，為環境保護和可持續發展貢獻一份力量

## 什麼是碳審計？

碳審計，有時又稱為碳足跡，是衡量和記錄一個機構或者一幢建築物在特定系統範疇內的溫室氣體排放量的方法。



## 香港的碳審計

香港的溫室氣體排放：  
有超過60%的溫室氣體排放源是發電。建築物耗電量約占香港總耗電量的89%。

為減少因建築物電力消耗而導致的溫室氣體排放，建築物業主和管理者應該瞭解由於建築物運作所產生的溫室氣體排放量，並採取適當措施來減少這種污染。





# Energy Saving and Emission Reduction of Lighting



## 燈光節能減排

Our company focuses on the energy-saving of lighting, and promotes LED high-efficiency energy-saving lamps (LED lamps). Light-emitting diodes (LEDs) are solid semiconductor devices, which can effectively convert electric energy into visible light. The luminous efficiency ranges from 100-180 lm/W, which exceeds any other lamps. It is more energy-efficient than incandescent lamps, fluorescent lamps and quartz bulbs.

我司專注於燈光的節能, 推動 LED 高效節能燈 (LED燈), 發光二極管 (LED) 是固態的半導體器件, 可有效地把電能轉化為可見光線。發光效率介乎 100至180 lm/W, 超過任何其他燈具, 它比白熾燈、熒光燈及石英燈泡更具能源效益。

### The Advantages 使用LED的優點



**Long Service Life**  
使用壽命長



壽命可達25,000至50,000小時, 比檯電膽長約3倍至6倍, 比一般鎢絲燈約1,000小時的壽命長更多。



**Solid and Reliable**  
堅固可靠



LED不會有燈絲斷裂的問題, 本身就堅固耐用。LED燈泡不易因外部衝擊而損壞, 不像螢光燈和鎢絲燈泡易碎。



**No Mercury**  
沒有水銀



發光二極管的生產過程中不需要使用水銀。  
NO Hg NO UV/IR



**Color Variation**  
色彩變化多



LED對開關和調控訊號反應迅速, 因此非常適用於營造閃動及變幻的照明效果。



### Average Performance of Various Light Sources(lm/W) 市場上各種光源的平均效能 (流明/瓦)



光源照明比較				
照明類型	發光效率 (流明/瓦特)	使用壽命 (小時)	顯色指數 (CRI)	色溫 (K)
白熾燈				
標準電燈泡	8 lm - 17lm	1,000-1,500	98-100 (非常好)	2,700-2,800 (暖)
鹵鎢燈	11lm - 21 lm	2,000-3,000	98-100 (非常好)	2,900-3,200 (暖偏中)
螢光燈				
T5 / T8	80lm - 110lm	15,000-30,000	60-95 (好)	2,700-6,500 (由暖到冷)
緊湊型螢光燈	50lm - 70lm	6,000-15,000	70-85 (好)	2,700-6,500 (由暖到冷)
發光二極管				
LED燈	100lm - 180lm	15,000-50,000	70-95 (好)	2,700-6,500 (由暖到冷)



### Electricity Charges in Hong Kong 香港近年電費變化

中電近年電費變化 (仙/度電)				
年份	基本電費	燃料費	回扣	平均淨電費
2022	93.7	38.6	-3.4	128.9
2023	93.7	62	-1.3	154.4
2024	96.6	46.3	0	142.9

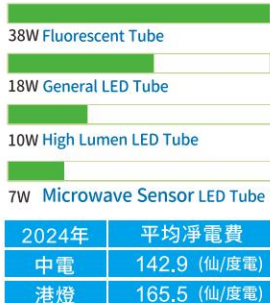
港電近年電費變化 (仙/度電)				
年份	基本電費	燃料費	回扣	平均淨電費
2022	109	27.3	-1	135.3
2023	114.5	82.5	0	197
2024	119.5	46	0	165.5

## Comparison Of Energy Saving Data of New LED Tube

### 全新LED Tube 的 節能數據對比 (本數據來自真實照明產品測試)

This data comes from the test results of traditional fluorescent tubes, ordinary LED tubes, high lumen LED tubes and microwave sensor tubes with the same size (4ft) and the same lighting effect at the same time.

本次數據來自於對同樣尺寸 (4ft) 且同等照明效果的傳統熒光燈管、普通LED燈管、高流明LED燈管和微波感應燈管，在同一時間對其進行測試的結果。



### 不同燈管的耗電參數

Comparison Item	Tube Type	T8 Fluorescent(4ft)	T8 LED Tube(4ft)	T8 High Lumen Tube(4ft)	T8 Microwave Sensor Tube(4ft)
燈管額定功率(瓦) + Ballast		36W + 2W	18W	10W	約7W
安定器型式		EM Ballast	電源驅動器	電源驅動器	電源驅動器
lighting Model		無	LT-I1218-L108A	LT-I1218-L188A-HL	LT-I1218-M188A-HL
安定器頻率(每秒閃爍次數)		AC220V/60Hz 燈管會閃爍	AC220V/60Hz 無可視頻閃	AC220V/60Hz 無可視頻閃	AC220V/60Hz 燈管不閃爍
每支燈管光通量(流明)		80lm/W	100lm/W	180lm/W	180lm/W
燈具光通量(流明)		2880lm	1800lm	1800lm	1800lm
光效(光通量 ÷ 耗電瓦數)		50	100	180	180
功率因數(PF)		~ 0.5	> 0.9	> 0.9	> 0.9
每支燈管壽命(小時)		8000 hrs	50,000 hrs	50,000 hrs	50,000 hrs
總耗電瓦數(瓦)/支		38W	18W	10W	12hrs 100% 12hrs 30% 平均約7W
<b>100支點亮對比</b>	每月耗電量(度) = 總耗電(W) ÷ 1000W × 點燈時間 (HKD) 每天電費 = (每天用電總數 × 電費單價\$1.43) (HKD) 每月電費 = 每天耗電量 × 電費單價\$1.43 × 30				
100支每天點燈時間(24小時)	91200W	43200W	24000W	16800W	
100支每天耗電度數(度)	91.2度	43.2度	24度	16.8度	
每天電費	HKD 130.42	HKD 61.78	HKD 34.32	HKD 24.02	
每月電費(HKD)	HKD 3,912.48	HKD 1,853.28	HKD 1,029.60	HKD 720.72	
100支每月節省電費(HKD)	沒更提,沒有節省電費	HKD 2,059.20	HKD 2,882.88	HKD 3,191.76	
100支每年節省電費(HKD)	沒更提,沒有節省電費	<b>HKD 24,710.40</b>	<b>HKD 34,594.56</b>	<b>HKD 38,301.12</b>	
<b>500支點亮對比</b>	每月電費(HKD) = 每天耗電量 × 電費單價\$1.43 × 30				
每月電費(HKD)	HKD 19,562.40	HKD 9,266.40	HKD 5,148.00	HKD 3,603.60	
500支每月節省電費(HKD)	沒更提,沒有節省電費	HKD 10,296.00	HKD 14,414.40	HKD 15,958.80	
500支每年節省電費(HKD)	沒更提,沒有節省電費	<b>HKD 123,552.00</b>	<b>HKD 172,972.80</b>	<b>HKD 191,505.60</b>	
<b>1000支點亮對比</b>	每月電費(HKD) = 每天耗電量 × 電費單價\$1.43 × 30				
每月電費(HKD)	HKD 39,124.80	HKD 18,532.80	HKD 10,296.00	HKD 7,207.20	
1000支每月節省電費(HKD)	沒更提,沒有節省電費	HKD 20,592.00	HKD 28,828.80	HKD 31,917.60	
1000支每年節省電費(HKD)	沒更提,沒有節省電費	<b>HKD 247,104.00</b>	<b>HKD 345,945.60</b>	<b>HKD 383,011.20</b>	



**HKGBC**  
**香港綠色建築議會**

**CE RoHS**



**CIC GREEN**  
**PRODUCT CERTIFICATION**  
**CICGPC-L-22452 (LED)**



CICGPC-L-22452 (LED)



IOS證書編號: 04624Q10153R0S



# 《香港房屋委員會優化住宅樓宇的照明光度》



## 優化住宅樓宇的照明光度

Optimisation on Illumination Level of Domestic Blocks

The illumination levels for public areas are as follows:

	Normal Mode	Triggered Mode
for typical lobby	50 lux	85 lux
for typical corridor	30 lux	85 lux
for staircase	30 lux	85 lux
for ground floor lift lobby	120 lux	NA
for lift car	150 lux	NA



提升公共地方照明光度



## 採用機電工程署的屋宇 裝備裝置能源效實務守則

Adopting EMSD'S Code of Practice for Energy Efficiency of Building Services Installation



## 新住宅樓宇公用地方的公共照明 光電感應控制

Photocell Sensor Control for Lights in Public Areas of New Domestic Blocks



## 以電子鎮流器取代電感鎮流器

The Use of Electronic Ballast to replace Electromagnetic Ballast



## 廣泛採用LED照明系統

Wider Use of LED Lighting



Car Park



Staircase



Class Room



Shop



Home



Conference



Office

## T8 LED超高流明玻璃管

### T8 LED Super Lumen Glass Tube



- >> 8 Watts retrofit tubular lighting
- >> Green Technology on Energy Efficiency Illumination
- >> 80% savings against conventional fluorescent lighting
- >> 50% savings against other generic LED tubes

#### Specification 產品規格

<b>Model</b> LT-11218-G-H	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 5
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 200±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 8	<b>Colour Rendering Index (CRI)</b> >70	<b>IP</b> IP 20
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T8.G13	<b>Flicker Free</b> YES

## T5超高流明玻璃管

### T5 LED Super Lumen Glass Tube



- >> 8 Watts retrofit tubular lighting
- >> Green Technology on Energy Efficiency Illumination
- >> 80% savings against conventional fluorescent lighting
- >> 50% savings against other generic LED tubes

#### Specification 產品規格

<b>Model</b> LT-11512-GP-H	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 5
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 180±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 8	<b>Colour Rendering Index (CRI)</b> >70	<b>IP</b> IP 20
<b>Length (mm)</b> 1150	<b>Lamp Base</b> T5.G5	<b>Flicker Free</b> NO

## T8 LED普通玻璃管

### T8 LED General Glass Tube



- >> Green Technology on Energy Efficiency Illumination
- >> Constant current drive can provide stable current for the lamp tube
- >> Powder coated glass tube kit, high transmittance 300 large beam angle

#### Specification 產品規格

<b>Model</b> LT-11218-G	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 3
<b>Voltage (V)</b> 220-240	<b>Lumen Output (Lm/W)</b> 120±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 18	<b>Colour Rendering Index (CRI)</b> >80	<b>IP</b> IP 20
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T8.G13	<b>Flicker Free</b> YES

## T5 LED高流明玻璃管

### T5 LED High Lumen Glass Tube



- >> High power, high light efficiency, high efficiency and durable
- >> Luminous uniform, no video flash
- >> Strong compatibility, easy to install and use, long life

#### Specification 產品規格

<b>Model</b> LT-1512-GP-HP	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 3
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 160±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 26	<b>Colour Rendering Index (CRI)</b> >80	<b>IP</b> IP20
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T5.G5	<b>Flicker Free</b> YES

## T8 LED 商用燈管

### Commercial LED T8 Tube



- >> Uniform light emission
- >> SPM Design – power circuit protection to cut off individual LEDs when mal-functioned
- >> Optional: rotary end knob for angle adjustment

#### Specification 產品規格

<b>Model</b> LT-11218-L	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 3
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 120±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 18	<b>Colour Rendering Index (CRI)</b> >80	
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T8.G13	

## T8 LED 高性能燈管

### High Performance LED T8 Tube



- >> Uniform light emission
- >> Retrofit to existing T8 lights on EM
- >> SPM Design – power circuit protection to cut off individual LEDs when mal-functioned

#### Specification 產品規格

<b>Model</b> LT-11218-N	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 3
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 120±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 18	<b>Colour Rendering Index (CRI)</b> >80	
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T8.G13	

## T8 LED高流明燈管

### T8 LED Lumen Tube



- >> Uniform light emission
- >> It save 80% energy than traditional fluorescent lamp
- >> SPM Design – power circuit protection to cut off individual LEDs when mal-functioned

#### Specification 產品規格

<b>Model</b> LT-11218-L-HL	<b>Colour Temp (K)</b> 4000/6000	<b>Warranty (Years)</b> 5
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 190±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 18	<b>Colour Rendering Index (CRI)</b> >70	<b>IP</b> IP 20
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T8,G13	<b>Flicker Free</b> YES

## T8-T5高性能燈管

### T8-T5 LED High Performance LED Tube



- >> Uniform light emission
- >> Retrofit to existing T5 lights
- >> T8 tube body to achieve the best lighting effect
- >> SPM design-Power circuit protection to cut off individual LEDs when mal-functioned

#### Specification 產品規格

<b>Model</b> LT-11218-T5G5	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 5
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 120±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 18	<b>Colour Rendering Index (CRI)</b> >80	<b>IP</b> IP 20
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T5,G5	<b>Flicker Free</b> YES

## T8 LED 抗干擾微波感應燈管

### T8 LED Anti-interference Microwave Sensor Tube



- >> Anti-interference design: 2 pcs microwave sensor tubes put into double tube batten. In close area not interfere each other
- >> Full lumen in activation mode. 30% lumen in standby mode
- >> The detection range can reach up to 8m

#### Specification 產品規格

<b>Model</b> LT-11218-M-AI	<b>Colour Temp (K)</b> 3000/4000/6000	<b>Warranty (Years)</b> 3
<b>Voltage (V)</b> 100-240	<b>Lumen Output (Lm/W)</b> 120±5	<b>PF</b> >0.9
<b>Wattage (W)</b> 18	<b>Colour Rendering Index (CRI)</b> >80	
<b>Length (mm)</b> 1200	<b>Lamp Base</b> T8,G13	

## T8 LED 微波感應燈管

### T8 LED Microwave Sensor Tube



- >> Microwave controlled internal sensor
- >> Full lumen in activation mode, 30% lumen in standby mode
- >> The detection range can reach up to 8m
- >> Exit time 15 seconds--60 minutes (on demand customization)

#### Specification 產品規格

Model LT-11218-M  
Voltage (V) 100-240  
Wattage (W) 18  
Length (mm) 1200

Colour Temp (K) 3000/4000/6000  
Lumen Output (Lm/W) 120 ± 5  
Colour Rendering Index (CRI) >80  
Lamp Base T8.G13

Warranty (Years) 3  
PF >0.9

## T8 LED 紅外感應燈管

### T8 LED Infrared Sensor Tube



- >> Infrared control internal sensor
- >> Full lumen in activation mode, 30% lumen in standby mode
- >> The detection range can reach up to 6m
- >> Exit time 15 seconds--60 minutes (on demand customization)

#### Specification 產品規格

Model LT-11218-IR  
Voltage (V) 100-240  
Wattage (W) 18  
Length (mm) 1200

Colour Temp (K) 3000/4000/6000  
Lumen Output (Lm/W) 120 ± 5  
Colour Rendering Index (CRI) >80  
Lamp Base T8.G13

Warranty (Years) 3  
PF >0.9

## T8 LED 聲控感應燈管

### T8 LED Sound Control Tube



- >> Built-in voice sensor
- >> Full lumen in activation mode, 30% lumen in standby mode
- >> Sound sensitivity 30-60 dB
- >> Exit time 15 seconds--60 minutes (on demand customization)

#### Specification 產品規格

Model LT-11218-V  
Voltage (V) 100-240  
Wattage (W) 18  
Length (mm) 1200

Colour Temp (K) 3000/4000/6000  
Lumen Output (Lm/W) 120 ± 5  
Colour Rendering Index (CRI) >80  
Lamp Base T8.G13

Warranty (Years) 3  
PF >0.9

# The Advantages And Disadvantages Of LED lighting >>>>



## Advantages 優點

- 1) Same lighting intensity than traditional lamps 5-8 times less energy.  
相同的照明強度,能源比傳統燈少 5-8 倍。
- 2) Traditional lamp output light in all directions. Optical efficiencies of 60-70% with reflectors and diffusers. The LED can achieve an optical efficiency of more than 90%.  
傳統燈輸出光效率向各個方向發光,在反射器和擴散器光效達60-70%, LED 光效達到90%以上。
- 3) No maintenance or frequent replacement is required. Cost-effective and durable.  
無需維護或頻繁更換。成本效益且耐用。
- 4) Traditional lamps may take > 2 minutes to reach full brightness & Frequent switching affects the service life of traditional lamps. But LED Turn-on almost instantly. Frequent switching will not affect the service life.  
傳統燈需要長達 2 分鐘才達到完全亮度&頻繁開關影響傳統燈使用壽命。但LED開啟立即發光,頻繁開關不會影響使用壽命。
- 5) The spectrum of LED meets specific visual, physiological or psychological needs. Allow you to control the spectrum by adjusting the color temperature and intensity of the light.  
LED技術光譜滿足特定的視覺、生理或心理需求。允許調整燈光的色溫 and 強度來控制光譜。
- 6) Design flexibility. can be used for various functions. Such as bulbs, tube lights, flexible light strips or neon signs.  
設計靈活性,可以用於各種功能:如燈泡、管燈、柔性燈條或霓虹燈。
- 7) Traditional lamps have an average lifespan of 8,000 hours, while LED lamps have an lifespan is 5-10 times  
傳統燈平均壽命為8千小時,而LED燈的使用壽命比傳統燈長 5-10 倍
- 8) The LED Light pollution & unwanted glare effects are reduced by emitting light in a specific direction.  
LED 特定方向發射光線,減少光污染和不必要的眩光效果。

## Disadvantages 缺點



- 1) The blue light pollution rate produced by cool white LEDs is much higher than other traditional lighting sources. Can cause be harmful to human eyes, impairing vision. ( Warm white LEDs with a color temperature of 3,000K -4000K are recommended. )  
冷白光 LED 產生的藍光污染率高於其他傳統照明。導致對人眼有害,損害視力。( 建議使用色溫於3000K-4000K 的暖色白光 LED. )
- 2) It is recommended to use a constant current driver, The voltage drop must be calculated correctly to avoid adversely affecting the lifetime.  
建議使用恆流驅動器,必須正確地計算電壓降,以避免對使用壽命產生不利影響。
- 3) Traditional lamps the price is cheapest, but LED lamps higher costly.  
傳統燈是便宜的照明, LED成本昂貴。
- 4) Not compatible with traditional lighting drivers & controllers, Therefore, need to pay extra during the LED installation process to get a compatible LED controller.  
不兼容傳統照明驅動器&控制器,因此在 LED 安裝過程中支付額外費用才能獲得兼容的 LED 控制器。



# Sensor Light Tube Q&A

## 感應燈管 Q&A

### Q1: 感應燈管是否可安裝支架或燈盤? / Can the sensor light be mounted to the bracket or light panels?

#### A1: ① T8 LED Microwave Sensor Tube (M)

只可用於單支架，唯兩支燈管距離或間隔安裝必須要在3米以上，如兩支距離太接近，就會有干擾現象。

It can be used for single bracket, and the distance or spacing between the two lamp tubes must be at least 3 meters. If the distance between the two lamps is too close, there will be interference.

#### ② T8 LED Anti-interference Microwave Sensor Tube (M-AI)

可用於單/雙支架，雙支架或燈盤建議感應器對角安裝，另外可解決兩支感應燈管太接近，而有干擾現象。

It can be used for single/double brackets, and it is recommended to install sensors diagonally for double brackets or light panels. Additionally, it can solve the problem of interference caused by two induction light tubes being too close.

#### ③ Programmable Microwave Sensor Tube (PM)

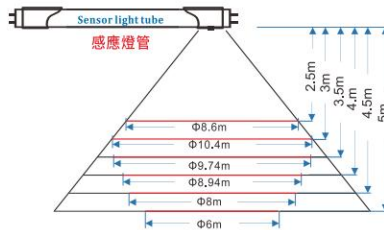
可用於單/雙支架，雙支架或燈盤建議感應器對角安裝，另外可再修改感應燈管之操作參數。

It can be used for single/double brackets, and it is recommended to install sensors diagonally for double brackets or light panels. Additionally, the operating parameters of the induction light tube can be modified.

### Q2: 燈管的感應距離 / Sensing distance of lamp tube

#### A2: \* 例如安裝高度2.5米時，那麼感應的理想範圍是8.6米

\* For example, when the installation height is 2.5 meters, the ideal range for sensing is 8.6 meters



### Q3: 是單端還是雙端接線? / Is it single ended or double ended wiring?

(可按客戶要求去配合不同接線方法 / Different wiring methods can be coordinated according to customer requirements)

#### A3:



### Q4: 關於啟動自檢 (首次啟動，有自檢程序，由25秒或5秒不等，但啟動過程不作檢測)

Regarding the startup self test (for the first startup, there is a self test program, ranging from 25s to 5 seconds, but the startup process is not tested)

#### A4: ① T8 LED Microwave Sensor Tube (M)

首次接上電源，燈管進入全光狀態 (100%亮度)，感應範圍內如無動作25秒後，燈管則進入休眠狀態 (30%亮度)。

When the power is first connected, the lamp enters a full light state (100% brightness). If there is no action within the sensing range for 25 seconds, the lamp enters a sleep state (30% brightness).

#### ② T8 LED Anti-interference Microwave Sensor Tube (M-AI) / Programmable Microwave Sensor Tube (PM)

首次接上電源，燈管進入全光狀態 (100%亮度) 5秒內變暗，感應範圍內如無任何感應信號，燈管則進入休眠狀態 (預設的亮度)。

When the power is first connected, the light tube enters full light mode (100% brightness) and dims within 5 seconds. If there is no sensing signal within the sensing range, the light tube enters sleep mode (preset brightness).

### Q5: 關於感應頭壞 / Regarding sensor head failure

#### A5: 假如感應器壞掉會造成無感應功能，會出現以下兩種情況：

If the sensor is broken, it will cause no sensing function and the following two situations will occur:

- ①長時間全光，但不會不亮 / Full light for a long time, but it won't go off
- ②長時間半光，但不會不亮 / Half light for a long time, but it won't go off

## Q6: 關於燈管長亮（無半光功能） / Regarding the long light on of the lamp tube (without half light function)

**A6:** 必須保證感應範圍內（一般為6-8米）無任何的移動物體，應遠離風扇、風口、和各種可能隨風擺動的物件。會觸發微波感應燈管造成長亮的情況：

- (1) 風吹動桌面上的紙張； (2) 風吹動植物葉片； (3) 風吹動塑膠膠袋； (4) 風吹動門簾、窗簾等；  
(5) 風扇葉片的轉動； (6) 空調導風葉的擺動窗簾； (7) 寵物等。

It is necessary to ensure that there are no moving objects within the sensing range (usually 6-8 meters), and to stay away from fans, air vents, and various objects that may swing with the wind. Will trigger the microwave induction lamp tube to cause a prolonged light:

- (1) The wind blows the paper on the desktop; (2) Wind blows the leaves of plants; (3) Wind blows plastic bags;  
(4) The wind blows the door curtains, curtains, etc.; (5) Rotation of fan blades; (6) Swing curtains for air conditioning guide vanes; (7) Pets, etc.

## Q7: 無任何感應效果或者感應距離極短 / No sensing effect or extremely short sensing distance

**A7:** 檢查是否有金屬物件遮蓋：不可用金屬物體遮蓋感應器，金屬物體會遮斷微波信號。

當有金屬物體遮擋感應器時，感應信號會被遮罩，燈管無感應效果，或者感應距離很短。

Check if there are metal objects covering the sensor: Do not use metal objects to cover the sensor, as metal objects may mask the microwave signal.

When a metal object obstructs the sensor, the sensing signal will be masked, the lamp tube has no sensing effect, or the sensing distance is very short.

## Q8: 關於接應急照明（停電後） / About connecting to emergency lighting (after power outage)

**A8:** ① T8 LED Microwave Sensor Tube (M)

應急時還有微波感應功能 → 應急亮度比後備亮度高（如後備做30%出光，而應急輸出高於30%）  
後備狀態就是實際應急亮度，應急時間越長光度會隨電池電壓降低而下降

It also has microwave sensing function in case of emergency → The emergency brightness is higher than the backup brightness (for example, the backup output is 30%, but the emergency output is higher than 30%)

The backup state is the actual emergency brightness. The longer the emergency time, the brightness will decrease as the battery voltage decreases.

應急時沒有微波感應功能 → 應急亮度比後備亮度低（如後備做30%出光，而應急輸出低於30%）

應急亮度就是這個產品的實際應急亮度

No microwave sensing function during emergency →

The emergency brightness is lower than the backup brightness (for example, the backup output is 30%, but the emergency output is lower than 30%)

The emergency brightness is the actual emergency brightness of this product

② Programmable Microwave Sensor Tube (PM)

應急時沒有微波感應功能 → 內部編程設置30%、100%且固定，不具備檔位調節一直是恒功率發光

No microwave sensing function during emergency → The internal programming settings are 30%, 100% and fixed. There is no gear adjustment and the light is always at constant power.

## Q10: 關於安裝位置選擇 / Regarding installation location selection

**A10:** 不要安裝在動蕩不定的物體上，如：容易震動的薄木板牆。

微波信號可穿過物體：磚牆、玻璃牆、木板牆、混泥土牆等，只要不是金屬都會穿過。

Do not install on unstable objects, such as thin wooden walls that are prone to vibration.

Microwave signals can pass through objects: brick walls, glass walls, wooden walls, concrete walls and other non-metallic objects.

## Q11: 關於保養 / About maintenance

**A11:**

	2年 two years	3年 three years	5年 five years
產品保養選擇 product care options	常規商用款式保二年，工程款式可選擇保三年或保五年。 Regular commercial styles are guaranteed for two years, while engineering styles can be guaranteed for three or five years.		
免責保修的範圍 Scope of disclaimer of warranty	1. 超過保修期； 2. 非本公司質量問題引起的故障和損壞； 3. 非產品本身問題：由於人為原因及用戶錯誤或不當使用、保管、保養或操作不當造成的故障和損壞； 4. 未經過我司授權，擅自拆卸或維修造成的損壞。 1. Expired the warranty period; 2. Failures and damages not caused by quality problems of the company; 3. Non-product problems: faults and damage caused by human factors and improper use, storage and maintenance by users; 4. Damage caused by unauthorized disassembly or repair without authorization from our company.		
超過保養期 exceeded maintenance period	1. 超過保養期，需支付額外的維修費及人工雜費等； 2. 如寄存在本公司維修，維修完畢可免費保存貨物一個月，超過時間我司將額外收取產品價值20%的倉儲費； 3. 過保養期的產品，本公司有權利不承擔維修義務。 1. If the maintenance period is exceeded, additional maintenance fees and labor miscellaneous fees need to be paid; 2. If it is stored in our company for repair, the goods can be kept for free for one month after the repair is completed. 3. Our company has the right not to assume maintenance obligations for products that have passed the maintenance period.		