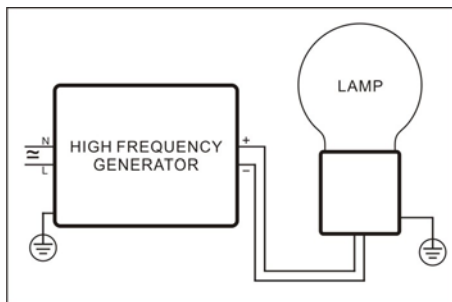


## Electrodeless lamp

Except for basic functions, different function could be custom-tailored; we could provide changes, as you need and customized services.



### Structure and Operating Principle of Electrodeless Lamp

The HFED consists of

- 1、bulb,
- 2、power coupler
- 3、high-frequency generator.

The power coupler is built inside the bulb, connecting the high-frequency generator through feeder line. The coupler induces and couples high-frequency electromagnetic energy created by the generator into the bulb, which makes the air inside the bulb cumulatively ionized into plasma. Excited atom of the plasma while returning to ground state will spontaneously radiate ultraviolet light that will invigorate the phosphor powder on inner wall of the bulb to give off visible light.

### Features of Electrodeless Lamp:

#### 1. Super long service life:

No filament and electrode in the bulb. Service life of the bulb depends on natural attenuation of phosphor powder. It has the longest service life among all light sources. Designed service life:  $\geq 60$  thousand hours, 50 times that of incandescent lamp, and 10 times that of gold halogen lamp.

#### 2、High-efficiency & Energy-saving:

High luminous efficiency and excellent energy saving. The optical efficiency:  $\geq 65\text{lm/w}$ , 5 times that of ordinary incandescent lamp. Can save energy more than 80%.

#### 3、Environmental Protection:

Freedom from flicker, no spluttering and low glare. Can thoroughly eliminate eye fatigue. Free of liquid mercury, it is the best light source for environmental protection.

**4、Excellent Color Rendering:**

Color rendering index:  $\geq 80$ , extremely close to natural light. Comfortable lighting.

Multiple choices of color temperature. Can realize lighting with different color in different environment.

**5、Instant Startup:**

starting time  $\leq 0.1$  second. No preheating is needed. Instant startup.

**6、Good Electric Specification:**

Power factor:  $\geq 0.95$ ; small current harmonics;

Wide applicable voltage range: 110V-260V

In line with national standard of electromagnetic compatibility: GB17743-1999. No interference to outside world.

**7、Strong Expanded Function:**

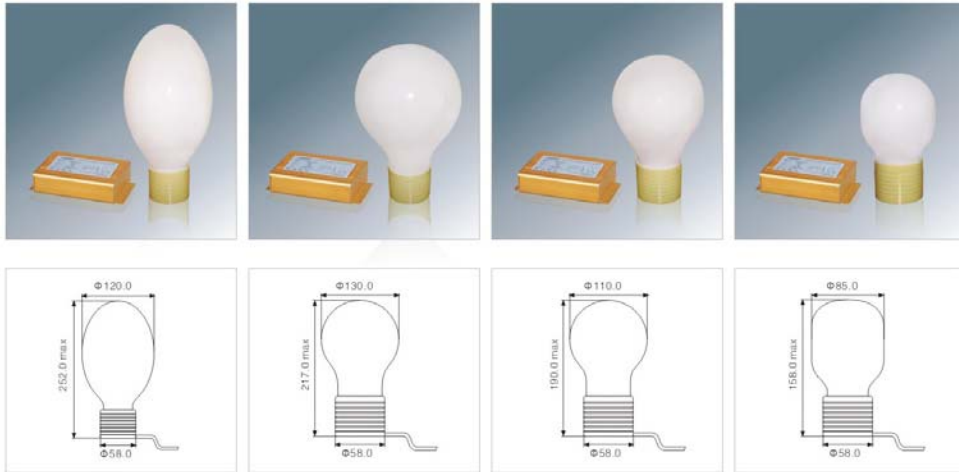
Can realize DC supply, timing open circuit and other personal function design. Fully satisfy diversified customers' needs.

**Compare Table**

Item	Electrodeless Lamp	Incandescent Lamps	Halogene Lamps	Fluorescent Lamps	HID	Energy-saving Lamp
Luminous Flux (Lm/w)	65-80	7.4-20	12月24日	40-100	60-100	60-65
Color rendering index (Ra)	>80	99-100	99-100	65-90	60-85	80-90
Color Temperature(K)	2700-6400	2500-2900	2900-3000	2700-6500	3000-5600	2700-6400
Avg.Life (H)	60000	1000	1500-2000	5000-12000	1000-10000	8000
Power Factor	$\leq 0.98$	1	1	0.4-0.5	0.4-0.8	0.92-0.95
Start Time	<0.5s	<0.5s	<0.5s	1-3 S	4-8min	<0.5s
Preheating star time	<0.5s	<0.5s	<0.5s	<0.5s	5-15min	<0.5s

**Wide application :**

Airport、Bridge、Factory、workshop, supermarket, street lamps, industrial factories, mines, backyard, sport, etc;



**Topband Electrodeless Lamp's Main Technical Parameters Table**

Part Number	Power(W)	Luminous Flux(lm/W)	Color Temperature(K)	Color Rendering Index (Ra)	Power Factor	Avg.Life(H)	Diameter( mm)
TB 55W/27	55	3500	2700	>80	≥0.98	60000	85
TB 55W/30	55	3500	3000	>80	≥0.98	60000	85
TB 55W/40	55	3500	4000	>80	≥0.98	60000	85
TB 85W/27	85	6000	2700	>80	≥0.98	60000	110
TB 85W/30	85	6000	3000	>80	≥0.98	60000	110
TB 85W/40	85	6000	4000	>80	≥0.98	60000	110
TB 165W/30	165	12000	3000	>80	≥0.98	60000	130
TB 165W/40	165	12000	4000	>80	≥0.98	60000	130