

“天樂” 陶瓷複金屬高效節能路燈

**【SELENA】**

**Ceramic Metal Halide Lamps**



**SS-1503(NEW)**

**2010/10/15 Test Report**

**Sofrina International Co., Ltd.**

**“天樂” Ceramic Metal Halide Street Lamp**  
**陶瓷複金屬路燈 【 Selena 】 SS1503A**



Energy consumption of regular building lighting and air-conditioning has amounted to the largest portion. In summer time, the proportion of power consumption for building has amounted to 40% to 50%, while that of lighting has reached as high as 30% to 40%. For production of machinery in accordance to heavy power consumption in factory, the part of lighting that amounts to the total of power expense is found with slight drop in terms of proportion.

Thus, the energy conservation of lighting does mean significantly. As a matter of fact, power consumption of light has amounted to 10% to 12%, power consumption for regular household power and public venue, and lighting for external part, and street-light of city (including community) would approximately amount to 50%.

Energy-conservation of lighting is done from three major approaches:

1. select high-efficiency and energy-conservation light-source and lamp;
2. select electronic rectifier or energy-conservation inductor rectifier;
3. Install advance lighting control device.

Power-conservation is to lower lost, and it is considered as the most immediate way for notable effect.

Lighting efficiency displayed by lamps can have demonstrated diverse power-conservation effect from different manufacturing plants as well as their structures.

Highly efficient, energy-conservation, environmental friendly, comfortable, safety, and economical

Ceramic Metal Halide Street Lamp 【Selena】 SS1503A five major advantages :

1. Power and energy conservation that meets energy-conservation policy for lighting of the country
2. Small size, light weight, low burden to light-pole, and highly safe
3. High efficiency of light-emission, large illumination, and wide size of area with projection
4. Given with light penetration, and insignificant impact from strong fog, rainy and snowy day
5. The part of power control is highly stable, and most reliable

Optical-level streetlight, and traditional streetlight

Ceramic Metal Halide Street Lamp 【Selena】 SS1503A four major reforms to streetlight :

1. Reflector: precision and optical nano-level reflector disk
2. Ceramic and metal halide lamp
3. Water-proof and dust-proof level
4. Stabilizer: high-efficient electronic stabilizer

Ceramic Metal Halide Street Lamp 【Selena】 SS1503A product advantages

1. Design after unique and professional, optical, and reflection theorem, and it could have enhanced efficiency of lamp and achieve the effect of power conservation.
2. 150W ceramic metal halide lamp in place of high-pressure sodium or silver lamp, helping to save power for 30%.

3. It has passed the design for power conservation for lighting so as to reduce power consumption, and achieves the objective of environmental protection.
4. Given with 3000K color performance, and there is such natural lighting of sunlight, and visual effect of brilliance and comfort.
5. High color performance with brilliant lighting, and it is lot more easy to distinguish between road and peripheral environment that it can ensure the safety of road traffic and pedestrian.
6. The streamlined profile of small size and light is resistant to winds and earthquake, and saves much expense for transportation.

### Convenience of installation

Old streetlight is changed of lamp holder: when it is to change the old lamp holder for this product, it is only necessary to connect the previous power source and this product, and then fix the sealing part.

Installation of newly set up streetlight: can cope with the design and installation of the newly set up streetlight

### Product information

Production explanation	Technical parameter of product	
Casting shell of aluminum alloy	Weight	SS1503A—6.5kg
High-intensity round and convex tempered glass	Size	L 570mm x W 280mm x H 165mm
Supra-small size light and novel and streamlined profile	Protection class	IP65
Professional design of light-source reflector excellent lighting effect	Insulation-level of electronic device	Class I
Self-protection design for stabilizer	Installation height	6~10 M
High-standard design of water and dust-proof	Installation size	φ 35~60mm
Easy maintenance, No need of tool for replacement of light source	Product application	Product application road lighting

### Frequent and common comparison of streetlight

Item	Ceramic Metal Halide	LED light	High-pressure sodium light	Light golden halogen light
light efficiency (lm/W)	100~110	50~70	90~120	70~90
Life span (Hrs)	12000~20000	50000★	10000~20000	7000~10000
Color temperature (K)	3000	4000~6000	2100	4000
Color performance (Ra)	90	80	23	65
Heat-radiation capability	Good	Bad	Regular	Regular
Anti-decay rate	Good	Bad	Bad	Bad
Environmental friendliness	RoHS	without mercury	with mercury	with mercury

“★” Led is found with scenario of serious light decadence “reduction by 12% to 20% in half a year), and for 50000 hours it refers to the fact that there is still lighting with visual light. However, the actual lighting has, in reality, reduced a great deal, while the effect for longer period of utility should be worse.

#### Control of power safety

It has employed electronic stabilizer, with power factor of higher than 98%, while the efficiency of power shift reaches more than 95%.

If it copes with solar-power streetlight, it can provide for the use of DC 12V input stabilizer

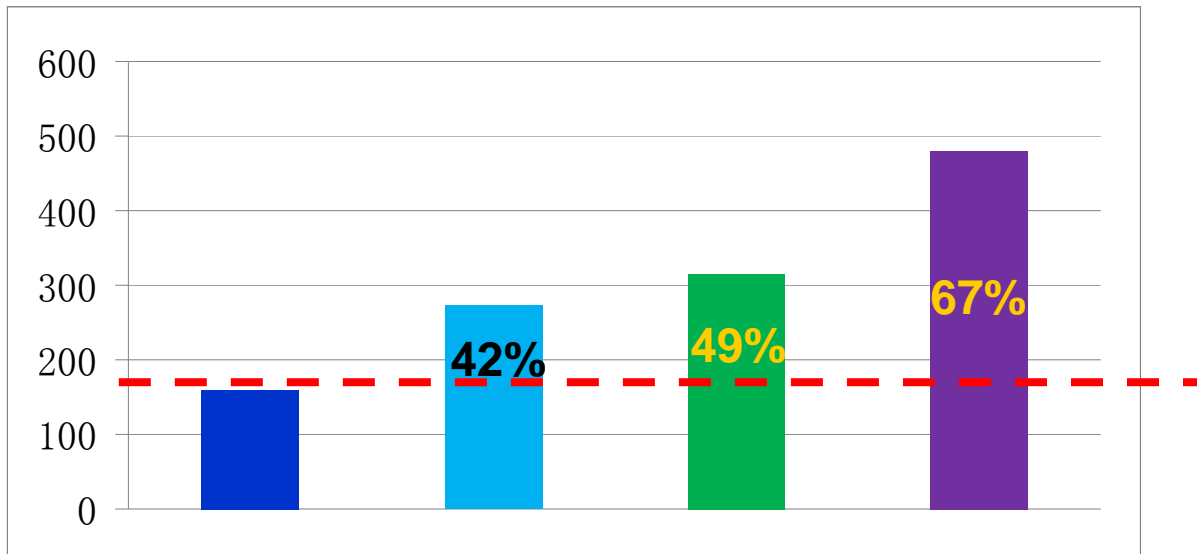
#### Self-protection of circuit

1. If the temperature is too high, and power circuit will be automatically cut off.
2. Light source not installed or damaged, and power circuit will be automatically cut off.

Fixed output power, guarantee color temperature and light quality to stay at constant status.

Power-conservation effect: optical-level vs high-pressure sodium vs LED streetlight (illustrated with NT/Taiwan area)			
Items of evaluation	150W HCl streetlight	400W high-pressure	100W LED× 2
Weight	6.5kg	18kg	12kg 【×2】
Size	570 x 280 x165	800×380×250	770×470×280 【×2】
Color-rendering	88%	22%	60%
Strong fog and rainy day recognition	High	High	Low
Economic life of light source	12000Hrs (Osram HCl)	12000Hrs (Philips)	50000Hrs (Unfavorable heat-radiation affects life-span)
Color-temperature	3000K	2000K	4000~6000K
power Current	0.72A	2.18A	1.25A
Power factor	98%	99%	88%
Power conversion efficiency	95%	83%	83%
Efficiency of light source	97 lm/W	120 lm/W	80 lm/W
Luminous	16,368 lm	48,000 lm	16,000 lm
Lamp efficiency	87.72%	25%	73%
Actual use of light source	14,357 lm	12,000 lm	11,680 lm

耗能比較圖(紅線以上為多消耗之功率)

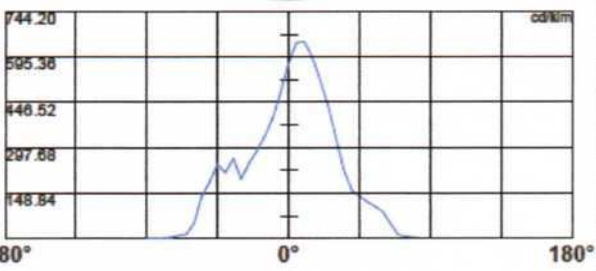
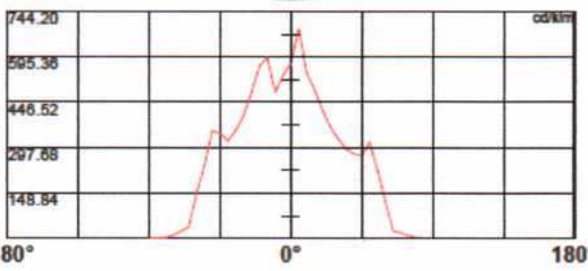
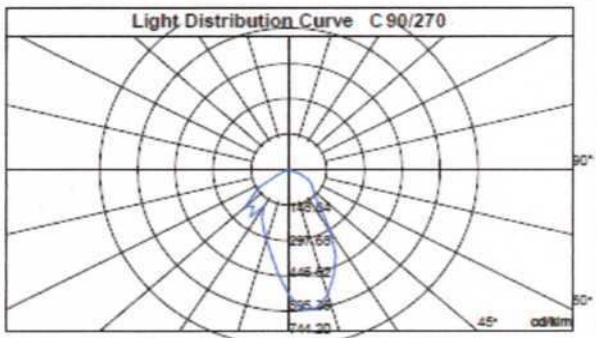
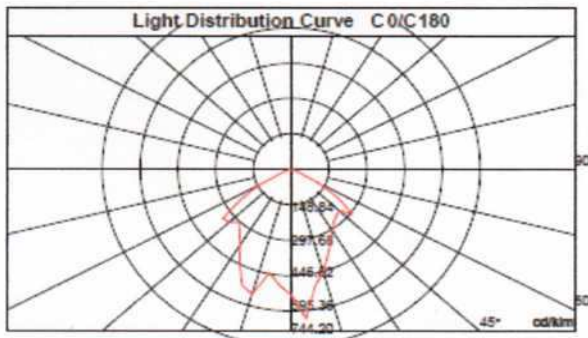


Source	Optical-level streetlight	LED light	Electrodeless light	High-pressure light
Light efficiency	157W	274W	316W	480W
Actual use of light source	14,357 lm	11,680 lm	12,000 lm	12,000 lm



1. Photometric Results

電源電壓	220 V	電源頻率	60 Hz
燈具光通量	14357.49 lm	燈具效率(LOR)	87.72 %
光源光通量	16367.83 lm	燈具發光效率	90.8 lm/W
功率	158.11 W	功率因數	0.98
最大光強度	744.204 cd/klm	最大光強度之角度	C: 45.0° G: 5.0°
光束角	C0_180[ 24.5,-33.1 ]	佈光角	C0_180[ 62.5,-63.3 ]
(50%Imax)	C90_270[ 28.1,-11.9 ]	(10%Imax)	C90_270[ 61.8,-58.6 ]



燈具配置

