



Srichakra Scientifics Pvt Ltd

Energy saving concepts



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SpectraLUX 120 has the following salient features

“SpectraLUX120” is an advanced technology LED based solid-state-lighting system, which has high lumen efficiency with a high energy saving of more than 70% when compared to conventional lamps.

It is a cool and natural replacement for the conventional mercury / sodium vapor lamps for the streetlights.

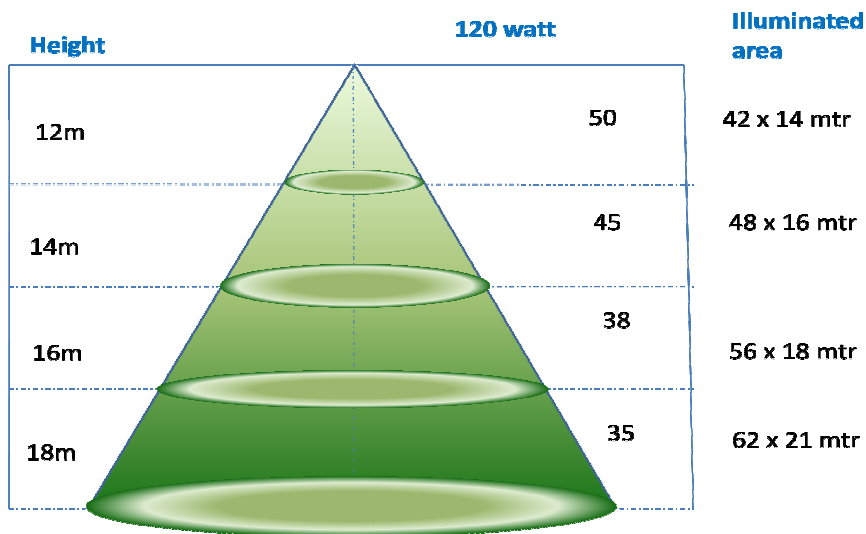
“SpectraLUX” could be used in of all the existing conventional street lights (sodium vapor, mercury vapor, tube lights, incandescent). The efficiency is about 100 lumen /watt, which is as good as a mercury vapor lamp.

The major advantage of the SpectraLUX is the high-energy efficiency and longer life.

- **Major energy savings of about 65~70%**
- **Solid-state, high shock / vibration resistant.**
- **Long life LED's are maintenance-free for over 5 years.**
- **Very low power consumption.**
- **Reduces light pollution.**
- **2 Year Warranty on manufacturing defects.**
- **Eliminate cold start problems.**
- **Water proof design.**
- **Eliminate mercury and other hazardous chemicals.**
- **Voltage fluctuation losses during “peak” “off-peak” hours are zero.**
- **Line losses are minimal due to the low power consumption**
- **Cable cost can be reduced drastically with the LED lighting due to the low power when compared to the regular lighting.**
- **Overall the major energy saving comes through the carbon credit.**

Technical specifications

1. Power consumption of 134 Watts/hour during operation.
2. Input Voltage 85~305 volts 50 Hz AC (universal).
3. Power factor >0.9
4. Light output at a distance of 9~10 meter 30~40 LUX
5. Type III illumination pattern (along the road/ street).
6. Dimension: 250 mm x 455 mm (extruded aluminum with integrated heat sink for very good thermal dissipation).
7. Weight ~ 5.3 Kg
8. LED with lens of 120 x 60 degree viewing angle



Comparison Data

Conventional Sodium/Mercury vapor lamp	SpectraLUX 120
1. Power in watts: 400+40 watt (ballast) total 440 watt	1. 134 watts
2. Light output: 20LUX at 18 meter height from the lamp	2. Light output: 30~35LUX at 18 Mtrs height from the lamp
3. Ballast is required and delay start	3. No ballast and instant glow.
4. No spike protection	4. Spike protection available
5. Average life of less than 4 months.	5. Expected life of 7.5 years and two year replacement warranty.
6. Flickering problem persists frequently and shutoff problem due to thermal protection. High temperature of 200° due to lamp and ballast.	6. Absolutely no flicker and temperature below 70~75° centigrade
7. Recovery on investment is not applicable	7. ROI is within less than 15 months and after that power bill is saved about 70%.
8. The lamp gets damaged due to impact/shock or vibration.	8. Shock and vibration resistant
9. 80 degree view angle	9. 120 degree viewing angle
10. Working voltage ranging from 200~250 volts AC	10. Wide operating voltage ranging from universal AC input
11. UV and other light pollution	11. No light pollution

Applications:

- Residential street lighting,
- Parking Lots,
- Highways,
- Flyovers,
- Underground tunnels,
- Open cast Mines,
- Industrial,
- Commercial Signage,
- Indoor lighting &
- Outdoor “General Illumination” projects.