

eLuxnet _ green living product : Luminex™ & Solamax™



Green Living

Resolution of

- Global warming
- Pollution
- Energy saving
- Energy efficiency

▪ **Change of Lighting**

	Incandescent bulb	Fluorescent tube
Emitting method	A filament is heated to incandescence	Ultraviolet photons hit phosphor coated fluorescent tube, this phosphor creates visual light.
Energy efficiency	10~15 lm/W	50 lm/W (Fixture efficiency: 50~60%)
Life time	1,000 hrs	4,000 hrs
Advantage	Low price Easy handling	Low price Easy handling
Disadvantage	Inefficient, Short life time	UV generation, flickering, Hazardous substance (Hg) Maintenance required.
Environment	Lead Hazardous metal used	Contain Hg, Pb RoHS (EU) items



LED
Emit lighting from inorganic diode through combination of electron and hole
60 ~ 200 lm/W Fixture efficiency :over 80%
Over 50,000 hrs
Long life, NO Hazardous substances
High price of white LED Heat emission control Point lighting
Environment friendly NO hazardous substances

- **No more Edison bulb**
 - Energy efficiency: 10~15 lm/W compare to LED Lighting 60~150 lm/W
 - Low energy efficiency, Increase consumption of fossil fuel, The culprit of global warming.
 - Australia will ban sales of incandescent bulb by 2010
Incandescent bulb will phase out after 3 years
 - Can reduce 8000 tons of green house gases annually without I.B.

- **No more Fluorescent**
 - 25mg Hg contained per F. Tube, need special disposal
 - Exposure to harmful U.V. in-house
 - '05 Kyoto Protocol, '06 EU RoHS, increase disposal fee
 - Energy Information Dept USA
LED can save 25% of world energy consumption by 2025

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Comparison: Fluorescent Fixtures vs. Luminex™ 2020E

Items	Luminex™ 2020E	Parabolic F. fixtures	Prism F. Light	F. Fixture with NO shading
Fixture Image				
Light source	LEDs	Fluorescent 20W x 4	Fluorescent 20W x 4	Fluorescent 20W x 4
Power consumption	60W	80W	80W	80W
Fixture efficiency	87%	62%	64%	76%
Illumination (Lux_ 1m)	1380 Lux	980 Lux	1070 Lux	1230 Lux
Life span	Over 50,000hrs	7,000hrs	7,000hrs	7,000hrs
Energy Efficiency	70 lm/W	50 lm/W	50 lm/W	55 lm/W

Luminex™ product

Up to 20% additional HVAC savings can be achieved, based on the HVAC implementation since the product generates conductive heat compared to radiant for fluorescent.

ROI Comparison

**Break-even Point
2 years**

