

## LED FACTS AT A GLANCE

Labeled as the light source of the future, cutting-edge research now shows a bright future for LED as the next generation of light source for general illumination, from homes to commercial applications. It offers effective, competitive and highly advantageous solutions for accustomed lighting applications.



## WHAT CAN WE DO TO REDUCE CARBON FOOTPRINT?

Climate change is inevitable due to economic growth from fossil fuel use, deforestation, over-fishing and unsustainable farming. Researches show that generation of electricity and heat was by far the largest producer of Carbon Dioxide (CO<sub>2</sub>) emissions. During the 20th century, average global temperatures increased by 1 degree Fahrenheit. While this single degree of rising temperature might look insignificant, however, small changes can make a huge difference.

Just as our lives depend on our planet's natural resources around us, our planet's well-being need our care. Each of us can make a difference in our daily lives by reducing our carbon footprint and it is nothing complicated to get started. With the flick of a switch or a push of a button, we can easily regulate our use of electricity.

While reducing the use of electrical products sounds good, however, switching to more energy efficient appliances sounds even better. For instance when you switch your conventional lighting system to environmentally friendly LED lighting devices, not only does it helps reduce both the amount of emissions you create and the amount of money you spend, you could actually prolong the lifespan of the luminaires.





# ENERGY EFFICIENCY

The need to reduce energy consumption has affected both domestic and commercial buildings, with the lighting industry bringing out more efficient lamps, better fittings to focus the light where it is most needed, more efficient control gear and control systems to better manage its switching or dimming. Because of this, Energy Efficiency becomes an essential element of every home and business. In fact, lighting accounts for approximately 10% of a typical household's energy bills, and up to 40% a year in commercial buildings' yearly electricity usage. One of the most important features of LED Lighting is it has high energy efficiency.

Making changes at home can help change our future. Energy efficiency is the easiest way to reduce greenhouse gas emissions at home. Imagine changing all of your current lighting applications to LED for a combined, massive amount of energy saved. This can ultimately cut your current electric bill down to 1/5th the cost in its lighting expenses.





## ZERO TOXIC

Aside from using much less energy and heat than other types of lighting technology, LED Lightings are also environmentally friendly because they do not contain any toxic chemicals or hazardous substances. Regular light source put carbon dioxide, sulfur oxide and mercury waste into the landfills and atmosphere. By changing your light source to low energy LED home lighting, it helps to keep one half tonne of carbon dioxide out of the atmosphere through its life cycle. It will also keep the sulfur oxide and mercury waste to a minimum in the landfills and environment.

All the Carinae LEDs are mercury-free and leave a small carbon foot print. They also reduce the waste stream by being long-lasting in comparison to throwing out 50 incandescent or 5 CFLs over the course of a single LED light source.

By switching one light source in your home or office, the environmental concerns being discussed with fervency these past couple of years can begin to be addressed on a global scale.



## LOW COST

In many applications, LEDs are usually expensive compared with other light sources. With cutting-edge and continuous research on LED technology, LED manufacturers work towards reducing their production costs while at the same time increasing the light output of the devices. However, the high initial cost of LED-based systems is offset by lower energy consumption, lower maintenance costs and other factors.

With average service life of up to 25,000 hours and above, LED lightings are perfect for your household luminaires, in particular those hard-to-reach and maintain fixtures. Besides reducing maintenance, they substantially extend LED replacement cycles, further cutting costs.

Saving money with LED lights in your home makes going 'green' an easier pill to swallow, as the differences are significant, whereby you could see better, and with more perceived feeling of comfort.





## DURABLE AND LONG LASTING

LEDs are durable, solid state devices. They are not susceptible to damage due to vibration compared to incandescent filaments. LED lights are integrated into rugged packages, made predominantly of aluminum. The lights can withstand far more abuse than glass-based bulbs, while remaining functional.

The next best thing is, using such lights rarely result in any flickering or buzzing. Luminaires with LED as the source of light always provide better work performance.

With a significant reduction in electrical current draw from LED lights, wiring and electrical fittings will function under less stress and hence last longer.







# Carinae LEDs

*Your Star Tales*

Carinae, the brightest star in the universe, symbolizing eternal brightness, eternal life. In Carinae LED, we embrace the commitment to provide innovative, long-lasting and quality lighting solutions to the consumers. Our wide range of Carinae LED products utilize clusters of LED to generate bright, energy efficient lights that is suitable for residential, commercial or industrial purposes.

We always believe good lightings help to create a better working environment and it means less stress and more productivity. It is also vital to ensure our lightings produce very little carbon footprint for the sustainability of our mother earth's limited properties. Therefore, in Carinae LED, we have all the aforementioned attributes to suit all your lighting needs for your ideal living.



# BENEFITS OF LED TECHNOLOGY



### Energy Saving

LED bulbs use 80% less energy to reduce carbon footprint.



### Cost Saving

Fewer replacements over time, less money spent on lighting and less bulbs being tossed away.



### Long LifeSpan

Extra longer lifetime than traditional incandescent light bulbs.



### Mercury Free

Contain no hazardous mercury or halogen gases for better environment preservation.



### Durable

LED bulbs contain no fragile components which ensure longer durability.



### Hassle Free

Low maintenance and less replacement as LED bulbs could withstand disruptions.



### Low Temperature

Minimal emitted heat which contribute to a cooler living environment.



It is our commitment to provide innovative and the best quality lighting in order to enhance people's sense of well-being and motivation. The major benefit of Carinae LED is that it consumes very little electricity, hence reducing the amount of emission of Carbon Dioxide (CO<sub>2</sub>) to the earth.

The low voltage DC drivers give the LED chips a stable and constant current in order to protect and extend the life of the luminaire. Our Carinae LED have a useful lifespan of around 25,000 hours and above. Due to they used substantially less power than incandescent or compact fluorescent lamps, the frequency of changing light source is greatly reduced.

As technology advances, Pensonic is producing vast selections of indoor and outdoor LED applications. This form of low-wattage, economical and beautiful lightings can be used to illuminate homes, schools, offices, parking lots, shopping centers and even your street lights.

**PENSONIC**  
**Why Carinae LEDs**  
*Your Star Tales*






Where to start







**PENSONIC**

# Carinae LEDs

## *Your Star Tales*

Carinae LED lighting is the answer to any eco friendly people who love mother nature and at the same time would like to maintain or achieve even greater brightness in their homes or offices. Available in a variety of models and sizes, you can select one to meet your ideal requirement.



**PENSONIC**



Carinae LED Bulb is an energy saving alternative for traditional incandescent bulbs. It is perfect for general lighting applications, with no hazardous waste materials and even possesses longer lifespan. With its even and consistent light spread, it is widely used in hotels, offices, schools, shopping malls, kitchen and home indoor lighting.



Carinae LEDs bulb





Light Bulb

8W A19 E27 Bulb

Rated Power	8W
Body Size	Ø60*H108 mm
Color Temperature	6000K ~ 6500K
Rated Voltage	220-240V AC/DC
Base	E27
Average Life	25,000hrs
Color Available	Cool White



OSRAM LED



Light Bulb

8W A19 E27 Bulb

Rated Power	8W
Body Size	Ø55*H120 mm
Color Temperature	3000K / 5500K
Rated Voltage	220-240V AC/DC
Base	E27
Average Life	35,000hrs
Color Available	Warm White Cool White / Daylight



LED By LG Innotek



\* Compatible with certain dimmers only



Light Bulb

4W / 6W A19 E27 Bulb

Rated Power	4W / 6W
Body Size	Ø60*H108 mm
Color Temperature	3000K / 5500K
Rated Voltage	220-240V
Base	E27
Average Life	25,000hrs
Color Available	Warm White Cool White / Daylight





**PENSONIC**



A direct replacement for standard halogen or incandescent lighting, Carinae Spot Light provides intense levels of lighting, which saves energy almost 8 times than the traditional incandescent lamps. Slash your lighting bills and cut maintenance expenses while maintaining the same level of brightness in your luminaires



Carinae LEDs spot light





Spot Light

**MR 16 5W \***

Rated Power	5W
Body Size	Ø48.8*H52 mm
Color Temperature	3000K
Rated Voltage	12V
Base	GU5.3
Average Life	35,000hrs
Color Available	Warm White



**CREE EasyWhite LED**



Spot Light

**MR16 GU5.3 4W Spot Light \***

Rated Power	4W
Body Size	Ø50*H48 mm
Color Temperature	3000K
Rated Voltage	12 AC/DC
Base	GU5.3
Average Life	25,000hrs
Color Available	Warm White



Spot Light

**MR16 GU10 4W Spot Light**

Rated Power	4W
Body Size	Ø50*H55 mm
Color Temperature	3000K
Rated Voltage	220-240VAC
Base	GU10
Average Life	25,000hrs
Color Available	Warm White



\* Compatible with certain ballasts or transformers only



**PENSONIC**



Light up your living cabin with a cozy table lamp. Carinae Table Lamp provides perfect lighting solution to in-house activities, be it writing, reading, lounging or a compliment to modern and stylish home ambiances. The adjustable angle of the lamp ensures infinite illumination preferences, while maintaining its sophisticated, personal lighting style.



Carinae **LEDs** dream lamp





**PTL-100**

Voltage : 200-240V ~ 50/60Hz  
 Power : 8W  
 Color Temperature : 6000K  
 USB Output : DC 5.0  
 Dimmable Touch Control  
 Touch ON / OFF  
 5 Brightness Dimmer  
 With AC Adaptor



**PTL-102**

Voltage : 200-240V ~ 50/60Hz  
 Power : 5W  
 Color Temperature : 5500K  
 Foldable Design For Compact Storage  
 ON/OFF Mechanical Control  
 Adjustable Design for Easy Directing Of Light  
 With AC Adaptor



**PTL-101**

Voltage : 200-240V ~ 50/60Hz  
 Power : 10W  
 Color Temperature : 6000K  
 Built-in Night Light  
 Foldable Design For Compact Storage  
 Adjustable Design For Easy Directing Of Light  
 Touch ON/OFF Switch  
 With AC Adaptor



**PTL-103B**

Voltage : 220-240V~50/60Hz  
 Power : 4W  
 Color Temperature : 5500K  
 ON/OFF Easy Control  
 Stable Base With Flexible Arm  
 For Easy Directing Of Light

Light Blue Pink



*" Lighten up your journey to the fantasy dreamland "*



**PENSONIC**



This attractive, retro inspired Solar Cube is ultra-portable, dependable, and is great for campsite, hanging up, or carried by handle when on the go. Compact and light, not only it provides ample illumination, it could be transformed into an audio player whereby you could easily play melodious music wherever you go.

Powered by solar energy, it is able to function as charge storage to recharge your smart phones, tablets or any other USB devices.

A fusion of portable audio and lighting in one mini compact solar kit, it has to be Carinae Solar Cube.

# Solar Cube

# Mobility

C o n v e n i e n c e

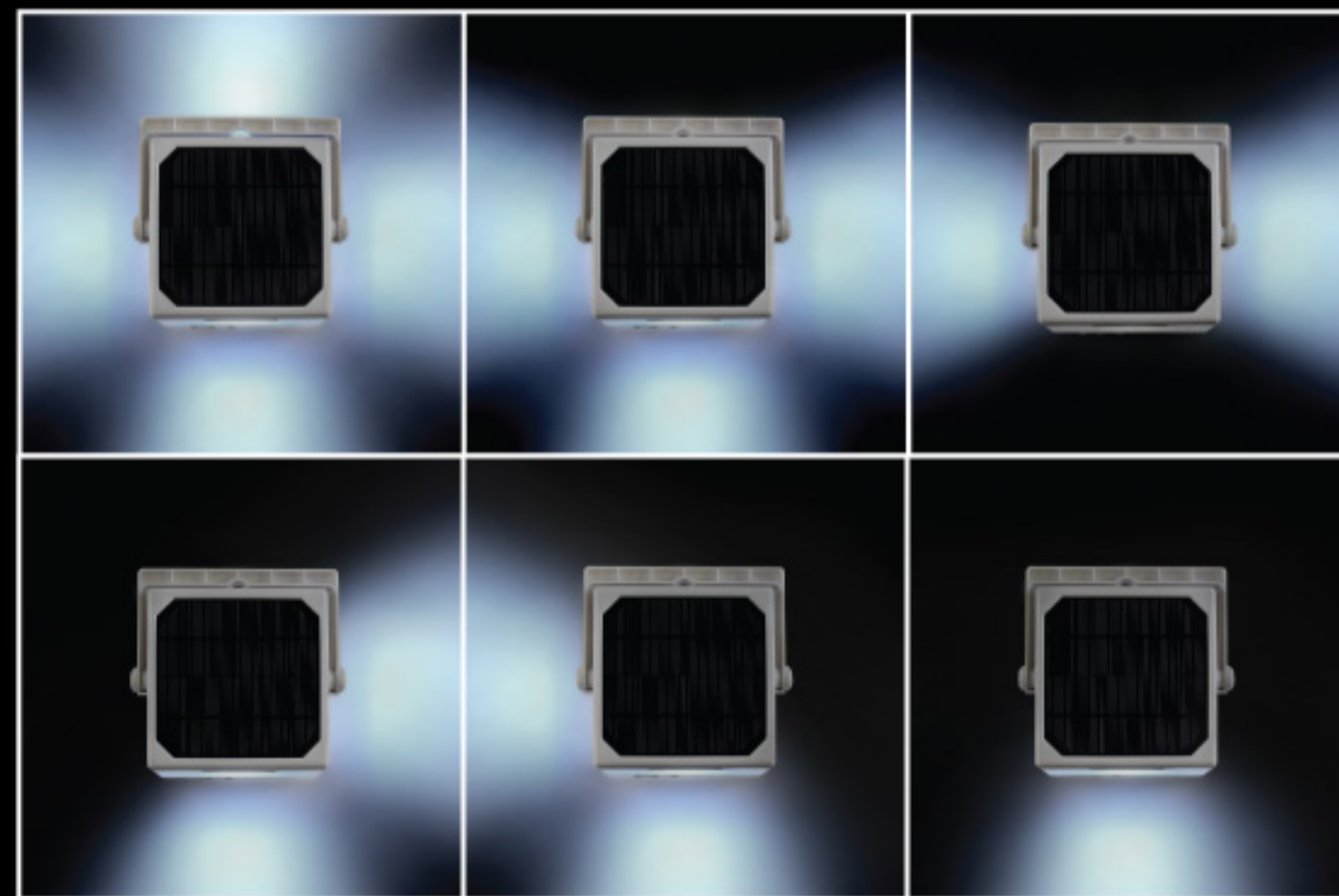
1 Year Standby Time

Carinae LEDs solar cube



**PEL-40C**

- Maximum Brightness : 60,00mcd
- Charging Time : 8 Hours (Solar)/ 7 Hours (AC Adapter)
- Up to 88 Hours Of Illumination
- Battery Status Indicator
- 4-Panels Selection of Light With Adjustable Brightness
- Powerful Solar Panel For Quick Charging
- FM Radio, MP3 Player
- 32 high Intensity LED
- Compatible With Smart-phones & Tablets
- Mobile Phone Charging Function (USB-DC V5)



4-Panels Selection of Light with Adjustable Brightness



Powerful Solar Panel for Quick Charging

FM Radio, MP3 Player

32 High Intensity LED



**Comparison Chart**

Attributes	Carinae LEDs Bulbs	Incandescent Bulbs
Life Span (Average)	25, 000 hrs	1, 200 hrs
Wattage	6-8 watts	40-60 watts
CO2 Emission	451 lbs / yr	4, 500 lbs / yr
Lumens per Watt	50-70	10-19
Kilo-watts of Electricity used	329 KWh/yr	3285 KWh/yr
Durability	Durable	Fragile
Heat Emitted	3.4 Joule	85 Joule
Sensitivity to humidity	No	Some
Replacement Frequency (over 25k hours)	1	20
Turns on instantly	Yes	Yes
Lifespan shortened if Frequent On/Off Cycling?	No	Yes
High Possibility of Mechanical Failure	No	Yes
Contains Toxic Mercury	No	No
RoHS Compliant	Yes	Yes



# Gravity

Because of LED lighting's incredible visual impact, high-efficiency performance and long-lasting attributes, this form of light source can replace conventional lighting technology in many commercial lighting applications. With Pensonic's Gravity LED Commercial and Industrial Lighting, not only it provides ultra long durability to reduce your lightings' maintenance fee, like the universal force of attraction, Gravity LED makes a perfect bond with your commercial lighting applications. It is poised to help your business or organization slash electricity bills and employ a green and eco-friendly solution to your lighting needs.



**PENSONIC**



Classic design with good performance and high quality, Gravity PAR Light helps create a whole new look and feel to your space, giving you a very nice quality of light. Since PAR Light are often installed in recessed or covered cans, high temperature can easily lead to premature bulb failure. Good quality LED Par Lights therefore have a customized aluminum heat sink whereby it carries the heat away from the luminaires and dissipates it safely. It allows for slightly higher power applications and is especially suited for use in high lighting heat-sensitive objects, such as in culinary shops, libraries, museums, art galleries, retail outlets etc.



Gravity par light





PAR 30

KP-P30C-30013-2024 / KP-P30C-60013-2024

Rated Power	13W
Body Size	95 mm
Color Temperature	3000K / 6000K
Rated Voltage	100-240V AC
CRI	>70
Luminous Flux	560 Lumens
Beam Angle	24° and above
Average Life	25,000hrs
LED	<b>Cree EasyWhite</b>



PAR 38

KP-P38C-30018-2024 / KP-P38C-60018-2024

Rated Power	18W
Body Size	120 mm
Color Temperature	3000K / 6000K
Rated Voltage	100-240V AC
CRI	>70
Luminous Flux	680 Lumens
Beam Angle	24° and above
Average Life	25,000hrs
LED	<b>Cree EasyWhite</b>



**PENSONIC**



Gravity Downlight is the ideal replacement for compact fluorescent lamps and halogen lamps. It fits in perfectly in high end exterior lighting applications. Designed for new construction and retrofit, Gravity Downlight also consumes very little energy and low glare output that enables an unprecedented combination of light output, high efficacy, beautiful colour and affordability.



Gravity down light





PL-DL4D-30010-2120  
PL-DL4D-60010-2120

Rated Power	10W
Body Size	D130*H102 mm
Color Temperature	3000K/6000K
Rated Voltage	240V AC
CRI	>75-80
Luminous Flux	620 Lumens
Average Life	25,000hrs



PL-AR1C-30022-2040  
PL-AR1C-60022-2040

Rated Power	22W
Body Size	D120*H35 mm
Color Temperature	3000K/6000K
Rated Voltage	240V AC
CRI	>75~80
Luminous Flux	1,350 Lumens
Average Life	35,000hrs
LED	<b>Cree</b>



PL-DL6D-30013-2120  
PL-DL6D-60013-2120

Rated Power	13W
Body Size	D130*H102 mm
Color Temperature	3000K/6000K
Rated Voltage	240V AC
CRI	>75~80
Luminous Flux	800 Lumens
Average Life	25,000hrs



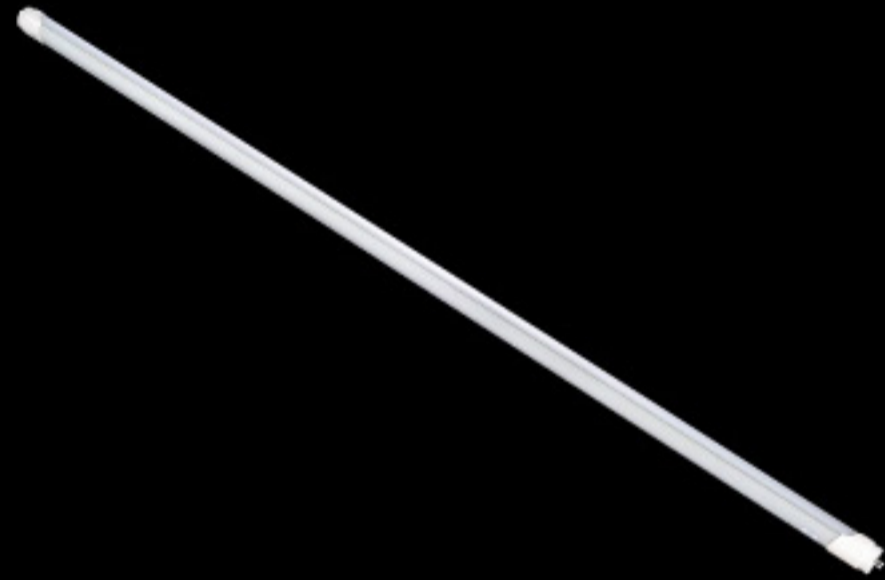
SD-DL4C-30023-2065  
SD-DL4C-50023-2065

Rated Power	23W
Body Size	D144*H113 mm
Color Temperature	3000K/5000K
Rated Voltage	220-240V
CRI	>75~80
Luminous Flux	1,200 Lumens
Average Life	25,000hrs
LED	<b>Cree EasyWhite</b>

\* All 4 models are available in Warm White and Cool White / Daylight.



**PENSONIC**



Gravity Tube Light is an extremely versatile linear lighting system for all types of concealed, indirect and joinery lighting. It is the next generation solution to replace conventional fluorescent lamp. This type of lighting could be used anywhere, at homes, offices, museums, car parks, factories, shop windows, restaurants, labs and galleries.



Gravity tube light





**PENSONIC**



**LED Tube**

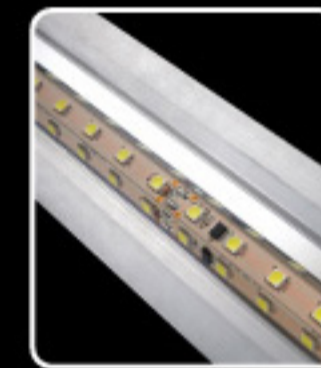
PL-2T800-30010-2120 / PL-2T800-60010-2120

Rated Power	10W
Body Size	D30*L600 mm
Color Temperature	3000K / 6000K
Luminous Flux	790 lumen
Average Life	35,000 hrs
Length Available	2 Ft
LED	<b>OSRAM</b>

**LED Tube**

PL-T800-30018-2120 / PL-T800-60018-2120

Rated Power	18W
Body Size	D30*L1200 mm
Color Temperature	3000K / 6000K
Luminous Flux	1,550 lumen - 1,700 lumen
Average Life	35,000 hrs
Length Available	4 Ft
LED	<b>OSRAM</b>



**Eco Tube**

PL-2T10D-30010-2120      PL-T10D-30020-2120  
 PL-2T10D-60010-2120      PL-T10D-60020-2120

Rated Power	10W	20W
Body Size	D30*L600 mm	D30*L1,200 mm
Color Temperature	3000K / 6000K	3000K / 6000K
Luminous Flux	630 lumen	1,400 lumen
Average Life	35,000 hrs	35,000 hrs
Length Available	2 Ft	4 Ft

**LaserLite**

LH-LL4G-30018-2080  
 LH-LL4G-60018-2080

Rated Power	18W
Body Size	D66*L1190 mm
Color Temperature	3000K / 6000K
Luminous Flux	1,250 lumen
LED	LG Innotek

\* All 4 models are available in Warm White and Cool White / Daylight.



**PENSONIC**



Ideal for most high power applications in factory, warehouses, workshop, petrol station, badminton hall, construction sites etc, in which high brightness and dependable illumination is needed. The high intensity LED lighting system provides incredible amounts of lights with all the efficiency and lifespan of LED, is the direct replacement for metal halide and HID lighting systems.



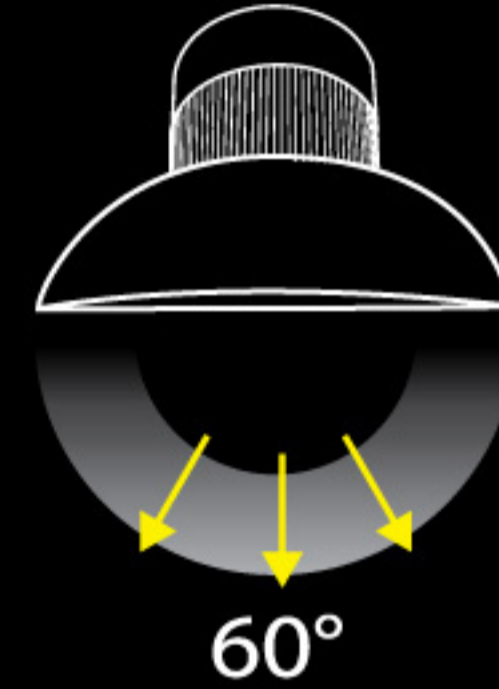
**Gravity** high-bay





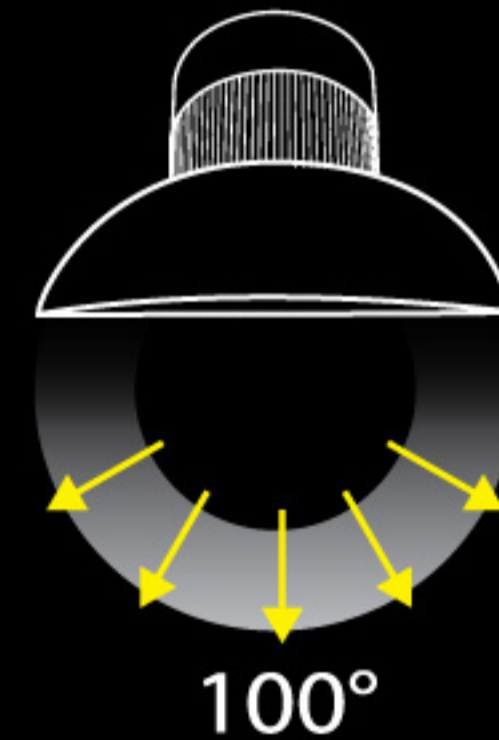
**PL-HBOC-60120-2060**

Rated Power	120W
Body Size	D415*H490 mm
Rated Voltage	240V AC
Beam Angle	60°
Luminous Flux	9000 lumen
CRI	>75
Lens Type	Optical Grade Lens
LED	<b>Cree</b>



**PL-HBOC-60120-2100**

Rated Power	120W
Body Size	D415*H490 mm
Rated Voltage	240V AC
Beam Angle	100°
Luminous Flux	9000 lumen
CRI	>75
Lens Type	Optical Grade Lens
LED	<b>Cree</b>





**PENSONIC**



This Gravity Flood Light will illuminate almost any outdoor space. It provides high-performance interior and exterior illumination for a wide variety of architectural accent applications including factory, sports stadium, advertise board, lawn, garden, landscape. It is durable in construction and weather resistant. The beam angle is precisely controlled to offer uniformly illuminated object surface, giving you maximum visual comfort even in a great distance.



**Gravity flood light**

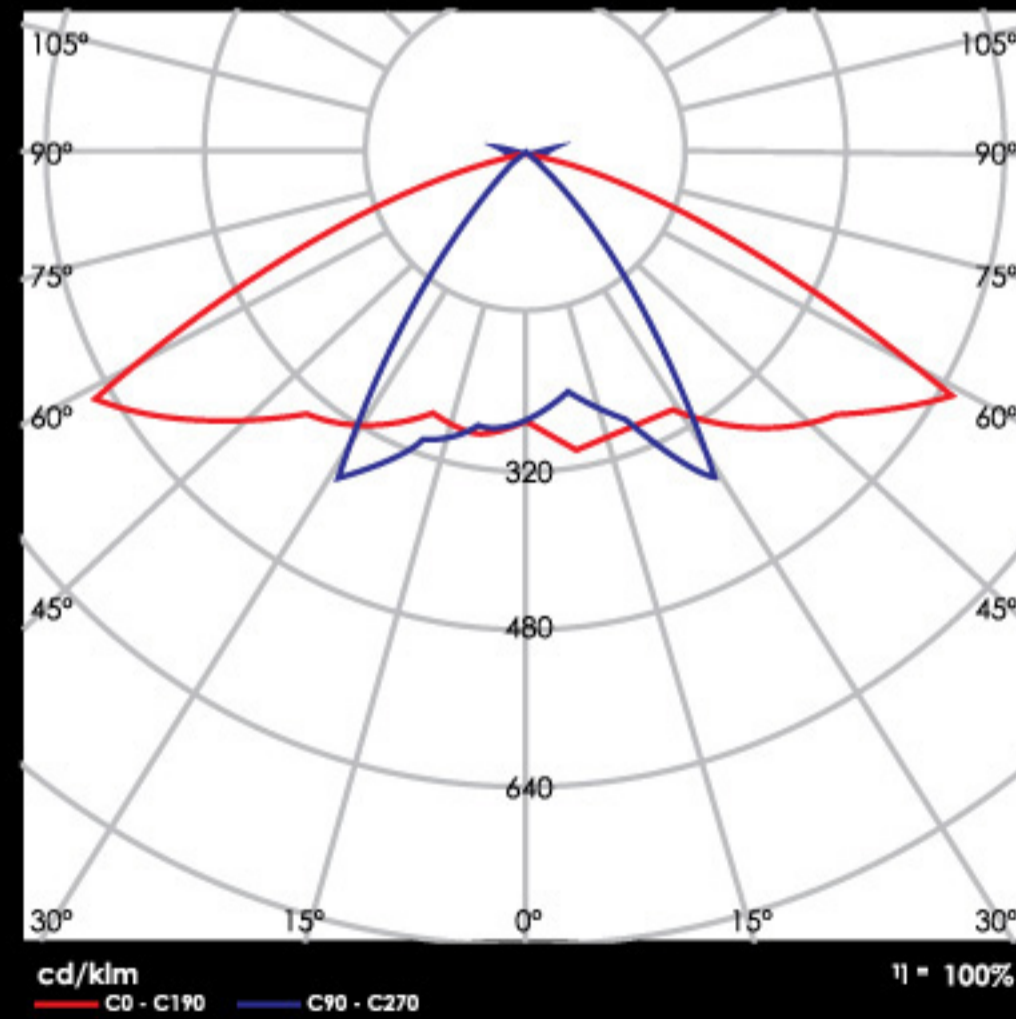
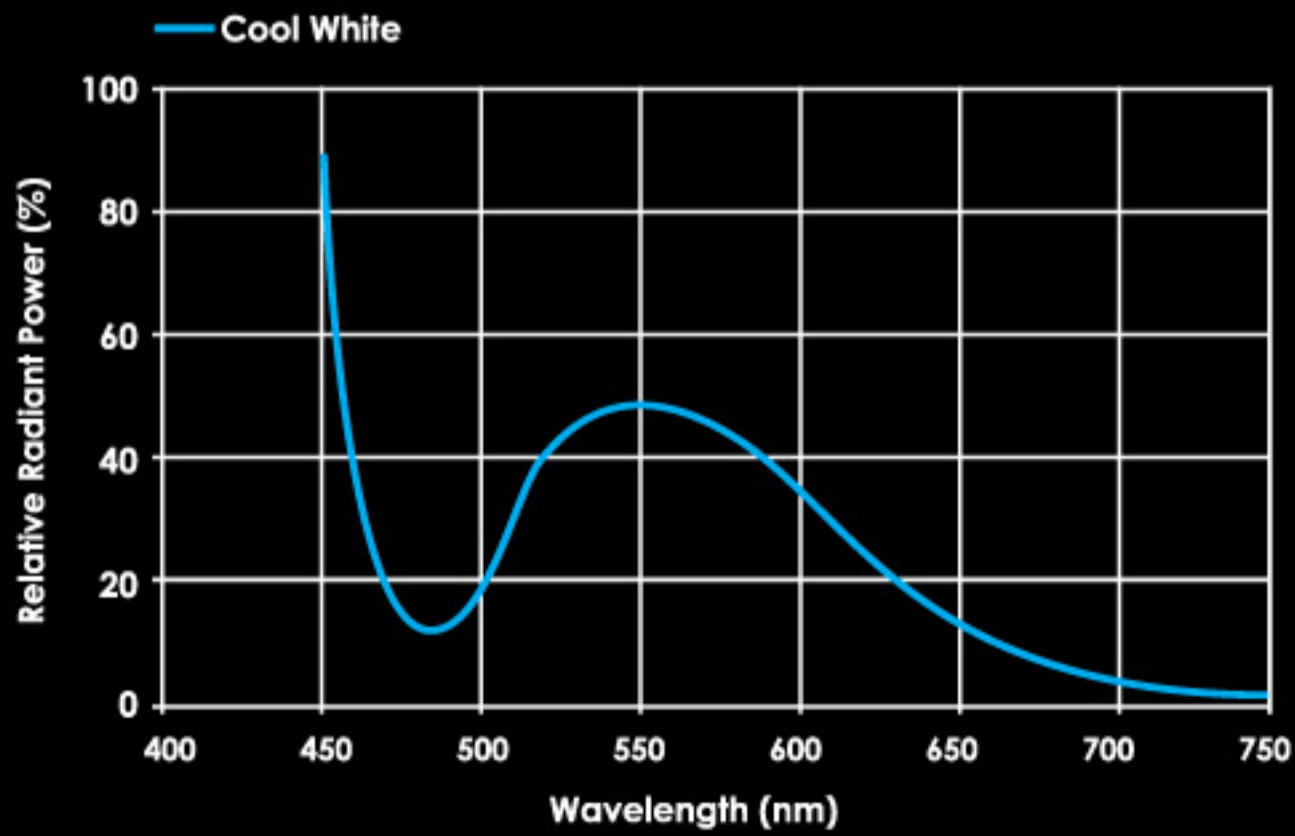




**PL-FLOC-60130-2110**

Rated Power	130W
Rated Voltage	240V AC
Color Temperature	6000K
Beam Angle	60° / 100°
Luminous Flux	9000 lumen
Average Life	35,000hrs
Ingress Protection	IP65 Rated
LED	<b>Cree</b>

**Photometry performance**





**PENSONIC**



Improve night visibility of your belongings and provide additional security with Gravity Street Light. Not only does it offer higher colour rendering and a variety of colour temperatures, the light emitted is more uniform and will provide better visibility. It is environmentally safe and require very little to no maintenance. Suitable for factory compound, bungalow, street lighting etc.



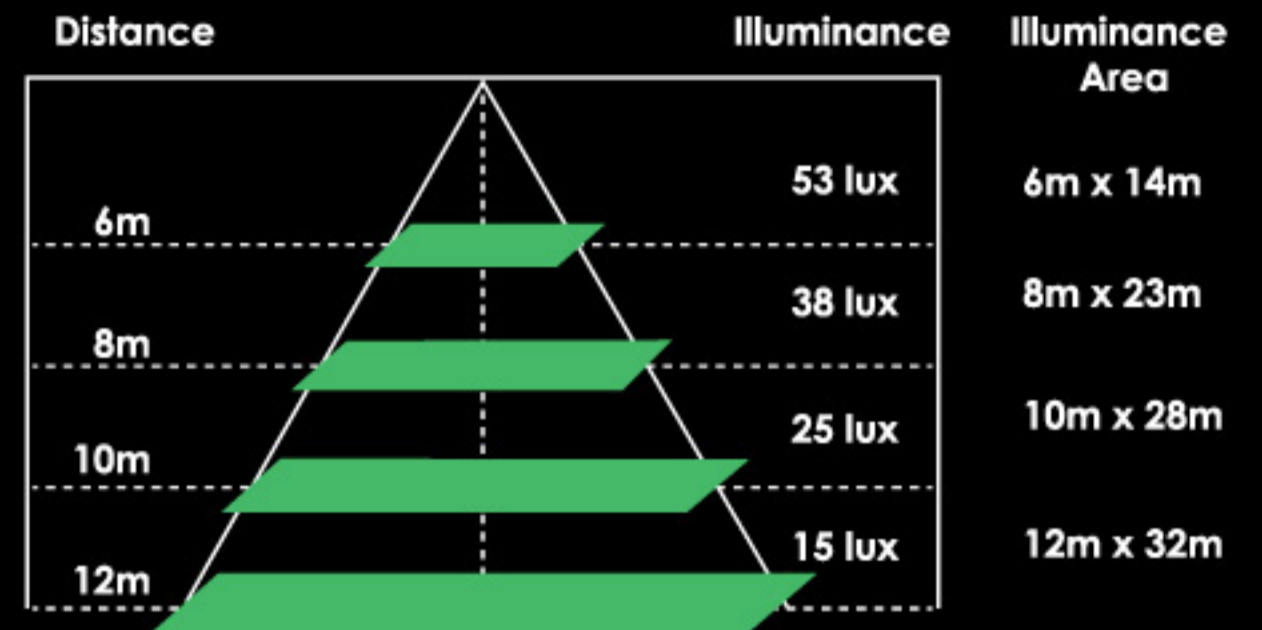
Gravity street light





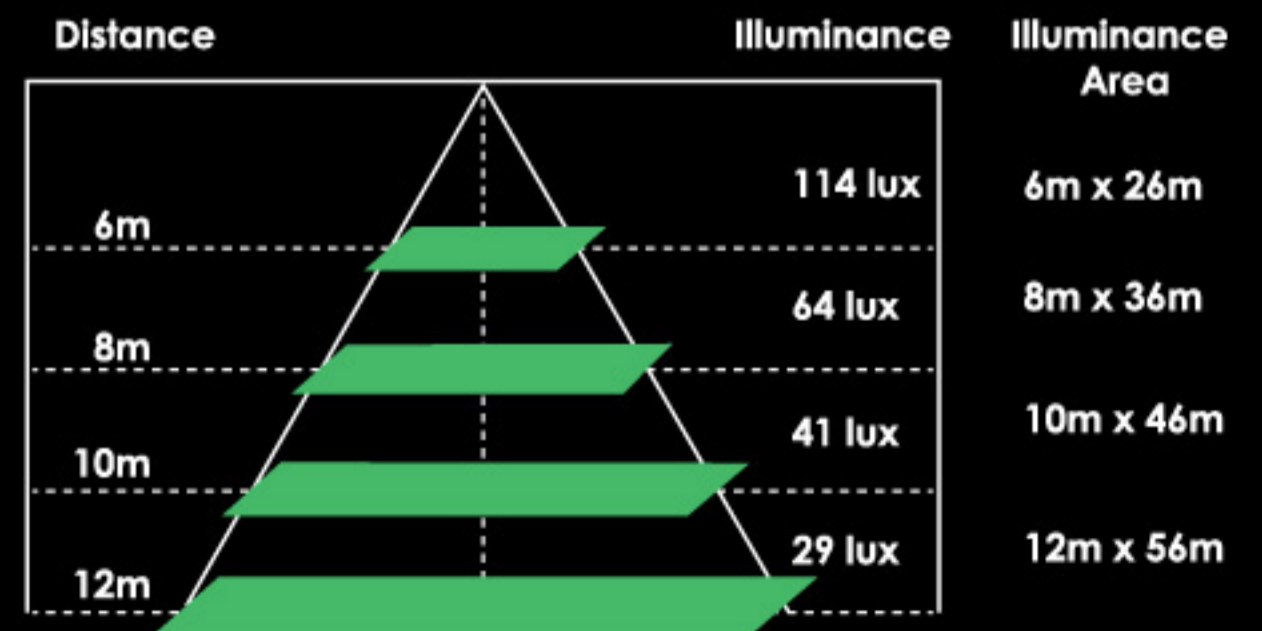
**PL-SLOC-60120-20AS**

Rated Power	120W
Colour Temperature	6000K
Luminous Efficacy	77.3 lm/w
Ingress Protection	IP65
Average Life	35,000hrs
Dimensions	H490*W330*L690 mm
LED	<b>Cree</b>



**PL-SLOC-60180-20AS**

Rated Power	180W
Colour Temperature	6000K
Luminous Efficacy	80.7 lm/w
Ingress Protection	IP65
Average Life	35,000hrs
Dimensions	H490*W330*L690 mm
LED	<b>Cree</b>





**PENSONIC**

## ***STAR LIGHT*** Compact Fluorescent Light

What is the better way to obtain the best lighting system while preserving the environment, and at the same time saving huge amount of money? The answer is switching from incandescent lights to Compact Fluorescent Lights in your homes or offices.

Unlike the traditional incandescent, Compact Fluorescent allows you to save yourself a nice chunk of your hard-earned money while helping the rest of us by saving energy, conserving natural resources, decreasing air pollution, reducing acid rain, and slowing down the growth of global warming.



**PENSONIC**



Pensonic Compact Fluorescent bulb is an extremely energy-efficient lighting option. This kind of bulbs is three to five times more energy efficient than incandescent light bulbs.

Because fluorescent lights use less electricity than incandescent, the amount of greenhouse gas produced by fossil fuel power plants is reduced. This translates into a reduced environmental impact from mining and drilling operations, including risks and pollution associated with fuel refining and transportation.

**STAR LIGHT** CFL





**PCFL-09U2WA/CA**

Rated Power	9W
Body Size	D32*C130*F41 mm
Rated Voltage	170-260V~50-60Hz
Luminous Flux	400-450 lumen
Luminous Efficacy	44.4 lm/W
Average Life	8,000hrs
Color Available	Warm White / Cool Daylight



**PCFL-18U3WA**

Rated Power	18W
Body Size	D38*C148*F48
Rated Voltage	170-260V~50-60Hz
Luminous Flux	900-1000 lumen
Luminous Efficacy	56.9 lm/W
Average Life	8,000hrs
Color Available	Warm White / Cool Daylight



**PCFL-11U3WA/CA**

Rated Power	11W
Body Size	D30*C119*F41 mm
Rated Voltage	170-260V~50-60Hz
Luminous Flux	500-600 lumen
Luminous Efficacy	51.8 lm/W
Average Life	8,000hrs
Color Available	Warm White / Cool Daylight



**PCFL-23U3WA**

Rated Power	23W
Body Size	D38*C168*F48
Rated Voltage	170-260V~50-60Hz
Luminous Flux	1300-1400 lumen
Luminous Efficacy	58.7 lm/W
Average Life	8,000hrs
Color Available	Warm White / Cool Daylight



**PCFL-15U2WA/CA**

Rated Power	15W
Body Size	D32*C165*F41
Rated Voltage	170-260V~50-60Hz
Luminous Flux	750-820 lumen
Luminous Efficacy	53.3 lm/W
Average Life	8,000hrs
Color Available	Warm White / Cool Daylight



**PCFL-23HSWA**

Rated Power	23W
Body Size	D38*C168*F48
Rated Voltage	220-240V~50-60Hz
Luminous Flux	1200 lumen
Luminous Efficacy	52.2 lm/W
Average Life	8,000hrs
Color Available	Warm White / Cool Daylight