



LED LIGHTS FOR  
STREET & URBAN  
AREAS.

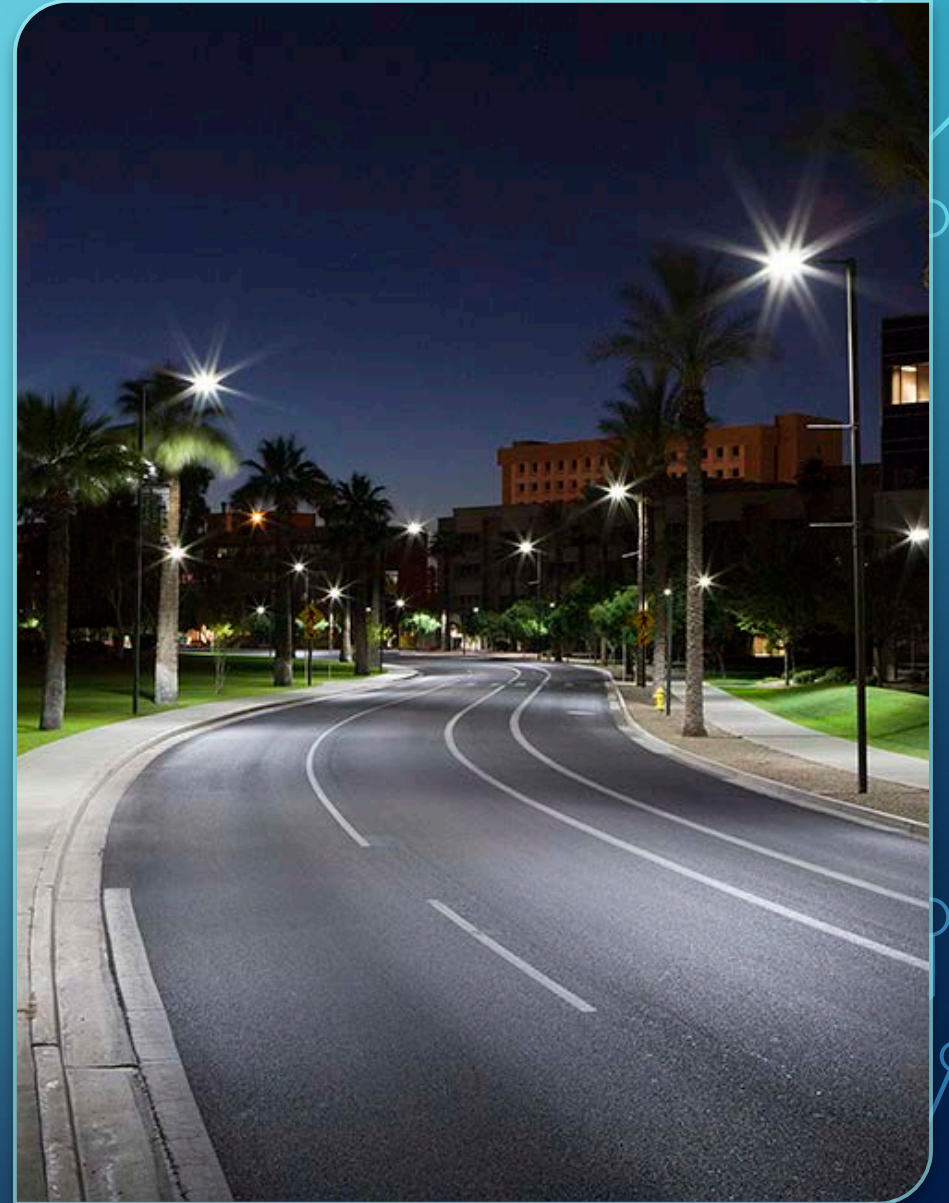


# OUTDOOR LIGHTING- ENVIRONMENT AND SAFETY.

There are many aspects regarding outdoor lighting, the light intensity must ensure safety but must not be at the expense of glare, light pollution and should preserve the night sky. This must all be balanced and contribute to well-being of all users, neighbours and the general population. Outdoor lighting should be durable, long-lasting and efficient, selecting an energy efficient solution will contribute both to the environment and to reduce cost.

The LED technology is in rapid development and LED has many applications because of the robustness of the diodes. LED is fast becoming the preferred light source in cold & warm environments such as on the outdoor applications. The longevity of the diodes makes them popular in inaccessible areas where there are high installation heights such as; buildings, entrances and pole mounted lights for street and urban areas. The sizes makes them particularly suitable for all these areas and a proven approach to the selection of material for outdoor luminaries will greatly affect the quality, maintenance and lifetime.

Create a magic moment - Combine environment and safety with style.







# LED LIGHT!

LED floodlight for street and urban lighting is for mounting on a pole with top diameter of 46-60mm or on a wall by use of a wall bracket.

This LED light is manufactured with luminaire housing in diecast aluminium with polyester powder coated paint finish.

The optical system is a combination of lenses and reflectors in silver coated aluminium and supplied with a 4 mm tempered safety glass cover with extra high light transmission.

The luminaire has silicone gasket and all screws are in stainless steel.

The street lights can be installed with adjustable dawn to dusk sensors if requested.

Note!

We also supply all kind of lights for parks, pathways, industrial areas, car parks, entrances, signs and facades.





# GENERAL TECHNICAL DESCRIPTION!

- 1) LED Chips Brand: Epistar 3030 Led's, 130lm/W;
- 2) Input Voltage: 100-277 Vac / 50/60Hz;
- 3) Color Temperature: WW (2700-3000K); NW (4000-4500K, 5000-5500K); CW (6000-6500K);
- 4) Beam Angle: Type II & Type III;
- 5) IP Rating: IP65 (Outdoor Using)
- 6) Lifetime: 100,000 Hours
- 7) Warranty: 5 Year manufacture warranty
- 8) Certifications: CE, ROHS



CE RoHS





## External and Integrated Solar LED Street Lights!







What is a modern Street light and how it can help alleviate pollution?

- Generally speaking, a modern Street light is a light that relies on innovative sources of energy. A **solar-powered Street light (Solar Street light)** is the perfect example of modern light. It consists of a solar panel, a light pole, a battery and the light unit. It works by converting the energy received from the sun (through the panel) to actual light—emitted through the corresponding LED and CFL diodes (which Street lights are based on).
- As you can guess at this point, solar energy is one of the best ways to reduce the carbon footprint. This is why many people are exploring the best solar Street light products and the manufacturers are increasingly focusing on this technology as a revolutionary one. Even more significantly, solar energy can realize the rapid deployments of Street lights in rural areas (including ones located off the power grid) and help provide urban and suburban security and economic growth everywhere across the country.
- One study carried out in 2017 showed that modern lighting reduced carbon emissions by 570 million tons. This obviously included cases with **LED Street lights on roads and solar LED street light examples around cities.**



**Solar LED Street Lights** can operate efficiently with the use of solar panels, either directly attached to the light structure or, by drawing from a local solar array. This allows safe, efficient and natural lighting in areas where it may have previously been cost prohibitive.

As an alternative to running electrical lines, solar power for LED lighting has both urban and rural applications for cost saving and can utilized as both a temporary or permanent solution.

If you want to supply efficient public services to your community, you can't allow to have energy disruptions. Since solar outdoor lighting systems provide viable solutions for businesses and private users as well, smart cities can motivate solar Street light installations among their citizens. By implementing solar energy projects, smart cities could provide practical examples of the benefits of using solar LED lights and work close together with the community to inform the citizens about this clean energy application. It's much easier to ensure resources are available in the future if the entire city works together towards green energy goals.





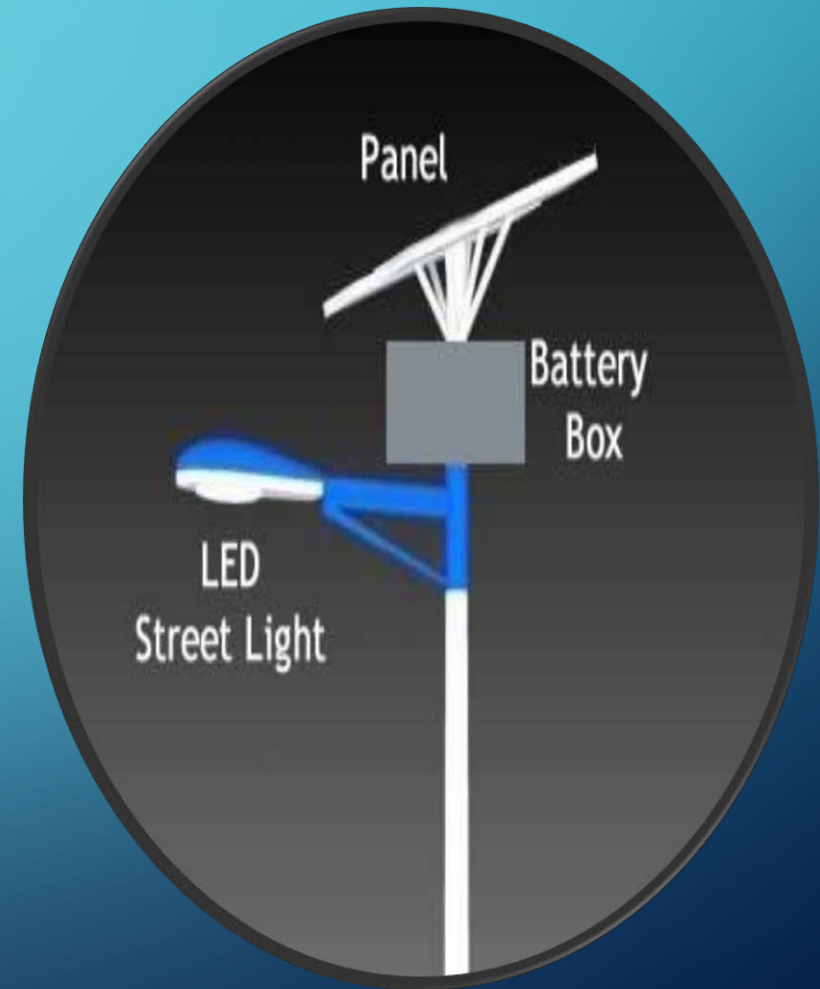


Batteries in solar LED lights are the main store of energy generated by the sun. They must be **both durable and easily replaceable**, which is why you should focus on products offering these features and manufactured with common and standard technical parameters that ensuring you can easily find a replacement or alternative in the market. The durability, moisture- and heat-resistance is another key factor to watch, given that most of these lights are installed and used outdoors and should be used under extreme weather.

Photovoltaic cells are the ones which trap the light from the sun and transform it into electrical energy. In some solar Street Lights, these cells are ingrained into the light fixtures and in others, they come in separate arrays attached externally to the pole containing the LED light. You don't need to understand the luminance of the light by measuring the amount of the cells or the size of the panel. The wattage (Watt value) of the light—as a symbol of power—can be especially useful in this manner—related to the actual power of the light.

The light pole which the solar LED Street light is mounted on should be sturdy and be able to withstand its weight. It should also be designed to stay erect even in bad weather conditions like typhoons.

The intensity of light and expanse of the area are additional things to consider. Improper LED solar street lighting can result even from lights that are working perfectly.









## Pros of solar Street Lights

- Solar Street lights are the greener option and the eco-friendly alternative that actually reduces the carbon footprint.
- Most of them do not require standard electrical power—but there are some which require the lights to be grid-connected in order to power the lights even when there is no sun as the abundant weather—or not enough power stored in the batteries.
- They can be installed anywhere where there is enough solar irradiation.
- Solar lights emit a gentle LED light that operates more efficiently (12VDC rather than AC power).
- Many grants and tax incentives are available to be offered to help lower the cost of going solar.
- Each solar light operates independently from the next (except for signs, billboards, etc.)
- The low voltage energy provided by the solar panels is **safe to work with**.
- Solar LED lights with directional lighting can provide more light where it is needed—and less where it isn't needed.
- There are many styles and options to choose from for different users and purposes.

## Electricity Cost

- What prevents cities from implementing new outdoor lighting systems? Take a guess. My answer is budgetary restrictions first and foremost.  
However, this should not be a problem if a solar Street lights are part of your city development plan. Since solar LED lights are powered by off-grid solar energy source, the city's electricity cost should eventually decrease. The energy savings from installing solar street lighting systems will enable new funds for implementing many other applications complementary to the smart city concept.

| TRADITIONAL vs. SOLAR LIGHTS   |                           |   |
|--|---------------------------|---|
| Cost analysis of Traditional and Solar Lights, including the cost of the light, installation, electrical infrastructure, and electricity usage in 5 years for 1 parking lot light. |                           |   |
|  <b>TRADITIONAL</b><br>(1 Light)  | VS                        | <b>SOLAR POWERED</b><br>(1 Light)  |
| \$2,000  | Light                     | \$3,000   |
| \$1,800  | Installation              | \$1,800   |
| \$3,200  | Electrical Infrastructure | No pipe & Wire  |
| \$1,200  | Electricity in 5 years    | No Electrical Bill  |
| <b>\$8,200</b>   | <b>TOTAL</b>              | <b>\$4,800</b>  |



# 5 YEAR WARRANTY!

5 Year warranty against manufacturing and material defects. The warranty will be given if the conditions below are fulfilled, warranty parts will either be repaired or replaced with new fully functional products. The warranty is valid from the invoice date and applies for manufacturing and material defects if the products have been used/installed;

- Purely in accordance with their intended purpose and application specifications.
- Within the specified operational envelope, e.g. Environment.
- With power within the specified range, i.e. Voltage, current and frequency.
- In a professional and legal manner and in accordance with installation instructions provided.

## The Warranty does not cover;

- Any type of consequential loss.
- Failures due to exposure to extreme conditions e.g. Thunder, lightning, water ingress, fire or other conditions beyond the control of Lindblad Solutions.
- Parts that needs to be replaced due to normal wear & tear, e.g. Interchangeable light sources, starters & batteries.
- Failures due to compatibility issues between the products and the installation environment, e.g. Control system & power supply.
- Products that have been modified or repaired by unauthorized personel.
- Normal maintenance and repair issues.





# LINDBLAD SOLUTION, GLOBAL CONSULTING!

FOR INQUIRIES AND QUESTIONS, PLEASE CONTACT:



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