



Version

2

LeDiwali Outdoor Lights

Product and Installation

Guide



Designed, developed and manufactured by

U-Tron (Beijing) Electronics Co. Ltd.,



In Association with;
U-Tron (India) Company Ltd.,



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KEY

APPLICATION

Road Ways

Tunnels and Under Bridge

Bridges and Overpass

Open Air Car Parks

Platforms

LeDiwali Lights

The U-Tron LeDiwali Lights are made of the light weight high-power water-proof LeDiwali modules. A perfect solution for lighting up the streets and lanes in every village. With over 2000 lumens you get a wide coverage of illumination no other Florescent, Incandescent or Sodium vapor lights have done before.

Designed from the bottom up as a totally optimized LED street light system, the LeDiwali Series redefines municipal lighting in many Indian cities. It's easy to force a LED bulb inside an existing light fixture and expect everything to work "well" and look "perfect". But it's not the case in the real world. The old fashion lamps are made to contain the heat inside the lampshade and LED on the other hand must let the heat evaporated as soon as possible to keep the LEDs from overheating. We made the LeDiwali lights for those who cannot afford to waste any more electricity.

At U-Tron we design lamps that bring out LED's advantages rather than fighting to sustain their weaknesses. At U-Tron "we do LEDs right".

Technical Specifications

Le Diwali :

Diwali Lights are equipped with Lens and reflectors and sealed to meet IP68. The power supply and Driver are U-Tron proprietary design to meet the dimming and warranty of 3 years.

U-Tron is an active member of Zhaga consortium:



**ORDERING PART
NUMBERS AC
VERSION**

68LD-A12-CR4PM

68LD-A12-CR4E40

68LD-A12-WQ5PM

68LD-A12-WQ5E40

**ORDERING PART
NUMBERS DC
VERSION**

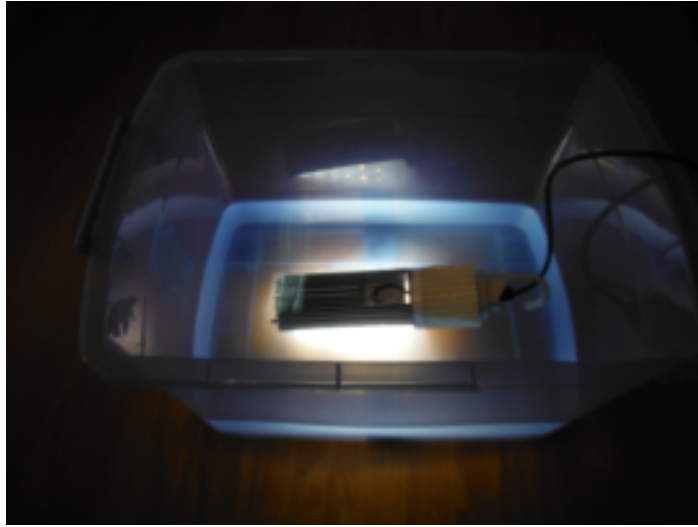
68LD-S12-CR4PM

68LD-S12-CR4E40

68LD-S12-WQ5PM

68LD-S12-WQ5E40

General Information



LeDiwali lights are good for wet areas.

Rated Maximum protection IP68; Recommended Protection IP67



LeDiwali 12 with E40 Socket

68LD-012-CR4E40



LeDiwali with cover and pole mount.

68LD-012-CR4PMPC

IP65

Electrical Characteristics for AC Version

Input power	Universal AC input: 120, 240 and 260 VAC Versions Available
Rating of the lamp in watts	20 Watt
Dimming technology	TRIAC Dimmable
Choke/Ballast/Driver loss in watts	2 Watt

Light Characteristics

Lumen Output of fixture	1808 lumen (after 2 hours of burning)
Efficacy in lumen/watt for LED	100 lumen/Watt
Color rendering Index	75-80
Color temperature CCT	2700-3000, 5000-6500 Kelvin
Optical Control	PMMA multi directionnel Lens Array
Average life in burning hours	50,000hrs
Lumens maintenance after	>1600lm after 25% of life, >1450lm after 50% of life, >1260 lm after 75% of life
Luminary Type (Cutoff/Semi-cutoff) with Cutoff angle	Full Cut Off

Temperature & Environmental ratings

Operating Ambient Temperature	0 to 45 Degree C
Mercury or any other environment hazardous substances (in milligrams)	No Hg or other hazardous substance

Product Dimensions and Packaging Information

Physical Dimensions

Length 460mm
Diameter 90 mm

Box Dimension: 1 Piece per Box,

Length 390 mm
Width 170 mm
Height 160 mm

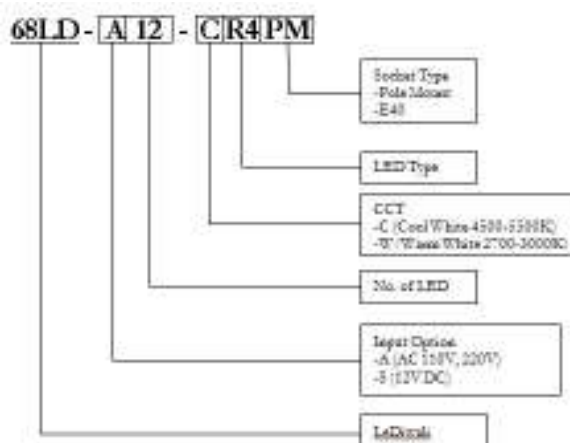
Net Weight Per Piece Pieces Per Pack 1

7500 Grams

Certifications

CE listed, RoHS compliant,
CSA and UL - LISTED

Part Numbering



Ordering Information and Options

Product Ordering # for AC Version

68LD-A12-CR4PM cool white pole mount

68LD-A12-CR4E40 cool white E40 Socket

68LD-A12-WQ5PM warm white pole mount

68LD-A12-WQ5E40 warm white E40 Socket

Product Ordering # for DC Version

68LD-S12-CR4PM cool white pole mount

68LD-S12-CR4E40 cool white E40 Socket

68LD-S12-WQ5PM cool white pole mount

68LD-S12-WQ5E40 warm white E40 Socket

KEY MODELS

20Watts LeDiwali 12

25Watts LeDiwali 14

ALL MODELS**SCALABLE**



Electrical Characteristics for DC Version

Input power	9-36V DC
Rating of the lamp in watts	20 Watt
Dimming technology	TRIAC Dimmable
Choke/Ballast/Driver loss in watts	2 Watt

Light Characteristics

Lumen Output of fixture	1808 lumen (after 2 hours of burning)
Efficacy in lumen/watt for LED	100 lumen/Watt
Color rendering Index	75-80
Color temperature CCT	2700-3000K, 5000 – 6500 Kelvin
Optical Control	PMMA multi-directional Lens Array
Average life in burning hours	50,000hrs
Lumens maintenance after	>1600lm after 25% of life, >1450lm after 50% of life, >1260 lm after 75% of life
Luminary Type (Cutoff/Semi-cutoff) with Cutoff angle	Full Cut Off

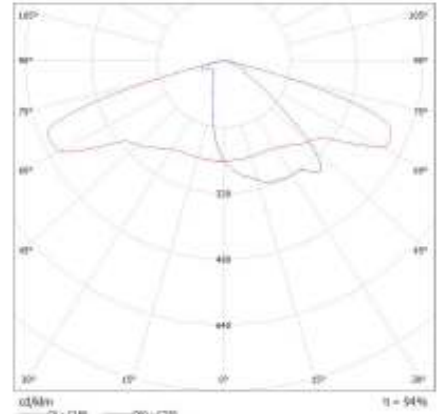
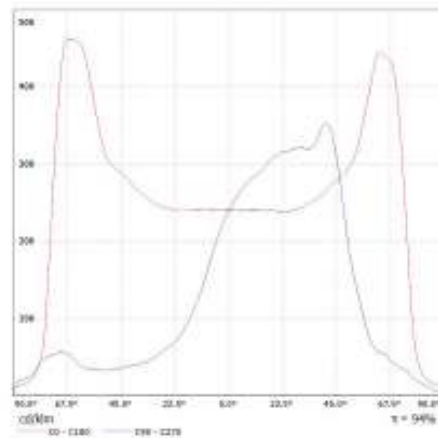
Temperature & Environmental ratings

Operating Ambient Temperature	0 to 45 Degree C
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The Light distribution:

The LeDiwali street lights deliver the best light distribution you can find in the industry today. The Lens and PCB assembly are the industry most advanced light distribution and water resistance you can find today. And the light loss is less than 7%. And the lens is made of PMMA.

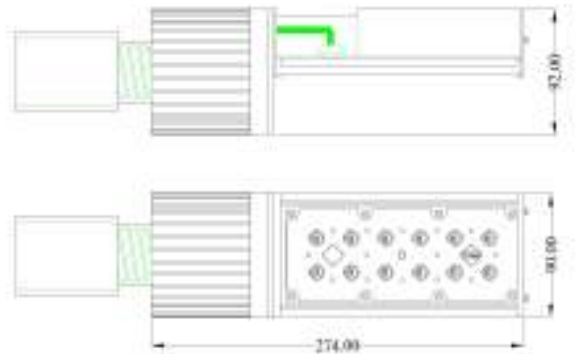
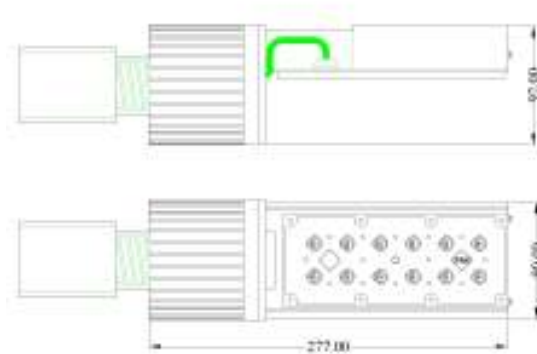
Lamp: 1 x Cree XT-E (180lm/3500K)



The LED Chips

LeDiwali Lights utilizes the latest technology from Cree XT-E. Please refer to the LM80 Test report provided in this document.

Mechanical Drawings



How to select your battery and calculating the size

For Solar Panel DC installations please select the Battery, Solar Panels and controllers.

Usually people expect for 3 night's of continuous working on a one full day charge.

Hypothetically speaking we assume the lights are 20Watt and working 6 hours per day. 4 hours after dawn and 2 hours before dawn. The batteries are 12 V DC Gel batteries.

The current its drawing when operation is equal to $W/V = 20W/12V = 1.66\text{Ampere}$. (40 is LED power in Watt and 12 is the battery's voltage)

If the lights are working for 6 hours per day then you need $6 \times 1.66 = 9.96\text{Ah}$ per night. Then you need this for 3 nights, so its 29.88Ah . But you don't want to drain your batteries to bare bottom, at least leave about 30% reserve then $29.88 \times 1.30 = 38.844\text{Ah}$. Lets round it up for 40Ah.

We recommend you buy a 40Ah, Gel, maintenance free batteries from any reputable manufacture for each 20W LeDiwali LED lights.

How to calculate the size of the Solar Panels

If you decide to use the LeDiwali lights connected to Solar panels, you need to understand the followings: Solar Panels come in poly crystalline or Mono crystalline. It doesn't matter which technology you chose, you must buy the right size for your application. We recommend that each of your panes are not to exceed 50 watt so the wind resistance will not become an issue. If you decide to add more panels you can do so in a parallel connection. Solar panels we supply also come in many sizes. We recommend you pick a 20Watt panel. (60 Watt, 80 Watt, 100 Watt and 120 Watt panels are also available from U-Tron. Larger panels need to be special ordered.)

Since we already know the Battery Size, we need to know the number of hours the Sun light is shining. So a 40Ah battery will discharge only up to 70% or 30Ah so we need Solar Panel that can generate 3Amper through out the 10 hours to fully charge our battery.

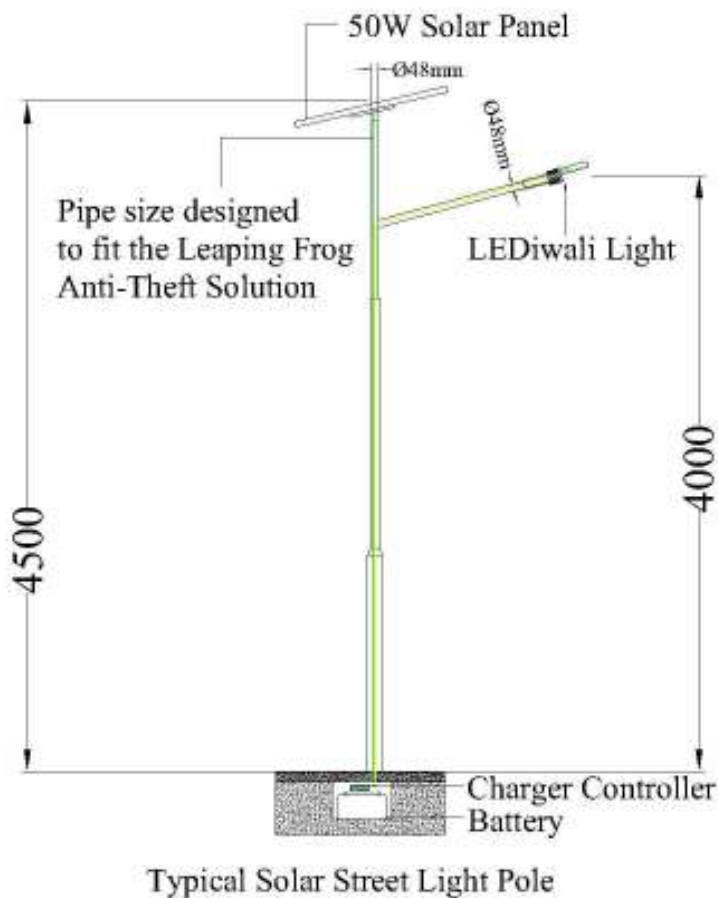
Please see the table bellow where you can chose the Solar panel to fit that need. Usually it's a 40 to 55 Watt panel will be sufficient.

Solar Panels Installation; Angle is Country Dependent.

Most countries in the northern hemisphere will face the south and southern hemisphere will face the north. If you are near the equator you will be facing straight up. The purpose is to get as much sun light as possible during the day. Do not install your solar panels in a shade or under the tree or in between tall buildings. If sun light is fully captured your batteries will not have enough charge to operate the lights during the evenings.

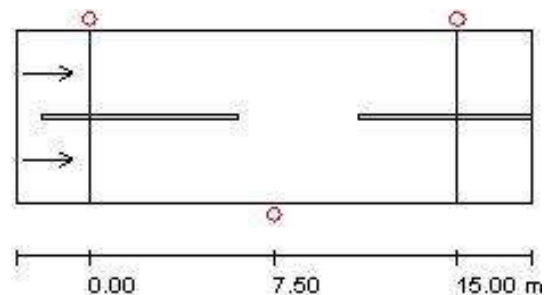
Which Controller to use

We have 3 different controllers to choose from. Please visit www.u-tron.com and chose the controller.



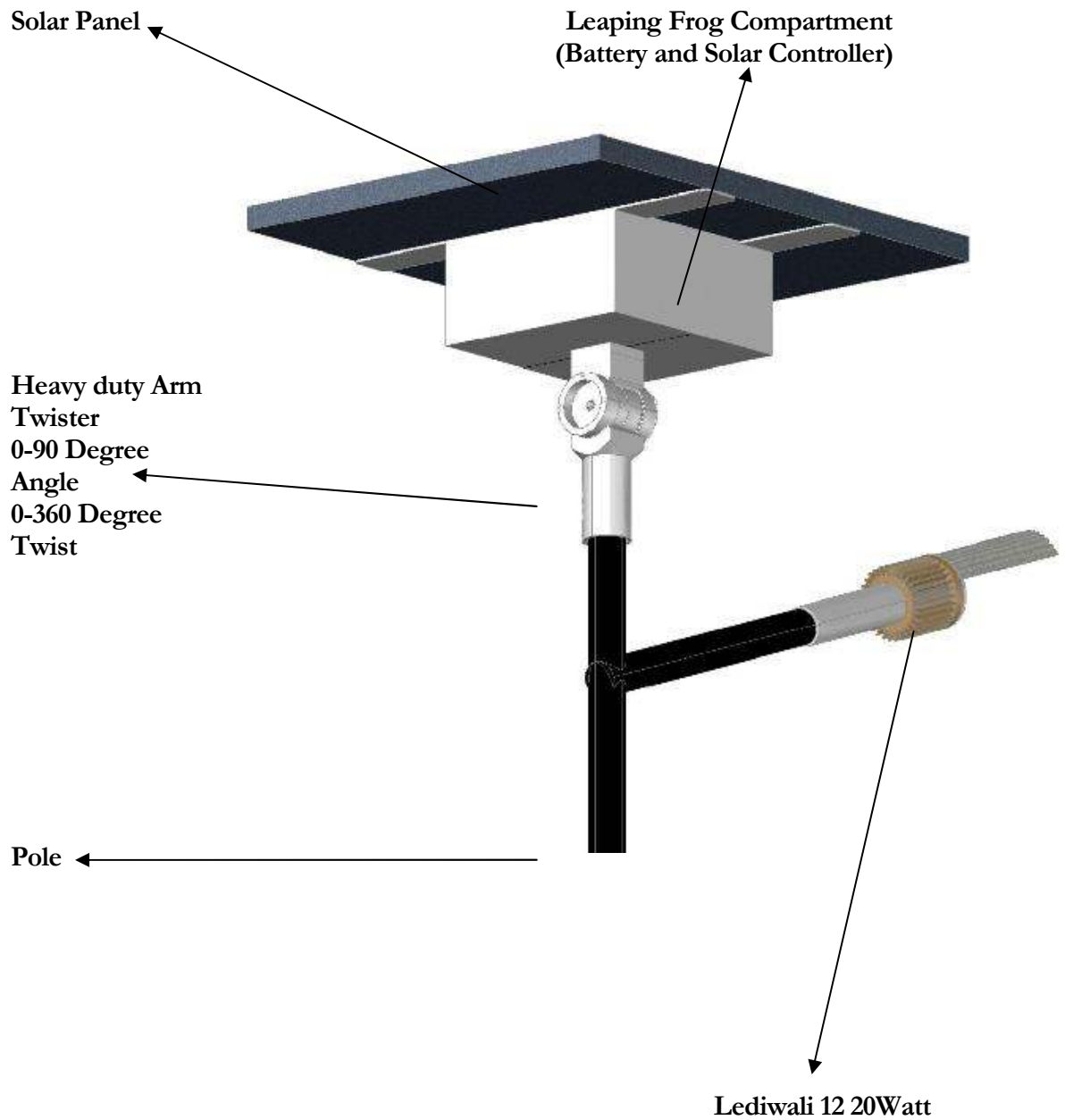
Pole height and pole to pole distance

Lediwalli 20W maximum pole height is 4 meters with an average lux on the ground of 12 lux. Pole height varies on different application such as wall mounting and the can height can be 3-4meters high.



Lediwalli 20W is good in offset pole arrangement with 15meters pole to pole distance.

Introduction to anti theft option for LeDiwali Solar Lights



Warranty

U-Tron (Beijing) Electronics Co. Ltd., warrant the products listed bellow for a period of 36 months from the date of shipment to be free from defects in material or workmanship and to be of the kind and quality designated or specified in the purchase agreements. If any products dose not meets the above warranty and the buyer promptly files a warranty claim U-Tron shall do the following:

U-Tron shall provide a 12 months **“No Questions Asked”** replacement of any faulty units at no charge to the customer. The time limit for exchange shall not exceed 30 days from the time a claim is filed by the buyers. The buyers shall return the faulty units within 30 days of filing the claim. The method of shipping back the faulty units to U-Tron shall be decided at that time by U-Tron and all shipping charges shall be borne by U-Tron.

At the end of the 12 month period U-Tron shall provide additional free **extended warranty** for another 24 months. During this 24 months time U-Tron shall repair or replace and re-certify every faulty units reported. Shipping charges for sending the units to U-Tron shall be the responsibility of the Buyers and the Shipping charges to return the repaired goods to the buyer shall be borne by U-Tron. Time limit for repairs shall not exceed 60 days.

U-Tron at our own option can elect to provide replacement units at any desired percentage to be warehoused and logged by the buyers for timely service of the extended warranty replacements. When the warranty expires the bad units and the unused units shall be shipped back to U-Tron unless otherwise stipulated in the contract or purchase agreements. If the warehoused quantities become 90% used up or nearing the end of stock, the buyers shall ship back the faulty units to U-Tron. U-Tron shall rotate the spare parts inventory with in 60 days of receiving from the buyers.

All warranty claims items shall by shipped to the buyers regardless of the geographical location, by air freight to the nearest airport, and any returning items can be shipped by sea or air freight at the request of U-Tron. If the customer fails to return the said faulty units with in the time frame as instructed, it will be considered as sold and U-Tron reserve the rights to bill the customer for its full value.

U-Tron shall not bare any responsibilities with the buyers customer claims or shall not bare any other expenses incurred other than the units cost it self. Customer site un-installation and re-installation of any faulty units shall not be the responsibilities of U-Tron.

The warranties set forth herein shall be voided if the units have been 1) repaired or altered by any un-authorized person 2) subjected to misuse, negligence and accidents or operated in other than normal operation and use. 3) Connected, installed or modified in a manner not in accordance with U-Tron instructions.

About U-Tron

U-Tron (Beijing) Electronics Co. Ltd., was established in 1992 as a WOFE in Beijing, China. The company is 100% funded by investments from the American Company, China Business Associates. The main purpose was to bring U.S. developed technology products to China for manufacturing, localization and re export. U-Tron has a 1,800 square meter factory employing 40 + people in Beijing and 4,500 square meter factory in Liyuan District, Guangzhou employing over 100 people.

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