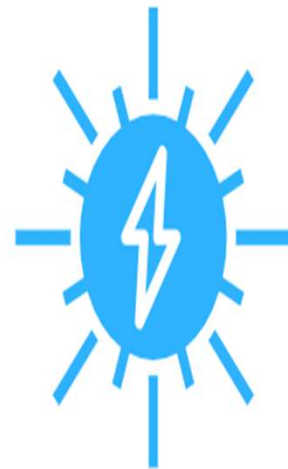


**TRITON SERIES OF LED  
SOLAR AREA  
LIGHTING.**

**The future of  
exterior lighting is  
here. Eliminate  
100% of your  
energy costs to  
power your  
exterior lighting  
by changing to  
solar LED.**



**KLL Energy**



## THE INNOVATION OF THE ORIGINALITY

Originally designed to provide the real and continuous high brightness output for long operation hours, Triton is highly engineered all-in-one solar street light incorporating large battery capacity and extremely high efficacy LED.

## ELEGANT YET ROCK-SOLID

With the highest grade corrosion resistant aluminum alloy cage, 316 stainless steel components, ultra strong slip fitter, IP66 and Ik08 rated, Triton stand and handle whatever comes your way and are twice as durable as others, be it in strong rain storms, or snow storms.

## KEY FEATURES



High luminous efficiency of 190lm/W to maximize battery performance.



Environment friendly - 100% powered by the sun, solar panels reduce fossil fuel consumption, eliminating pollution.



Off-grid roadway lighting made electric bill free.



Self-contained solution - Light on/off controlled by automatic daylight sensing.



IP66 Luminaire ensures long lasting and consistent high performance.



No trenching or cabling work needed.



Five Year Warranty.



Easy to install and maintain.

## EXTENDABLE SOLAR PANEL

With foldable solar panel extension, Triton offers more choices for higher wattage with the same structure for more demanding applications, be it long operation hours high power output or for harsh environments where high performance is required.





## APPLICATIONS

- 
- Street Lighting
  - Roadway Lighting
  - Parking lot Lighting
  - Sidewalk Lighting
  - Private Road Lighting
  - Wildlife Area Lighting
  - Perimeter Security
  - Schools
  - Park Lighting
  - Railway Yard Lighting
  - Campus Lighting
  - Shipping Docks
  - Remote Area Lighting
  - Military Base Lighting
  - Sports field Lighting
- 



## RELIABILITY UNEXPECTED VALUE



Only top quality mono - crystalline silicon solar panels with high efficiency and long lifetime are used.



Quality lithium batteries are used to store the energy, provide energy for immediate requirements, and enable a back-up for days when there is little to no sun. LiFePO4 is a subtype of Li-ion battery that improves the safety, lifespan, and optimal temperature range of off-grid power solutions.



High Lumen LED for maximum efficacy. Dedicated designed low-voltage solar controller technology with dimming capabilities for power-save management.  
Lifetime > 50,000 hrs and CRI nominal 70.



Microprocessor managed algorithms autonomously determine sunrise and sunset.



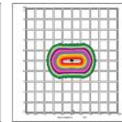
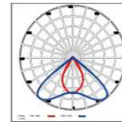
Easy to install without buying cables and rectifiers, directly on pole with an adjustable spigot  $0^{\circ} \sim 90^{\circ}$ .



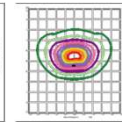
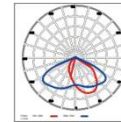


## PHOTOMETRICS

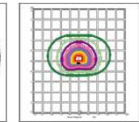
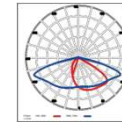
60x100° (TYPE I-VS)



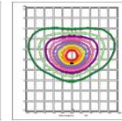
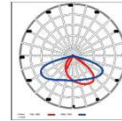
70x135° (TYPE II-S)



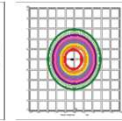
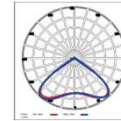
75x150° (TYPE III-M)



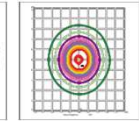
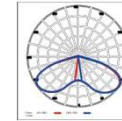
80x150° (TYPE II-S)



110° (TYPE V-VS)



150° (TYPE V-VS)



## PERFORMANCE

	30W~150W
	190lm/W
	Philips Lumileds
	PIR & Timer Dimming
	MPPT Controller
	5000K ( 2500~6500K optional )
	60×100° / 70×135° / 75×150° / 80×150° / 110° / 150°
	IP66
	IK08
	Monocrystalline silicon photovoltaic panels
	LiFeP04 battery
	Slip fitter
	Operating Temperature:-30°C to +45°C (-22°F to 113°F) Storing Temperature:-40°C to +80°C (-40°F to 176°F)



## SPECIFICATIONS

Part#	Power	Solar Panel	Battery	Efficacy (IES)	Total Lumen	Product Dimensions
KL-TST-30	30W	60W/18V	12.8V/24AH	190 lm/W	5,700lm	950×405×270mm
KL-TST-40	40W	60W/18V	12.8V/30AH	190 lm/W	7,600lm	950×405×270mm
KL-TST-50	50W	70W/18V	12.8V/30AH	190 lm/W	9,500lm	1050×405×270mm
KL-TST-60	60W	70W/18V	12.8V/36AH	190 lm/W	11,400lm	1050×405×270mm
KL-TST-80	80W	80W/36V	25.6V/24AH	190 lm/W	15,200lm	1250×405×270mm
KL-TST-90	90W	100W/36V	25.6V/30AH	190 lm/W	17,100lm	1550×405×270mm
KL-TST-120	120W	120W/36V	25.6V/42AH	190 lm/W	22,800lm	1250×855×270mm (Extendable Solar Panel)
KL-TST-150	150W	150W/36V	25.6V/48AH	190 lm/W	28,500lm	1250×855×270mm (Extendable Solar Panel)

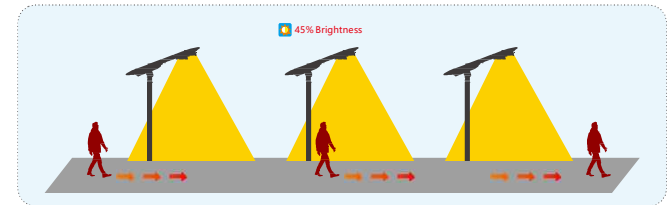


## SOLAR CONTROLLER



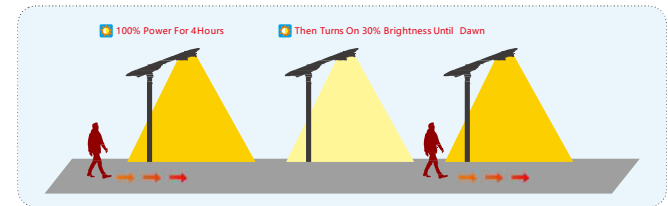
### Constant Mode

Light will automatically turn on at dusk and keep constant 45% brightness in a pre-set power mode.



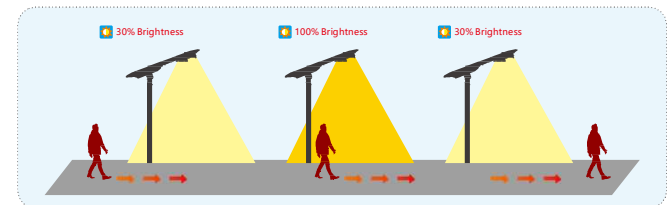
### Dusk to Dawn Mode

Automatically turns on at dusk and remains at up to 100% brightness for 4 hours, then it automatically turns to 30% brightness until dawn.



### Motion Sensor Mode

Automatically operates at 30% brightness. When motion is detected, light increases to 100% until no motion is detected for 30 seconds, then returns to 30% brightness.





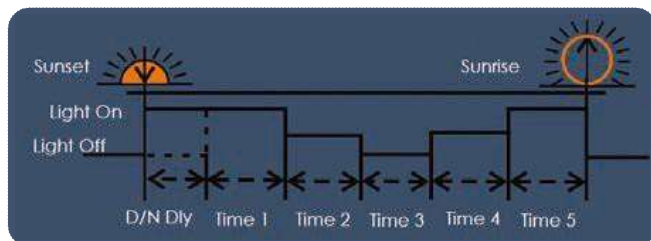
# SOLAR CONTROLLER - B

## Regular MPPT Controller



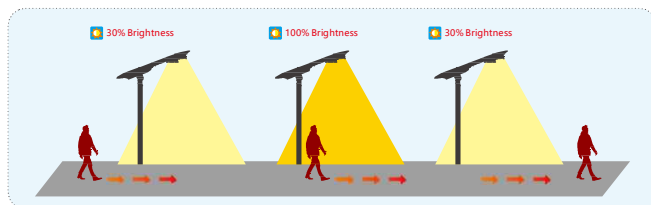
### Five-Stage Mode

The lighting divides into 5 stages, each stage time and dim can be set according to demands. Utilizing the dimming setting, it is an efficient way to save energy, and keep the lamp working for longer periods of time.



### Motion Sensor Mode

Automatically operates at 30% brightness. When motion is detected, light increases to 100% until no motion is detected for 30 seconds, then returns to 30% brightness.





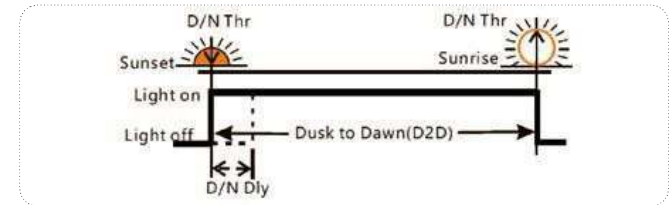
# SOLAR CONTROLLER - C

## Hybrid MPPT Controller



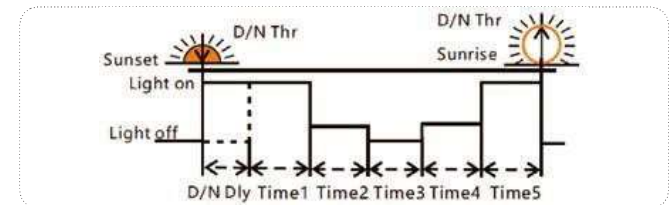
### Dusk to Dawn (D2D)

When fixture is set to D2D, it works in dusk to dawn mode. The fixture will turn on while the sun is down, and turn off at sunrise.



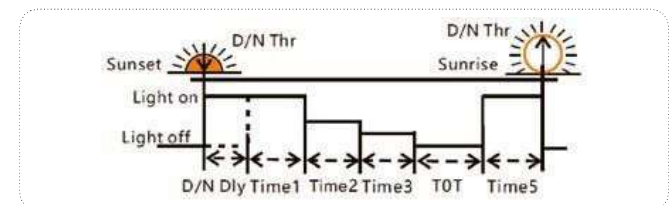
### Five-stage NightMode

The lighting divides into 5 stages, each stage time and dimmability can be set according to demands. With the dimmable feature it is an efficient way to save energy, and keep the lamp working for longer periods of time.



### TOT Mode (Can set the load on time before morning comes.)

When fixture is set to TOT then it will determine Time4 based on Time5 and previous data on the time of sunrise.



# iNET SMART CONTROL SYSTEM

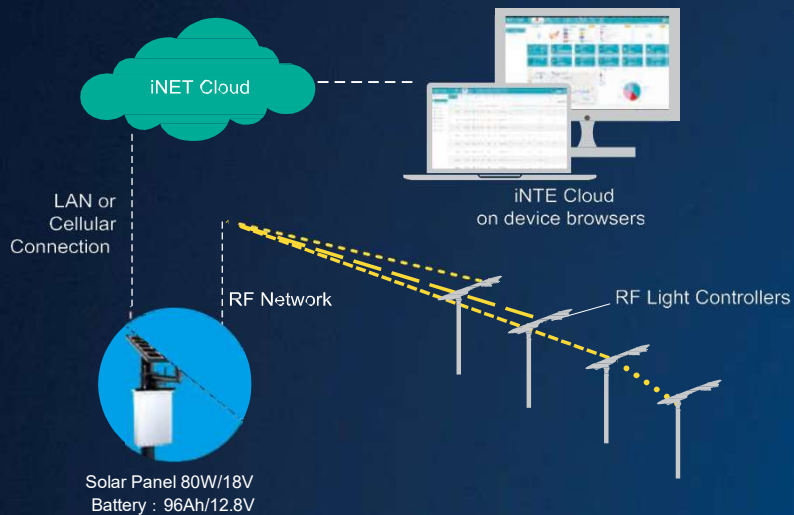


## Smart City

Smart controlling perfectly combines the solar street lighting fixture and internet with wireless communication technology, achieve monitoring and management of remote background data, real-time understanding the normal working status of each component of solar energy (street lights, photovoltaic panels, batteries, controllers), allow you to know the product usage on the client terminal that is thousands of miles away without leaving home or to manage the opening and closing of street lights and the adjustment of brightness.






The solar street light management system can pre-set one or more lighting modes according to the different time of day and traffic flow, automatically turn on or off, and adjust the switching time and illumination according to environmental requirements to achieve the purpose of energy-saving and consumption reduction.

The integrated system is mainly composed of a street light components, centralized controller, a single light controller, and a smart cloud platform. The centralized controller and the single light controller aggregate the data collected by the single light via the RF wireless communication network. The centralized controller uploads data to the system cloud platform through GPRS data flow, providing data dependence for mobile phones and computer terminal access.



## System & Hardwares



- 
**Automatic Light On/Off & Dimming Control**
  - By time setting
  - On/off or dimming with motion sensor detection
  - On/off or dimming with photocell detection
- 
**Accurate Operation & Fault Monitor**
  - Real-time monitor on each light working status
  - Accurate report on fault detected
  - Provide location of fault, no patrol required
  - Collect each light operation data, such as voltage, current, power consumption
- 
**Extra I/O Ports for Sensor Expandability**
  - Environment Monitor
  - Traffic Monitor
  - Security Surveillance
  - Seismic Activities Monitor
- 
**Reliable Mesh Network**
  - Self proprietary wireless control node
  - Reliable node to node, gateway to node communication
  - Up to 1000 nodes per network
  - Max. network diameter 2000m
- 
**Easy-to-use Platform**
  - Easy monitor on each and all lights status
  - Support lighting policy remote set-up
  - Cloud server accessible from computer or hand held device

# KLL Energy Services 10 YEAR WARRANTY

\*120 MONTH WARRANTY  
ON ALL PRODUCTS

\*60 MONTH WARRANTY ON  
BATTERY

\* WARRANTY IS FOR BOTH  
PRODUCTS AND  
INSTALLATION  
REIMBURSEMENT

## TEN-YEAR GENERAL LIGHTING WARRANTY AND DISCLAIMER

Beginning with products manufactured after January 1, 2023, KLL Energy Services, LLC. warrants to the purchaser that for a period of one hundred and twenty

(120) months beyond the date of manufacture (or the date of receipt of product by the purchaser, if proper documentation is available, KLL Energy Services LLC. LED lighting fixtures shall be free from defects in workmanship, damage to components, fixture failures which includes LED boards, Drivers and Sensors. KLL Energy Services LLC. liability for any warranty remedy shall include change out to new fixture and labor to replace by either KLL staff or customer staff. If install is completed by client then a credit of \$60 per fixture will be paid by KLL to client directly. Shipping costs for the defective replacements will be paid by Kimberly Lighting LLC. A fixture will be considered "defective" for the purposes of this warranty if at any point during the warranty coverage, at least 10% of the LEDs fail to light, if there is color shift or depreciation, if LED driver or Motion Sensors fail.

Drivers, lamps, emergency batteries, photocells, occupancy sensors, surge suppressors, and any other third-party accessories that are not are not part of the original purchase of the KLL Energy Services Light fixture but added by the client after the fact are excluded from this warranty, but may be covered by a third-party manufacturer. Assistance with warranty claims for any such components, and/or copies of each applicable manufacturer's warranty, may be obtained from KLL Energy Services LLC. customer service.

ALL CLAIMS FOR BREACH OF WARRANTY MUST BE RECEIVED BY KLL Energy Services LLC. NO LATER THAN THIRTY DAYS AFTER THE END OF THE WARRANTY PERIOD.

THE PRODUCT(S) WARRANTY IS THE ONLY WARRANTY GIVEN BY KLL Energy Services, LLC. KLL Energy Services LLC MAKES, AND THE PURCHASER RECEIVES, NO OTHER WARRANTY EITHER EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, AND ALL IMPLIED WARRANTIES ARE EXPRESSLY DISCLAIMED AND EXCLUDED HEREFROM.

THE AFOREMENTIONED PRODUCTS HAVE RECEIVED UL or ETL APPROVAL. HOWEVER, UNLESS EXPRESSLY AGREED TO BY KLL Energy Services LLC IN WRITING, KLL Energy Services LLC MAKES NO WARRANTY THAT THE PRODUCT(S) WILL: (i) MEET ANY SPECIFICATION NOT MADE KNOWN TO AND AGREED TO BY KLL Energy Services LLC. IN WRITING, OR (ii) HAVE RECEIVED THE APPROVAL OF OR ARE CERTIFIED BY ANY FEDERAL, STATE, LOCAL OR FOREIGN GOVERNMENT AGENCY (INCLUDING WITHOUT LIMITATION THE FEDERAL COMMUNICATIONS COMMISSION) OR ANY OTHER PERSON OR ENTITY. KIMBERLY LIGHTING LLC ASSUMES NO RESPONSIBILITY FOR OBTAINING SUCH APPROVALS OR CERTIFICATIONS OR MEETING SUCH SPECIFICATIONS.

The purchaser may exercise rights to warranty coverage by notifying KLL Energy Services, LLC in writing of a warranty claim. All claims for warranty coverage will be processed in accordance with KLL Energy Services, LLC. Warranty Procedure then in practice. Product(s) authorized for return under this warranty provision by KLL Energy Services LLC, shall be suitably packaged for return by the purchaser or have a photo taken of the damaged fixture listing the issues.

This warranty shall be void with respect to Product(s) that has been either modified or repaired by unauthorized sources. This warranty shall also be void with respect to Product(s) which has been damaged as the result of misuse, including operation outdoors during daylight hours, neglect, improper packaging for return shipment to KLL Energy Services, LLC., or exposure to lightning or excessive or improper voltage or temperature below -40 degrees C or above 50 degrees C, or with respect to Product(s) which has been operated contrary to current instructions or parameters regarding installation, maintenance and/or operation.

Product(s) returned by the purchaser which do not meet the warranty criteria as defined herein will be returned to the purchaser or disposed of as agreed upon by both parties or disposed of at KLL Energy Services, LLC. discretion if no agreement is reached within thirty days. All freight and handling for such invalid warranty returns will be charged to the purchaser.

THIS IS THE SOLE WARRANTY AND ONLY REMEDY OF ANY KIND FOR KIMBERLY LIGHTING LLC. WARRANTY. KLL Energy Services, LLC. LIABILITY, WHETHER IN CONTRACT, TORT, INCLUDING NEGLIGENCE OR ANY OTHER LEGAL THEORY, SHALL BE REPLACEMENT, OR CREDIT FOR DEFECTIVE FIXTURE AS STATED ABOVE AND SHALL IN NO WAY INCLUDE LIABILITY FOR CONSEQUENTIAL, SPECIAL, INDIRECT OR INCIDENTAL DAMAGE. THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THIS INCLUDES ANY CLAIM ARISING OUT OF ANY ADVISE OR HELP WITH THE LAYOUT OF PRODUCT BY ANY MEMBER OF KIMBERLY LIGHTING LLC. STAFF, WHETHER CHARGED FOR OR NOT. IF THE SAME PRODUCT IS NO LONGER AVAILABLE, KLL Energy Services, LLC., AT ITS SOLE DISCRETION, MAY SUPPLY A REASONABLY COMPARABLE PRODUCT AS REPLACEMENT

### LIMITATION OF LIABILITY

NEITHER KLL Energy Services, LLC. NOR ITS SUPPLIERS SHALL BE LIABLE, WHETHER IN CONTRACT, WARRANTY, FAILURE OF A REMEDY TO ACHIEVE ITS ESSENTIAL PURPOSE, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, INDEMNITY OR ANY OTHER LEGAL THEORY, FOR LOSS OF USE, REVENUE OR PROFIT, OR FOR COST OF CAPITAL OR OF SUBSTITUTE USE OR PERFORMANCE, OR FOR INDIRECT, SPECIAL, LIQUIDATED, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER LOSS OR COST OF A SIMILAR TYPE, ALSO FOR THIRD PARTY CLAIMS BY PURCHASER FOR SUCH DAMAGES RESULTING TO ANY THIRD PARTY.

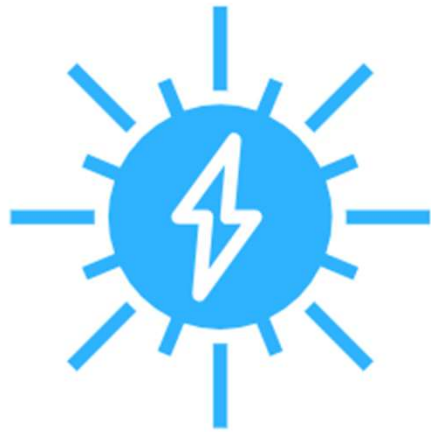
# INFLATION REDUCTION ACT- PAYS FOR COST OF SOLAR LED PRODUCTS

The new Inflation Reduction Act will pay for the cost of your solar led investment over a period of 5 years.

**ITC-** Is an investment tax credit of 30% for changing to solar powered products. This is a credit you get year one. Spend \$50,000 and you get a credit back of \$15,000.00 from the Federal Government. See link below.

[https://www.einnews.com/pr\\_news/587242222/changes-to-the-federal-tax-credit-itc-will-make-solar-lighting-projects-more-affordable](https://www.einnews.com/pr_news/587242222/changes-to-the-federal-tax-credit-itc-will-make-solar-lighting-projects-more-affordable)

**MACRS**-The modified accelerated cost recovery system (MACRS) is a depreciation system used for tax purposes in the U.S. MACRS depreciation allows the capitalized cost of an asset to be recovered over a specified period via annual deductions.



# KLL Energy

Please contact us with any questions you may have.  
We look forward to partnering with you in the  
future.