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(50A-100A) Series Charge Controller

AL ROUF LIGHTING TECHNOLOGY CO. LTD.

I take immense pleasure in introducing to you Al Rouf Lighting Technology Company, an ISO 9001-2015 certified well established company in the business of importing, exporting, supplying and installation of LED lighting Fixtures.



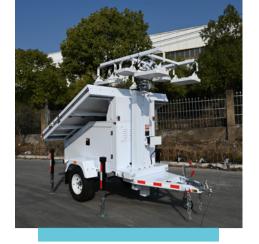
Lighting for us is not a Job it is a Passion



OUR GOALS AND MISSION

We are not just a company, we are unique solution provider that aims the satisfaction of their clients in every step of the project. We combine the experience with art and engineering to provide a solution that meets the clients requirements.

With the help of our high qualified staff, we provide lighting service from A to Z in all manners starting from the lighting design and the products selection, going through the logistic and martial handling until the installation part.







TECHNICAL SPECIFICATION OF SOLAR LIGHT TOWER WITH 4-850LAR



SOLAR LIGHT TOWER SPECIFICATION



| | | 1 | | 100 | | |
|------------------|------------------------|---------------------|-----------------------|---------------------|-----------------------|--|
| Item | Description | BL4P- G9N | инц1000- в | BL8P- G9 | MHL1000 | |
| LED Light | Qty of Lights | 4 | 4 | 4 | 1 | |
| | Light Wattage | 25 | 0W | 250W | | |
| | Light Output | 100 | 0W | 100 | 0W | |
| | Luminous Flux | 15000 | OO LM | 15000 | 00 LM | |
| | Other Function | Dimmable function \ | with switch and timer | Dimmable function v | vith switch and timer | |
| Mast | Mast Lifting Type | Mai | nual | Mar | nual | |
| | Height of Mast | 8.3 | 3 m | 8.3 | m | |
| | Section of Mast | Į į | 5 | Ę | 5 | |
| | Material | Carbon S | iteel Q235 | Carbo | n Steel | |
| | Surface treatment | Galvo | anized | Galvo | ınized | |
| | Shape | Squ | ıare | Squ | ıare | |
| Solar Panels | Qty of Solar Panel | 4 | | 3 | 3 | |
| | Panel Power(W) | 43 | 35 | 46 | 60 | |
| | Panel Output(W) | 17 | 40 | 3680 | | |
| | Material | Monocrys | stal Silicon | Monocrystal | | |
| | Angle Adjustment Mode | Fixed Angle | | Elec | etric | |
| Battery | Type of Battery | Gel | Lithium | Gel | Lithium | |
| | The qty of Battery | 8 | | 8 | | |
| | Capacity | 200AH | | 200AH | | |
| | Total Capacity | 19200Wh | 19200Wh | 19200Wh | 19200Wh | |
| | Voltage: | DC 12V | DC | 12V | 48V | |
| Controller | Туре | 40A | MPPT | A08 | MPPT | |
| | Brand | Epever | | Epever | | |
| | Remote Control | With | nout | Without | | |
| Backup Generator | | With | Without | With | Without | |
| Auto start | hybrid system | Inclu | ıded | Included | | |
| Charger | Power | 2.5 | 5kw | 2.5kw | | |
| Trailer Details | Axle | Sin | gle | Dual | | |
| | Tire and Rim Size | 185/70 | R14 79H | 185/70 R14 | | |
| | Outrigger | 4*Mc | anual | 4*Mc | anual | |
| | Standard | L | JS | U | S | |
| | Color | Wh | nite | Wh | nite | |
| | Tow Hitch | Ball ⁻ | Гуре | Ball | Туре | |
| Tower | L*W*H(mm) Shipping | 2650*17 | 50*2200 | 2600*2 | 300*23 | |
| Dimensions | L*W*H(mm) Transporting | 3550*17 | 50*2500 | 3700*2 | 300*25 | |
| | L*W*H(mm) Operating | 5500*34 | .00*9000 | 4700*6 | 500*90 | |
| | Weight(kg) | 1550 | 1400 | 2300 | 2100 | |
| | | | | | | |

SOLAR LIGHT TOWER

No Fuel No Noise No Emissions

Mobile solar light tower is ideal solution for work site construction site, mine, oil field, emergency rescue, parking lot, sports and millitary base temporary lighting.

Solar Lighting Tower with its advantage of no noise, no emmission and no fule, has been exported and imported to many countries. As time passes by the use of Solar Panels and Solar Light Towers is drastically increasing. Sun powered vitality is the future and sun oriented light towers also known as Solar light towers are a more intelligent, less expensive option in contrast to customary diesel light towers.



PRODUCT FEATURE OF LIGHT TOWER

Power full Solar Hybrid Light Tower

These Solar Hybrid Light Tower provide an independent light source, are excellent pieces of equipment for a variety of different applications such as construction, mining, agricultural and industrial sectors and more. High bright light fixtures top a variable-height mast, powered by Solar generator. The units are quite stable and can withstand the tough environments

Features of Our Items

Multi-directionally adjustable and tiltable floodlights

7 sections vertical tower 8.5 m, 340° rotatable

Galvanized metalworks

80 µm powder coating

Transversal forklift pockets for effective handling

Plug & play, colour coded cables and connectors

Guided main coiled cable to avoid damage during tower operation

Certified wind stability up to 110 km/h

4 height adjustable stabilizers + front jockey wheel

On board levels for guidance during stabilization

Running time before refill 3000 hours

24volt DC Battery

Recharging in 18 hours

230V 1PH Battery charger built-in

Product General Features

Pull-Out Solar Panel

- 1. Protect panel to extend life time
- 2. Smaller size, easier transportation
- 3. Smaller size, saving shipping cost.





Ac/Dc Outlet

The system is equipped with inverter and outlet plug to charge other electronics

Fork Lift Hole

- 1. Easier transportation
- 2. Save labor cost
- 3. Design for rental

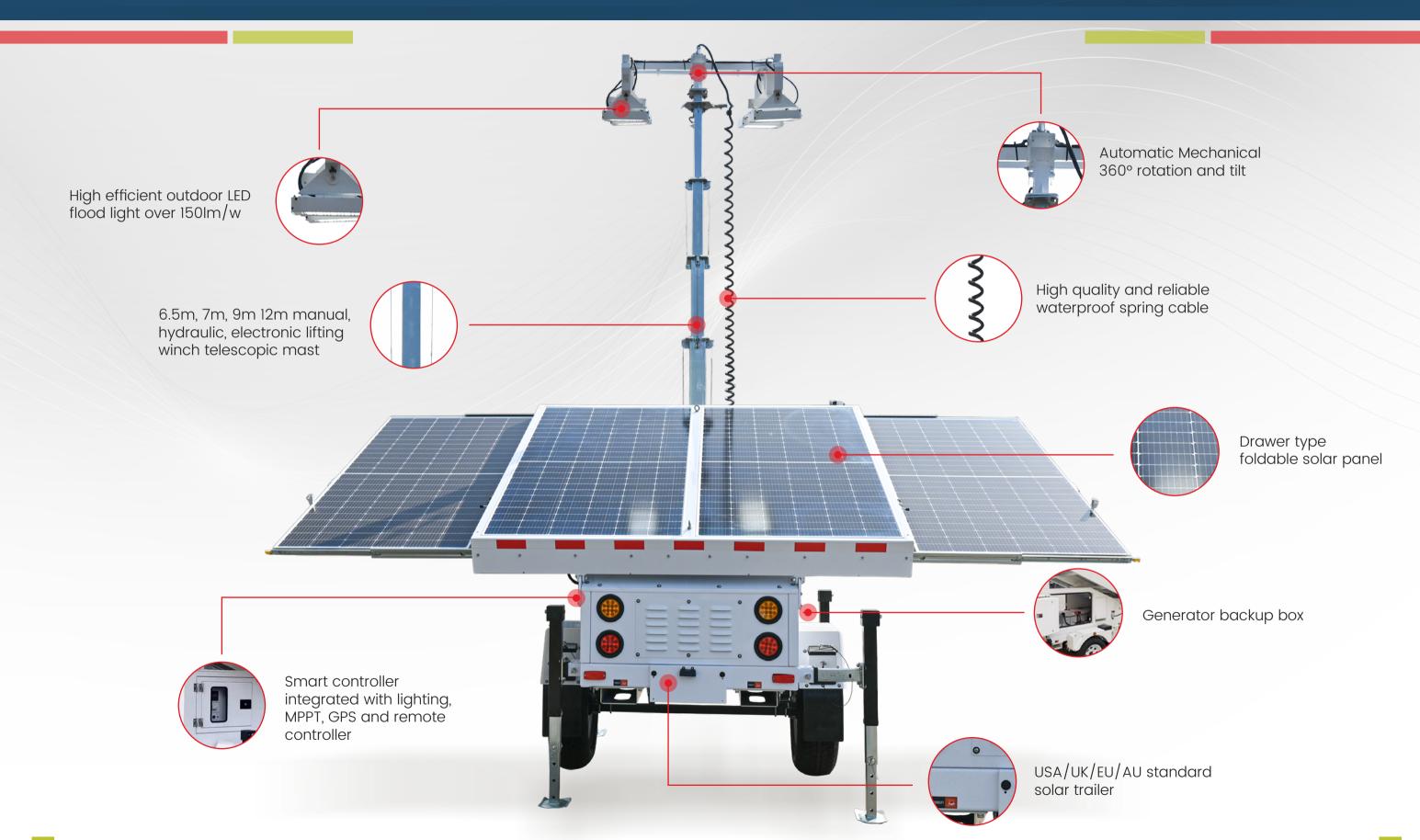




Two Door Each Side

- 1. Easier maintenance
- 2. Friendly using design
- 3. Good ventilation

ABOUT SOLAR LIGHT TOWER

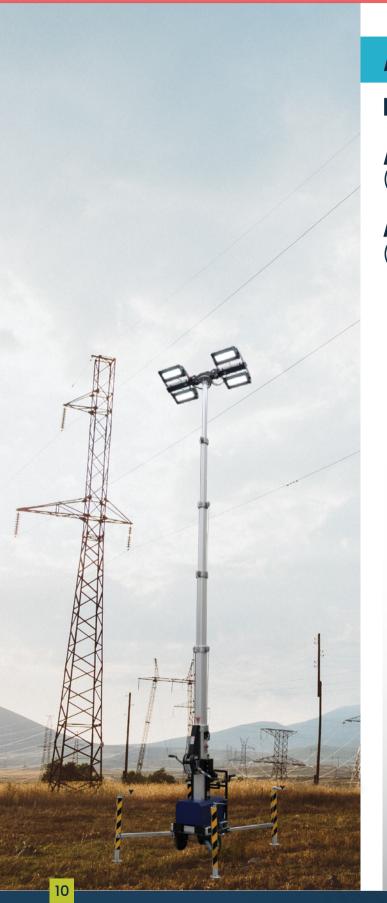


www.alroufled.com

EBP SERIES

BATTERY / ELECTRICAL POWERED

NEXT GENERATION
MOBILE LIGHT TOWER,
DESIGNED FOR
PROFESSIONALS.





Atlas easily replaces diesel driven light towers with much less weight and a fraction of the energy required, delivering low glare, brilliant light coverage in half the size of standard light towers.

NEXT GENERATION MOBILE LIGHT TOWER, DESIGNED FOR PROFESSIONALS

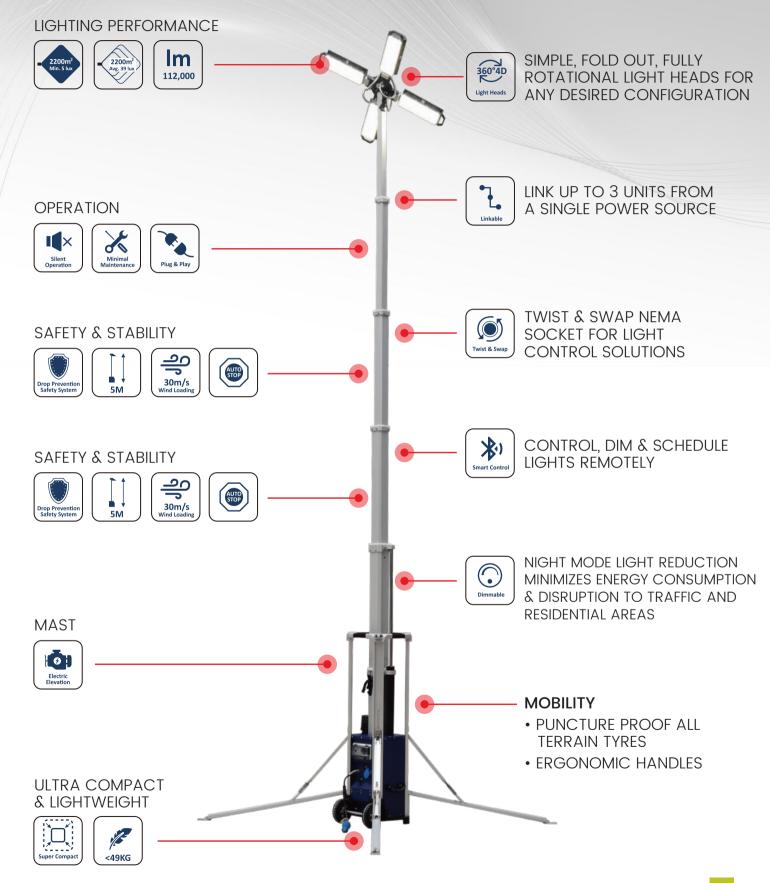


LVSERIES

(Low Voltage)



HIGH PERFORMANCE LIGHTING, LOW CARBON FOOTPRINT



SPECIFICATION PORTABLE LIGHT TOWER





| Item | Description | EBP MODEL | BATTERY OPERATED |
|---------------|-------------------------------|--|---|
| Model | Model No. | MLT-1K2-M (Manual Elevation) | PLT-800 |
| | | MLT-1K2-E (Electric Elevation) | |
| Performance | Illuminated Surface | 4296 m2 | 2200 m2 |
| | System Power | 1,200W | 800 W |
| | Luminous Flux | 168,000 lm | 112,000 lm |
| | Lumen/W | 140 | 140 |
| | Beam Profile | - | 60x60 (adjustable) |
| | Color Temperature (CCT) | 5000K | 5000K |
| Electrical | Operating Voltage | 220-240VAC/50Hz | 100VAC 50/60Hz |
| | Power Factor | >0.92 | >0.92 |
| | Electrical Class | Class I | Class I |
| | Protection | Over Voltage, Over Temperature, Short Circuit | Over Voltage,Over Temperature, Short Circuit |
| | Dimmable | Yes | Yes |
| | Input Plug | CEE 230V | - |
| | Output Socket | Schuko 230V (optional) | - |
| Environmental | Ambient Operating Temp. Range | -30QC to +4SQC | -30°C to +45°C |
| | Storage Temp. Range | -40QC to +80QC | -40°C to +80°C |
| | I K class | IK08 | IK08 |
| | IP class | IP65 (lighting)/ IP54 (chassis) | IP65 (lighting) / IP54 (chassis) |
| | Noise Emissions | < 5 dB(A) | < 5 dB(A) |
| Physical | Fully extended height | 7.1 meters | 5.1 meters |
| | Elevation system | Manual (Electric optional) | Electric |
| | Mast Rotation | 340° | 340° |
| | Mobility | Forklift pockets, crane hook, handles | By hand / crane / forklift |
| | Dimensions (min.) | 788 x 658 x 2046 mm | 358 x 427 x 1200 mm |
| | Dimensions (max.) | 1455 x 1752 x 6930 mm | 1640 x 1640 x 5100 mm |
| | Wind Resistance | 30 m/s | 30 m/s |
| | Housing Finish | UV stabilised powder coating | UV stabilised powder coating |
| | Weight | 217kg | 49kg |
| Approvals | Certifications | CE | PSE |
| | Service life L80 B50 (LED) | >100,000 h | >100,000 h |

SOLAR PANEL

MODEL

HI-MO 6 SCIENTISTS

LR5-54HTH **435~450**M

Suitable for distributed projects

Excellent outdoor power generation performance

High module quality ensures long-term reliability





LR5-54HTH 435~450M

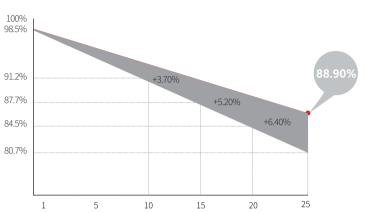
23.0%

O~3%

<1.5%

0.40%

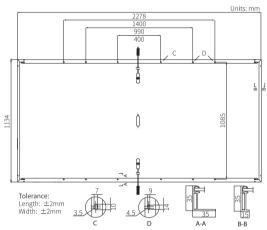
25-Year Power Warranty



| 98.5% | | | | | | |
|-------|---|---|--------|--------|--------|--------|
| 91.2% | | | +3.70% | | | 88.90% |
| 87.7% | | | | +5.20% | | |
| 84.5% | | | | | +6.40% | |
| 80.7% | | | | | | |
| | | | | | | |
| | | | | | | |
| | 1 | 5 | 10 | 15 | 20 | 25 |
| | | | | | | |
| | | | | | | |



| Mechanical P | arameters |
|------------------|--|
| Cell Orientation | 108 (6X 18) |
| Junction Box | IP68, three diodes |
| Output Cable | 4mm', ±1200mm length can be customized |
| Glass | Single glass, 3.2mm coated tempered glass |
| Frame | Anodized aluminum alloy frame |
| Weight | 20.8kg |
| Dimension | 1722X 1134X30mm |
| Packaging | 36pcs per pallet / 216pcs per 20' GP / 936pcs per 40' HC |



| Electrical Characteristics | STC : AM1.5 1000 | | | M1.5 800W | | | | |
|----------------------------------|------------------|---------|---------|-----------|---------|----------|------------|--------|
| Module Type | LR5-54H | TH-435M | LR5-54H | TH-435M | LR5-54F | ITH-445M | I LR5-54HT | H-450M |
| Testing Condition | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT |
| Maximum Power (Pmax/W) | 435 | 325 | 440 | 329 | 445 | 332 | 450 | 336 |
| Open Circuit Voltage (Voc/V) | 39.33 | 36.93 | 39.53 | 37.11 | 39.73 | 37.30 | 39.93 | 37.49 |
| Short Circuit Current (Isc/A) | 14.22 | 11.49 | 14.30 | 11.55 | 14.37 | 11.61 | 14.45 | 11.67 |
| Voltage at Maximum Power (Vmp/V) | 33.04 | 30.15 | 33.24 | 30.33 | 33.44 | 30.51 | 33.64 | 30.70 |
| Current at Maximum Power (Imp/A) | 13.17 | 10.78 | 3.24 | 10.85 | 13.31 | 10.90 | 13.38 | 10.95 |
| Module Efficiency(%) | 22 | .3 | 22 | 2.5 | 22 | 2.8 | 23 | 3.0 |

| Operating Parameters | |
|------------------------------------|------------------------------|
| Operational Temperature | -40'C ~ +85'C |
| Power Output Tolerance | 0~3% |
| Voe and Isc Tolerance | ±3% |
| Maximum System Voltage | DCIS00V (I EC/UL) |
| Maximum Series Fuse Rating | 25A |
| Nominal Operating Cell Temperature | 45±2'C |
| Protection Class | Class II |
| Fire Rating | Ultype 1 or 2 IEC Class C |



130~460W

166*83MM



Half-cut Technology

New circuit design, lower internal current and lower internal resistance loss



Significantly avoiding heat spot

The unique circuit design to reduce the temperature of heat spot significantly, so that to reduce the power loss and then increase the output of modules.



Lower cost

Increasing power generation can reduce the cost per kilowatt-hour



Excellent performance of PID resistance

The performance of PID resistance (Potential Induced Degradation) passed the standard of TUV Nord.



TECHNICAL SPECIFICATIONS SOLAR PANEL RATINGS

Electrical Data (STC)

| Model Type | ODA430-36V-MH | ODA440-36V-MH | ODA450-36V-MH | ODA460-36V-MH |
|-----------------------------|---------------|---------------|---------------|---------------|
| Peak Power (Pmax) | 430.00 | 440.00 | 450.00 | 460.00 |
| Maximum Power Voltage (Vmp) | 40.70 | 41.10 | 41.50 | 41.90 |
| Maximum Power Current (Imp) | 10.57 | 10.71 | 10.85 | 10.99 |
| Open Circuit Voltage (Voc) | 48.50 ±3% | 48.90 ±3% | 49.30 ±3% | 49.70 ±3% |
| Short Circuit Current (Isc) | 11.31 ± 3% | 11.46 ± 3% | 11.60 ± 3% | 11.72 ± 3% |
| Module Efficiency (%) | 19.78 | 20.24 | 20.74 | 21.16 |

STC: Irradiance 1000 W/ m^2 , AM1.5 and cell temperature of 25°c

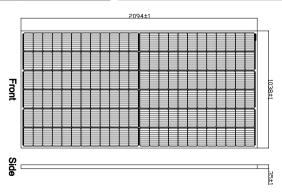
Electrical Data (NOCT)

| Model Type | ODA430-36V-MH | ODA430-36V-MH | ODA430-36V-MH | ODA430-36V-MH |
|-----------------------------|---------------|---------------|---------------|---------------|
| Peak Power (Pmax) | 321.10 | 328.60 | 336.10 | 343.50 |
| Maximum Power Voltage (Vmp) | 37.90 | 38.30 | 3860 | 39.00 |
| Maximum Power Current (Imp) | 8.47 | 8.59 | 8.70 | 8.80 |
| Open Circuit Voltage (Voc) | 45.50±3% | 45.80±3% | 46.20±3% | 46.60±3% |
| Short Circuit Current (Isc) | 9.15±3% | 9.27±3% | 9.38±3% | 9.48±3% |

STC: Irradiance 800 W/m², AM1.5 ambient temperature 20°c, wind speed lm/d

| Temperature & Maximum Rating | |
|---|-------------|
| Maximum System Voltage (V) | 1500 V |
| Maximum Series Fuse Rating (A) | 20A |
| Power Tolerance | 0~+3 W |
| Pmax Temperature Coeffcients (W/°C) | -0.350 %/°C |
| Voc Temperature Coeffcients (V/°C) | -0.270 %/℃ |
| Isc Temperature Coeffcients (A/°C) | +0.048 %/°C |
| NOCT Nominal Operating Cell Remperature ($^{\circ}$ C) | 45±2°C |
| Operating and Storage Temperature (°C) | -40~+85°C |
| | |

| Mechanical Characteristics | | | | |
|--------------------------------|--|--|--|--|
| Cell Type | 166*83□Mono | | | |
| No. of Cells | 144 (12*12) | | | |
| Dimensions 2094*1038*35mm | | | | |
| Weight | 23.50kg | | | |
| Front Glass | 3.2mm high transmission low iron, tempered glass | | | |
| Frame Anodized Aluminium Alloy | | | | |
| Junction box | IP67/IP68 3diodes | | | |
| Output cables | 4mm² cable 35cm (Inlcuding MC4 connector) | | | |
| MaxWind Load/Snow Load | 2400Pa/5400Pa | | | |



(50A-100A) SERIES CHARGE CONTROLLER



OVERVIEW

Tracer-AN (50A-100A) series is the largest charge controller series in EPEVER's product range and can take up to 5KW solar panel. For even more power, the user can use PAL-ADP-50N to connect max. 6 units of a controller in parallel for up to 30KW system. The multiple dry contact signals are designed for a diversified application.



Features

MPPT tracking efficiency above 99.5%

Maximum charge conversion efficiency as high as 98%

Support lead-acid and lithium-ion batteries

Common negative grounding, Charging current up to 100A

Charging power and current limitation function

High-temperature charging power derating function

3 relays design for different demand: utility, generator and load

Support up to 6 units in parallel

Remote temperature and voltage sensor design

Isolated RS-485 with 5VDC/200mA and MODBUS protocol

Nitharlands for MPPT

Blotooth feature



Solar Car



Solar Boat



Solar Home



Solar Street Light



Solar Backpack



Solar Power Generator



MPPT SOLAR CHARGE CONTROLLER

| Model | Tracer 6210AN | Tracer 5415AN | Tracer 6415AN | Tracer 8415AN | Tracer 10415AN | Tracer 5420AN | Tracer 6420AN | Tracer 8420AN | Tracer 10420AN |
|---|--|---|---|--|--|---|---|--|--|
| Nominal system voltage | 12/24VDC/Auto | | | 12/24 | /36/48VDC/ | Auto | | | |
| Battery type | Lead-acid (Sealed/Gel/Flooded)/Lithium (LiFePO4/Li(NiCoMn)O2)/User | | | | | | | | |
| Battery input voltage ange | 8V~32V | 8V~68V | 8V~68V | 8V~68V | 8V~68V | 8V~68V | 8V~68V | 8V~68V | 8V~68V |
| Rated charge current | 60A | 50A | 60A | 80A | 100A | 50A | 60A | 80A | 100A |
| Rated charge power | 750W/12V 1500W/24V | 625W/12V 1250W/24V 1875W/36V 2500W/48V | 750W/12V 1500W/24V 2250W/36V 3000W/48V | 1000W/12V 2000W/24V 3000W/36V 4000W/48V | 1250W/12V 2500W/24V 3750W/36V 5000W/48V | 625W/12V 1250W/24V 1875W/36V 2500W/48V | 750W/12V 1500W/24V 2250W/36V 3000W/48V | 1000W/12V 2000W/24V 3000W/36V 4000W/48V | 1250W/12V 2500W/24V 3750W/36V 5000W/48V |
| Max. conversion efficiency | 98.00% | 98.30% | 98.60% | 98.50% | 98.60% | 98.30% | 98.10% | 98.50% | 98.50% |
| racking efficiency | | ı | | | ≥99.5% | | | | |
| Max. PV open circuit voltage | 100V (At minimum operating environment temperature) 92V (At 25°C environment temperature) | | imum operating C environment to | g environment te emperature) | emperature) | | nimum operating C environment to | | emperature) |
| MPP voltage range | (Battery Voltage +2V)∼72V | (Battery Vol | tage +2V)~108 | iV | | (Battery Vol | tage+2V)~144\ | / | |
| Equalization voltage | | Se | ealed:14.6V,Flo | ooded:14.8V,U | ser-defined: | 9-17V | | | |
| Boost voltage | | Gel:14. | 2V,Sealed:14.4 | 4V,Flooded:14 | .6V,User-defir | ned:9-17V | | | |
| Float voltage | | G | el/Sealed/Flo | ooded:13.8V,U | ser-defined:9 | 9-17V | | | |
| ow voltage reconnect | | G | el/Sealed/Flo | ooded:12.6V,U | ser-defined:9 | 9-17V | | | |
| ow voltage disconnect voltage | | G | el/Sealed/Fl | ooded:11.1V,Us | er-defined:9 | -17V | | | |
| Self-consumption | | 98 | 8mA/12V;60r | nA/24V;50m/ | A/36V;46mA, | /48V | | | |
| emperature compensation (for lead-acid battery) | | | -3 | mV/°C/2V(D | efault) | | | | |
| Relative humidity | | | | 5% to 95% (N | .c.) | | | | |
| nclosure | | | | IP20 | | | | | |
| Communication interface | | RS4 | 85(5VDC/20 | 00mA, Two RJ | 45 ports in po | arallel) | | | |
| Grounding | | | C | common neg | ative | | | | |
| Operating temperature ange | `-25°C ~+60°C (derating above 45°C) | | | | | | | | |
| Dimensions (LXWXH) (mm) | 340×232×105.2 | 261×216×119 | 340×236×119 | 394×240×134 | 394×242×143 | 261×216×119 | 340×236×119 | 394×240×134 | 394×242×14 |
| Net weight | 3.5kg | 3.5kg | 4.5kg | 6.1kg | 7.4kg | 3.5kg | 4.5kg | 6.1kg | 7.4kg |
| | atically identify system voltage | if lithiums bott | | | | | <u> </u> | | <u> </u> |











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