



New Epoch , New Energy

WORK TOGETHER  
FOR A WIN-WIN

## New Beginning

Renewable energy,energy saving  
and environment friendly,let us  
with Epoch for a better future.



Power Your Car



# E-Star-EH1



## PV+ESS Integrated System

EPOCH 10.36KW



### Convenient Transportation

The integrated system is compact and flexible after settled, and can be transported in the form of container.

### Simple Installation

After unloading from the container, it can be deployed on the ground and used immediately.

### Long-Lasting

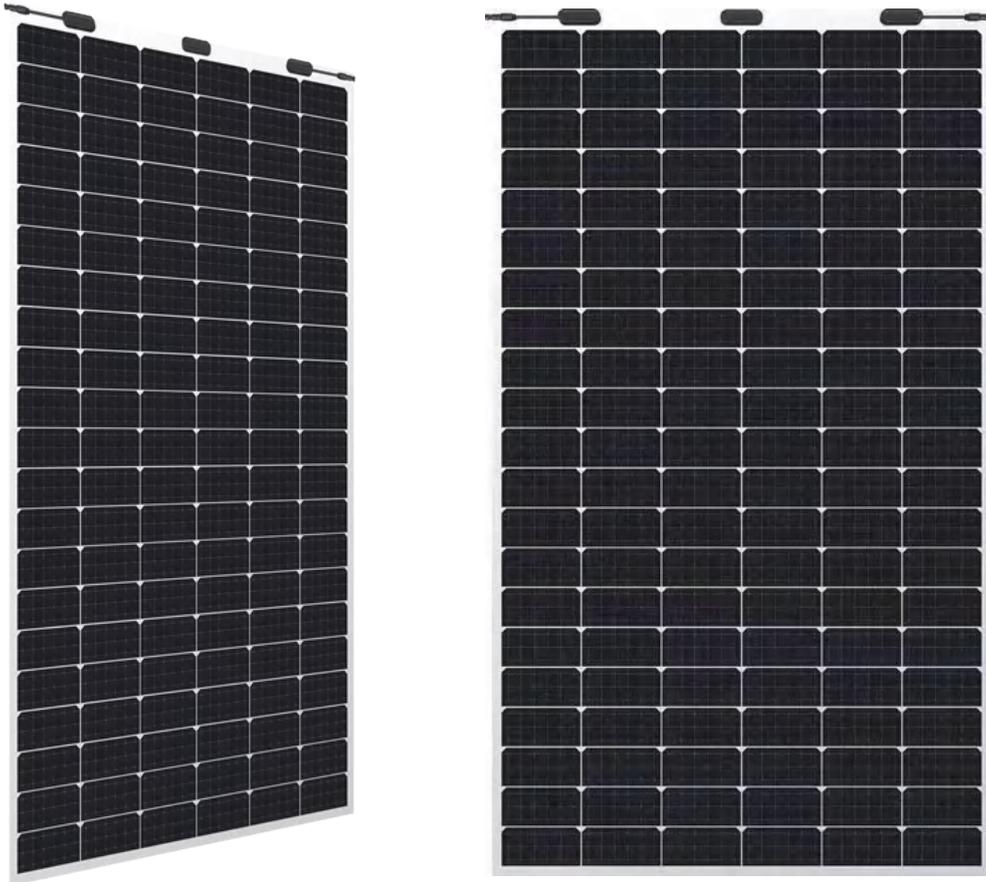
10.36kW PV modules can generate about 50 to 60 kWh within 8 hours a day. Except the daily use, built-in energy storage system can store excess electricity for standby

# E-Star-EH1



## MWT Flexible monocrystalline silicon high-efficiency PV Module

EPOCH 365-385W



### Lightweight and ultra-thin design

The weight of the module is as light as 5.7kg and the thickness is as thin as 2.5mm, meeting the requirements of various low-load projects

### Ultra-high flexibility

Ultra-thin silicon chips and advanced organic polymer packaging materials are used for ultra-high flexibility and toughness, with a minimum bending radius of 0.30m, which can perfectly fit various curved roofs

### Efficient and reliable

There is no main grid at the front to improve the PV conversion efficiency, and the power generation performance is excellent under weak light conditions

### Customizable

Products can be customized to meet the needs of different application scenarios

### Convenient installation

Convenient and fast installation and transportation, saving a lot of installation and transportation costs

### Lead-free environmental protection

Adhering to the concept of green PV design, with the lead-free technology and materials

| Model | SPP365EH | SPP370EH | SPP375EH | SPP380EH | SPP385EH |
|-------|----------|----------|----------|----------|----------|
|-------|----------|----------|----------|----------|----------|

## Performance parameters (Pm)

|                                    |       |       |       |       |       |
|------------------------------------|-------|-------|-------|-------|-------|
| Maximum power (Pm)/(w)             | 365   | 370   | 375   | 380   | 385   |
| Power tolerance                    | 0~+5  |       |       |       |       |
| Optimal working voltage (Vm)       | 34.9  | 35.1  | 35.3  | 35.5  | 35.7  |
| Optimal working current (Im)       | 10.46 | 10.54 | 10.62 | 10.70 | 10.78 |
| Open circuit voltage (Voc)         | 42.4  | 42.6  | 42.8  | 43.0  | 43.2  |
| Short circuit current (Isc)        | 11.09 | 11.16 | 11.23 | 11.30 | 11.35 |
| Effective efficiency of components | 20.7  | 21.0  | 21.2  | 21.5  | 21.8  |

STC:AM=1.5, Irradiance 1000W/m<sup>2</sup>, Module temperature 25, maximum power test uncertainty ±3%

## Performance parameters (NMOT)

|                              |      |      |      |      |      |
|------------------------------|------|------|------|------|------|
| Maximum power (Pm)/(w)       | 274  | 278  | 282  | 286  | 290  |
| Optimal working voltage (Vm) | 32.8 | 33.0 | 33.2 | 33.4 | 33.6 |
| Optimal working current (Im) | 8.35 | 8.42 | 8.49 | 8.56 | 8.64 |
| Open circuit voltage (Voc)   | 39.9 | 40.1 | 40.3 | 40.5 | 40.7 |
| Short circuit current (Isc)  | 8.91 | 8.98 | 9.05 | 9.12 | 9.19 |

NMOT: irradiance 800W/m<sup>2</sup>, Ambient temperature 20, wind speed 1m/s

## Temperature coefficient

|   |           |
|---|-----------|
| Rated operating temperature of battery (NMOT) | 43±2°C    |
| Power temperature coefficient                 | -0.36%/°C |
| Voltage temperature coefficient               | -0.28%/°C |
| Current temperature coefficient               | 0.06%/°C  |

## Mechanical Capacity

|   |  |
|---|--|
| Installation dimension (length × wide × High) | 1840mm×1040mm×2.5mm                                |
| Weight  | 5.7 kg   |
| Backing material                              | Backboard (white)                                  |
| Cell  | 126 (21x6)/single crystal/half piece               |
| Packaging materials                           | POE  |
| Frame   | No frame   |
| Protection grade of junction box              | IP68   |
| Cable specification (length/sectional area)   | Customized according to customers/4mm <sup>2</sup> |
| Connector                                     | MC4 compatible                                     |
| Bending radius                                | 0.3m   |

## Working conditions

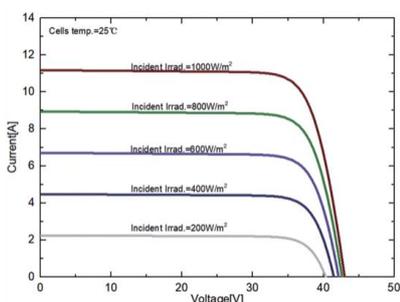
|                             |              |
|-----------------------------|--------------|
| Maximum system voltage      | DC1500V(IEC) |
| Maximum fuse rated current  | 18A          |
| Operating temperature range | -40°C~+85°C  |

## Package

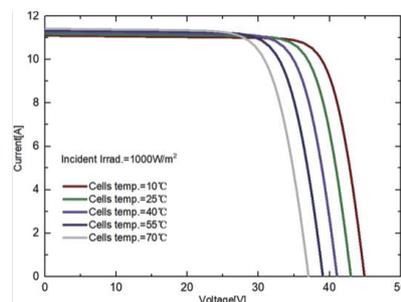
| Type of shipping               | container | Platform trailer | Platform trailer |
|--------------------------------|-----------|------------------|------------------|
| Specifications                 | 40'HQ     | 13m              | 17.5m            |
| Number of Modules percontainer | 1104      | 1196             | 1564             |
| Number of Modules per pallet   | 46        | 46               | 46               |

## IV - Curve

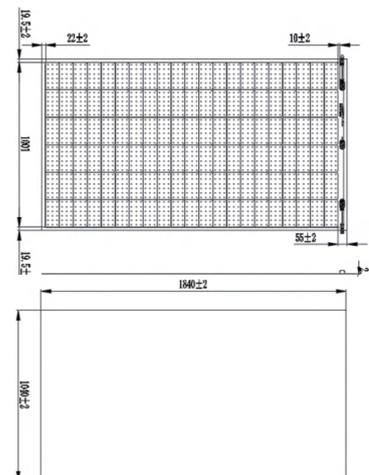
I-V curve under different irradiance(SPP375QHES)



I-V curve at different operating temperatures (SPP375QHES)



## Module Size



# E-Star-EH1

RESIDENTIAL SERIES



## POWER

8/10/12kW inverter

## CAPACITY

Battery modular design  
Power capacity expandable



## Multi-protection

Input Reverse Polarity/Anti-island  
Over-heat/AC Overcurrent  
AC Short-circuit/AC Overvoltage  
DC Surge/AC Surge Protection



PV MPPT Voltage Range 180V~850V  
Support GPRS/WIFI/RS485/USB  
PV overload capability up to130%

| Model  | ESI-8KW-H3   | ESI-10KW-H3 | ESI-12KW-H3 |
|--|--|-------------|-------------|
| <b>PV Input Data</b>                             |  |             |             |
| Maximum input power (kW)                         | 10.4   | 13          | 15.6        |
| Maximum input voltage (V)                        | 1000   |             |             |
| MPPT operating voltage range (V)                 | 180~850V   |             |             |
| Number of MPPT /strings per MPPT                 | 2/1  |             |             |
| Maximum input current (A)                        | 12.5/12.5  |             |             |
| MPPT Efficiency                                  | 99.50%   |             |             |
| Maximum efficiency                               | 97.9%  | 98.2%       | 98.2%       |
| Battery efficiency                               | 97.20%   |             |             |
| Euro Efficiency                                  | 97.2%  | 97.5%       | 97.5%       |
| <b>AC parameters (Grid tie )</b>                 |  |             |             |
| Rated power (kw)                                 | 8.8  | 11          | 13.2        |
| Maximum apparent power (kVA)                     | 8.8  | 11          | 13.2        |
| Rated Voltage(Vac)                               | 3L+N+PE,230/400V   |             |             |
| Rated frequency(Hz)                              | 50/60  |             |             |
| Maximum output current (A)                       | 12.7   | 15.9        | 19.1        |
| Power factor range                               | 0.8 leading ~ 0.8 lagging  |             |             |
| Current Total Harmonic Distortion (@rated power) | <3%  |             |             |
| <b>AC output parameters (Off grid )</b>          |  |             |             |
| Maximum apparent output power (kVA)              | 8.8  | 11          | 13.2        |
| Rated output voltage (Vac)                       | 3W+N+PE,230/400V   |             |             |
| Rated output frequency (Hz)                      | 50/60  |             |             |
| Maximum output current (A)                       | 12.7   | 15.9        | 19.1        |
| Auto switch time (ms)                            | <20  |             |             |
| Overload capacity                                | 110%,30S/120%,10S/150%,0.02S   |             |             |
| <b>Battery Pack Data</b>                         |  |             |             |
| Battery pack model                               | ES-256V32AH  |             |             |
| Cell type  | Li-ion(LFP)  |             |             |
| Rated voltage (V)                                | 256  |             |             |
| Operating voltage range (V)                      | 240~288V   |             |             |
| Battery Capacity(Ah)                             | 32   |             |             |
| Storage Capacity (kWh)                           | 8.2/16.4/24.6/32.8/41/49.5   |             |             |
| cycle life                                       | 10000*   |             |             |
| <b>Battery Output Data</b>                       |  |             |             |
| Maximum charging voltage (V)                     | 600  |             |             |
| Battery Voltage Range(V)                         | 125~600V   |             |             |
| Full load battery voltage (V)                    | 210  | 270         | 250         |
| Rated charge / discharge current (A)             | 40   |             | 50          |
| Communication Interface                          | CAN  |             |             |
| <b>General Data</b>                              |  |             |             |
| working temperature range                        | -25~60°C   |             |             |
| Working altitude (m)                             | No derating below 2000m  |             |             |
| Noise Figure (dB)                                | <35  |             |             |
| Topology   | Transformerless  |             |             |
| cooling method                                   | Non-Isolated   |             |             |
| Protection class                                 | IP65   |             |             |
| Humidity   | 0~95%  |             |             |
| Human-computer interaction                       | LCD  |             |             |
| Communication                                    | CAM/RS485/DRM/WIFI (optional) /4G (optional)   |             |             |
| Dimensions(w*D*H)(mm)                            | 530* 200* 600  |             |             |
| Warranty   | 5 years (optional 10 years)  |             |             |
| Weight(kg)                                       | 140/215/285/360/435/510  |             |             |
| <b>Certification</b>                             |  |             |             |
| Certificates                                     | VDE-AR-N 4105EN/IEC 61000-1/-2/-3/-4,IEC61000-3-11/12,UN38-3<br>VDE-AR-N 2510-50,IEC/EN 62109-1,IEC 62619,EN 50549,CEI 0-21,CE |             |             |

# E-Star-EH



## EV Charger

EPOCH 3.5/11W



## ESI-3.5kw-EH

1. Bluetooth connectable, support APP flexible operation
2. Intelligent dual temperature controlling, avoid overheating during charging
3. Support dual reservation charging of APP/ device
4. 4 stages of current adjustable, good compatibility
5. Patented adapter, more intelligent switching
6. IP66 protection upgrade, no fear of dust and rain
7. Assured by PICC, worry-free use
8. Grounding reminder, power supply reassurance

## ESI-11kw-EH

1. Online app management, intelligent and convenient
2. 9 Safety protections, more safe to use
3. Share free charging with families and friends
4. Support appointment charging, which saves more money

| Model | ESI-3.5kw-EH | ESI-11kw-EH |
|-------|--------------|-------------|
|-------|--------------|-------------|

## Product parameters

|                      |       |         |
|----------------------|-------|---------|
| Power Max            | 3.5Kw | 11Kw    |
| Voltage (V)          | 220V  | 380V~AC |
| Electric current (A) | 16A   | 32A     |

## General parameters

|                     |   |   |
|---------------------|---|---|
| Product size        | 245x100x60 (mm) (high x wide x deep)                  | 345x192x115 (mm) (high x wide x deep)                 |
| Length              | 5/10/15/20m   | 6m  |
| Usage               | Plug and Play   | Swipe charging, Bluetooth connection                  |
| Protection grade    | IP66 (Control box), IP55(Gun head – coupling state)   | Enclosure protection grade IP55                       |
| Working temperature | -20°C~+50°C   | -20°C~+50°C   |
| Cable specification | EV-(R)EYS90 3x6mm <sup>2</sup> +2x0.75mm <sup>2</sup> | EV-(R)EYS90 3x6mm <sup>2</sup> +2x0.75mm <sup>2</sup> |
| Standards           | Q/GM SX0101002-2022                                   | GB/T 18487.1-2015                                     |

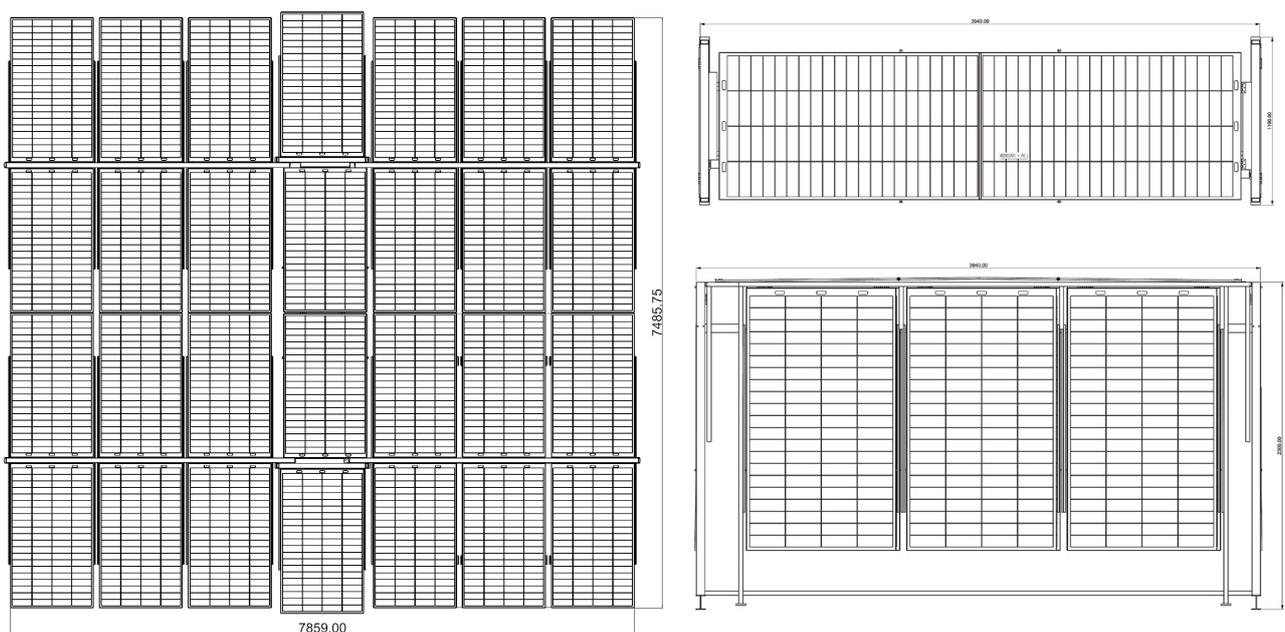
### ESI-3.5kw-EH

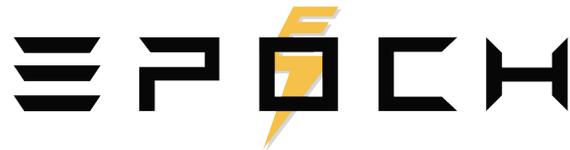
|   |   |   |   |
|---|---|---|---|
| 1.Smart and convenient charging,safe and convenient | 2.Operate on the moile phone for charging | 3.4 stages of current can be easily adjusted and the speed can be freely selected | 4.Intelligent dual-temperature controlling design does not overheat when charging |
|---|---|---|---|

### ESI-11kw-EH

|                          |  |  |   |
|--------------------------|--|--|---|
| 1.Protect the car&poeple | 2.Remote start and stop can also be charged at will when traveling | 3.Share charging with friends and relatives for free | 4.Support Tesla full-line charging Support mainstream EVs |
|--------------------------|--|--|---|

## Size of PV modules of the integrated system





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