

Silence the Noise, Harvest the Sun

POLYSHINE
SOLAR

POLYSHINE® FLEXSOLAR SOLUTIONS

YY Series – Solar Acoustic Panel for Transportation Infrastructure

20 Years

of Polymer Materials Expertise Proven Outdoor Performance

20,000⁺

Hours of Aging Tests

Product Features



Sound insulation of 26 dB (standard product)



Thermal insulation compliant with GB/8424-2020



Anti-glare surface with gloss ≤ 6 GU at 60° incidence



Zero spontaneous breakage, reducing secondary injury risk



Dimensions customized for seamless integration with acoustic barriers

Technical Support & Advanced Material Technologies



Polymer Chain Group Modification Technology

- Front sheet light transmittance $\geq 91\%$.
- Water vapor transmission rate $< 0.8\text{g}/\text{m}^2 \cdot \text{day}$.
- 25-year power warranty, ensuring long-term high performance.



Enhanced Resin-Fiber Interface Technology

- Static load resistance up to 5400 Pa.
- IEC61215 hail test certified.



Fire-rated acoustic core technology

- Complies with GB 8624 B1 fire rating.
- Certified to EN 13501 Class B for building materials.

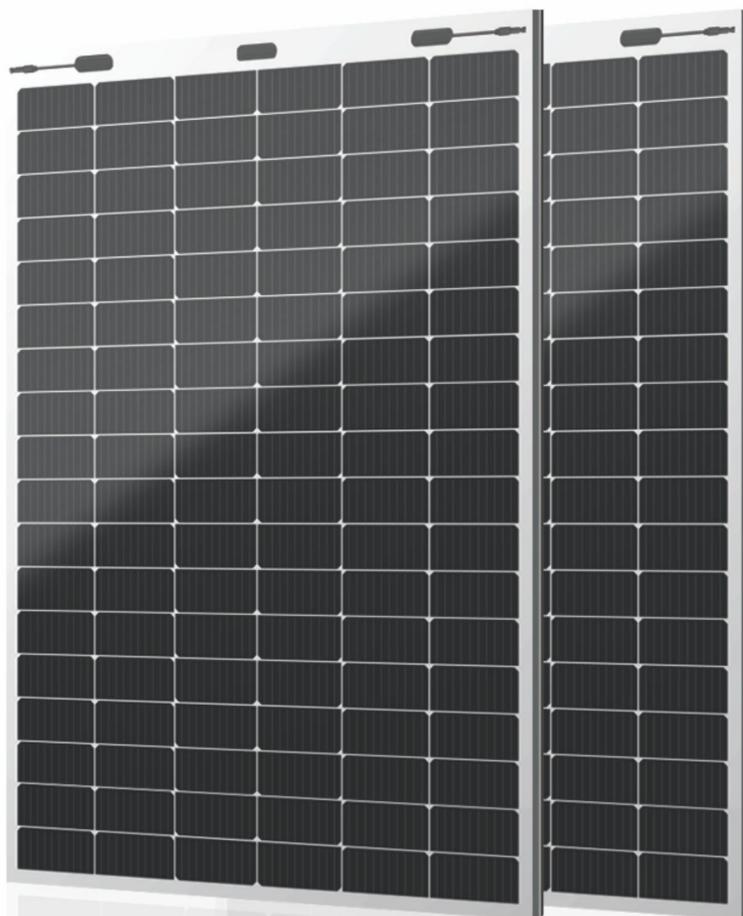


Nano Oxide Coating Self-Cleaning Technology

- Inhibits static electricity and dust accumulation, reducing hot spot effects.
- Quick rinse cleaning boosts power generation by 3-5%.

YY1-54H400PC

380~410w



Application Scenarios

Applications: Roadside noise barriers, stadiums, and other venues requiring sound insulation or flame-retardant performance



POLYSHINE SOLAR CO., LTD.

Address: 288 Mao Road, Qingpu District, Shanghai 201716, China

YY1-54HxxxPC 380~410w

ELECTRICAL CHARACTERISTICS AT STANDARD TEST CONDITIONS(STC)

| Specification/Model | Unit | YY1-54H380PC | YY1-54H385PC | YY1-54H390PC | YY1-54H395PC | YY1-54H400PC | YY1-54H405PC | YY1-54H410PC |
|-------------------------------|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Maximum Power(Pm) | W | 380 | 385 | 390 | 395 | 400 | 405 | 410 |
| Power Tolerance | W | 0~+5W | | | | | | |
| Optimum Operating Voltage(Vm) | V | 30.23 | 30.38 | 30.54 | 30.69 | 30.85 | 31.02 | 31.18 |
| Optimum Operating Current(Im) | A | 12.59 | 12.69 | 12.79 | 12.89 | 12.99 | 13.08 | 13.17 |
| Open Circuit Voltage(Voc) | V | 36.00 | 36.20 | 36.40 | 36.60 | 36.80 | 37.00 | 37.20 |
| Short Circuit Current(Isc) | A | 13.42 | 13.49 | 13.56 | 13.63 | 13.70 | 13.76 | 13.82 |
| Module Efficiency(ηm) | % | 19.2 | 19.5 | 19.7 | 20.0 | 20.2 | 20.5 | 20.7 |

STC: AM=1.5, irradiance1000W/m², Component temperature25°C

ELECTRICAL CHARACTERISTICS AT NMOT CONDITIONS

| Specification/Model | Unit | YY1-54H380PC | YY1-54H385PC | YY1-54H390PC | YY1-54H395PC | YY1-54H400PC | YY1-54H405PC | YY1-54H410PC |
|-------------------------------|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Maximum Power(Pm) | W | 286 | 290 | 294 | 298 | 302 | 306 | 310 |
| Optimum Operating Voltage(Vm) | V | 28.09 | 28.24 | 28.42 | 28.55 | 28.70 | 28.85 | 29.00 |
| Optimum Operating Current(Im) | A | 10.21 | 10.30 | 10.39 | 10.47 | 10.55 | 10.62 | 10.71 |
| Open Circuit Voltage(Voc) | V | 33.80 | 34.00 | 34.20 | 34.40 | 34.60 | 34.80 | 35.00 |
| Short Circuit Current(Isc) | A | 10.70 | 10.77 | 10.85 | 10.90 | 10.96 | 11.01 | 11.08 |
| Certified | TÜV | | | | | | | |

NMOT: irradiance 800W/m², ambient temperature20°C, wind speed1m/s

TEMPERATURE COEFFICIENT

| | |
|--|-----------|
| Nominal Module Operating Temperature(NMOT) | 41±2°C |
| Temperature Coefficient of Power | -0.36%/°C |
| Temperature Coefficient of Voltage | -0.26%/°C |
| Temperature Coefficient of Current | 0.04%/°C |

OPERATING CONDITIONS

| | |
|-----------------------------|---------------|
| Maximum System Voltage | DC1500V(IEC) |
| Maximum Series Fuse Rating | 20A |
| Operating Temperature Range | -40°C ~ +85°C |

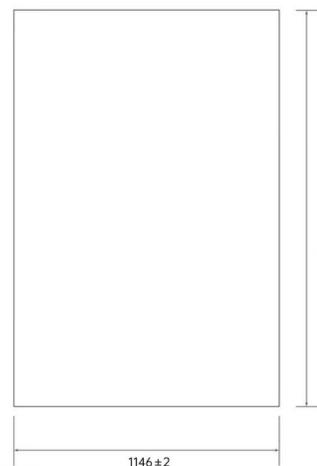
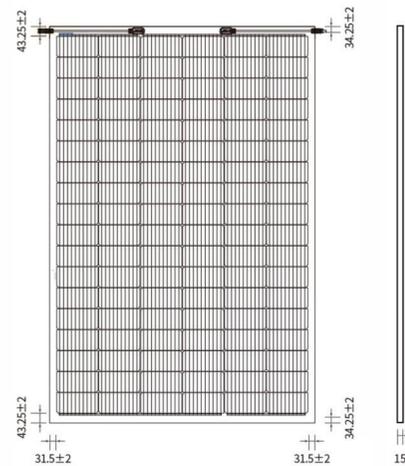
MECHANICAL CHARACTERISTICS

| | |
|------------------------|--|
| Dimensions (L×W×H) | 1741mm×1146mm×13mm (without junction box) |
| Weight | 14.2kg |
| Backsheet Type | Backsheet(White) |
| Cell | P-Type |
| Encapsulant Material | EVA/POE |
| Frame Material | Frameless |
| Weight per Unit Area | 6.98kg/m ² |
| Power per Unit Area | 185.6~202.2W/m ² |
| Connector Type | MC4-Compatible |
| Junction Box IP Rating | IP68 |
| Cable Specification | 4mm ² , 400mm Or customized by customers |

PACKAGING & TRANSPORTATION

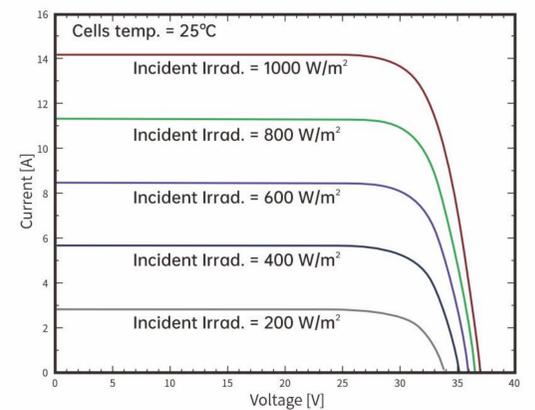
| Transport Mode | Specification | Qty per Container (40HQ) | Qty per Pallet |
|----------------|---------------|--------------------------|----------------|
| Container | 20'GP | 140pcs | 28pcs |
| Container | 40'HQ | 280pcs | 28pcs |
| Flatbed Truck | 13m | 616pcs | 28pcs |
| Flatbed Truck | 17.5m | 840pcs | 28pcs |

MODULE SIZE

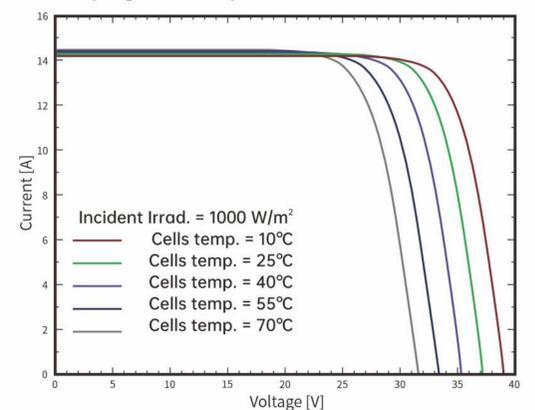


I-V CURVE

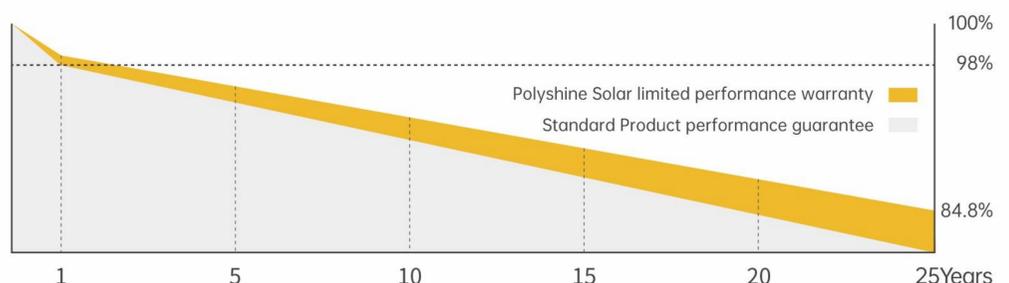
Current-voltage characteristics at varying irradiance



Current-voltage characteristics at varying cell temperature



PERFORMANCE WARRANTY



12Yrs QUALITY
25Yrs POWER

- ※ The power output shall not be less than 98% of the minimum output power specified in the product datasheet during the first year from the date the system is installed and operating normally;
- ※ Annual degradation ≤0.55% thereafter;
- ※ ≥84.8% by year 25, based on the minimum output specified in the datasheet.