

Benchmark II SPP305-335M60

305-335W MWT Module

Mono 60 Cells

20.6%

Module efficiency up to 20.6%

MWT Solar Cell

- New cell structure and different manufacturing process.
- No bus-bar on the front. 3% less shadow and better use of sunlight.
- Effectively avoid the micro crack caused by the pressure between cell edge and ribbon.
- Compatible with other cell types including PERC, HIT, Black Silicon etc.

Insured by PICC and LLOYD'S

PICC **LLOYD'S**

Comprehensive Qualifications & Certifications

- ★ IEC 61215, IEC 61730, IEC 61701, IEC 62716, IEC 60068-2-68.
- ★ CQC&CGC Top Runner Advanced Technology Certification (4A class)
- ★ ISO 9001; 2015 Quality Management System
- ★ ISO 14001; 2015 Environment Management System
- ★ OHSAS 18001; 2007 Occupation Health Safety Management System
- ★ TÜV NORD and UK NQA Quality System Certification



Benchmark MWT PV Module



Higher Efficiency

The highest efficiency of the series is up to 20.6%.



Higher Yield

Higher power generation on the same installation.



Lower Degradation

At least 98% of the initial effective output at the 1st year and 80% at the 30th year.



Heat-Resistant

Remain peak performance in hot days thanks to the improved temperature coefficient as low as $-0.36\%/^{\circ}\text{C}$.



Corrosion-Resistant

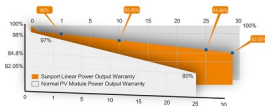
Certified for Ammonia Resistance and Salt Mist Corrosion to maximum severity level 6.



Anti-PID

Certified for Anti-PID under $85^{\circ}\text{C}/85\%\text{RH}$, for 288hrs.

30 Years Performance Warranty



Electrical Characteristics at Standard Test Conditions(STC)

| Spec/Model | Unit | SPP305M60 | SPP310M60 | SPP315M60 | SPP320M60 | SPP325M60 | SPP330M60 | SPP335M60 |
|---|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Max-Power(Pm) | W | 305 | 310 | 315 | 320 | 325 | 330 | 335 |
| Power Tolerance | % | | | | 0~+3% | | | |
| Max-Power Voltage(Vm) | V | 31.8 | 32.0 | 32.2 | 32.4 | 32.6 | 32.8 | 33.0 |
| Max-Power Current(I _m) | A | 9.60 | 9.69 | 9.79 | 9.88 | 9.97 | 10.07 | 10.16 |
| Open-Circuit Voltage(Voc) | V | 39.0 | 39.2 | 39.4 | 39.6 | 39.8 | 40.0 | 40.2 |
| Short-Circuit Current(I _{sc}) | A | 10.12 | 10.20 | 10.28 | 10.36 | 10.44 | 10.52 | 10.62 |
| Module Efficiency(η _m) | % | 18.7 | 19.1 | 19.4 | 19.7 | 20.0 | 20.3 | 20.6 |

STC:AM=1.5, Irradiation 1000W/m², Module Temperature 25°C

Electrical Characteristics at Nominal Module Operating Temperature (NMOT)

| Spec/Model | Unit | SPP305M60 | SPP310M60 | SPP315M60 | SPP320M60 | SPP325M60 | SPP330M60 | SPP335M60 |
|---|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Max-Power(Pm) | W | 228 | 232 | 236 | 240 | 244 | 248 | 251 |
| Max-Power Voltage(Vm) | V | 29.1 | 29.3 | 29.5 | 29.7 | 29.9 | 30.1 | 30.3 |
| Max-Power Current(I _m) | A | 7.84 | 7.93 | 8.01 | 8.09 | 8.17 | 8.25 | 8.30 |
| Open-Circuit Voltage(Voc) | V | 35.8 | 35.9 | 36.0 | 36.1 | 36.2 | 36.3 | 36.5 |
| Short-Circuit Current(I _{sc}) | A | 8.27 | 8.35 | 8.43 | 8.51 | 8.59 | 8.67 | 8.76 |

NMOT: Irradiation 800W/m², ambient temperature 20°C, Wind Speed 1m/s

Temperature Coefficient

| | |
|---|-----------|
| Nominal Operating Cell Temperature | 43 ± 2°C |
| Temperature coefficient of P _{max} | -0.36%/°C |
| Temperature coefficient of Voc | -0.28%/°C |
| Temperature coefficient of I _{sc} | 0.06%/°C |

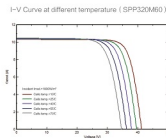
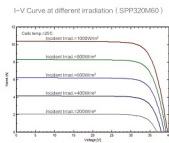
Package

| Container Size | Quantity (pcs) | Quantity (palette) |
|----------------|----------------|--------------------|
| 20' GP | 360 | 12 |
| 40' GP | 840 | 28 |
| 40' HC | 840 | 28 |

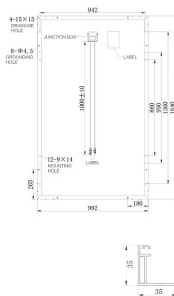
Mechanical Property

| | |
|----------------------|--|
| Dimension(L × W × H) | 1640mm×992mm×35mm |
| Weight | 18.5kg |
| Glass Type | High Transmittance Anti-reflective Coated Tempered Glass 3.2mm |
| Solar Cell | 60(10×6)/Mono/6inches |
| Encapsulant | EVA |
| Frame | Anodized Aluminum Alloy / Silver |
| Junction Box | IP65 & IP67 |
| Cable | 1000mm / 4mm ² |
| Connector | MCA Compatible |

I-V Curve



Module Size



Operating Conditions

| | |
|-----------------------------|--|
| Max System Voltage | DC1000V(TUV) |
| Max Fuse Rated Current | 15A |
| Operating Temperature Range | -40°C ~ +85°C |
| Mechanical Load | 5400Pa(2400Pa) |
| Max Allowable Hail Load | 4.25mm hail, from 1m of distance at 23 m/s |
| Application Class | Class A |

