

ONYX

590-605W

High Efficiency Half-Cell Mono PERC Module



Excellent low irradiance performance.



Better light trapping and current collection to improve module power output and reliability.



Industry leading lowest thermal co-efficient of power.



Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.

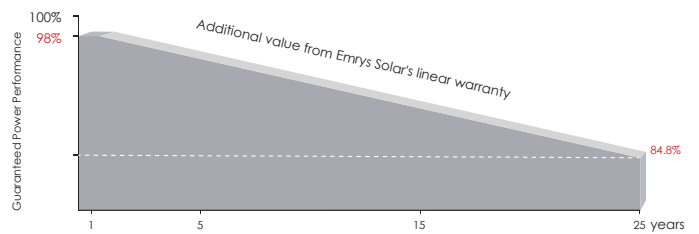


Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



100% triple EL test enabling remarkable reduction of hidden crack rate of modules

LINEAR PERFORMANCE WARRANTY



25 years

Product Workmanship Warranty

30 years

Output Power Warranty

COMPREHENSIVE CERTIFICATES



ELECTRICAL DATA(STC)

| Part Number | ES590M60 | ES595M60 | ES600M60 | ES605M60 |
|-------------------------------------|----------|----------|----------|----------|
| Peak Power Watts- $P_{MAX}(Wp)^*$ | 590 | 595 | 600 | 605 |
| Power Output Tolerance | 0~5W | | | |
| Open Circuit Voltage- $V_{oc}(V)$ | 41.00 | 41.30 | 41.50 | 41.70 |
| Short Circuit Current- $I_{sc}(A)$ | 18.42 | 18.47 | 18.52 | 18.57 |
| Maximum Power Voltage- $V_{MPP}(V)$ | 34.00 | 34.20 | 34.40 | 34.60 |
| Maximum Power Current- $I_{MPP}(A)$ | 17.35 | 17.40 | 17.44 | 17.49 |
| Panel Efficiency(%) | 20.80 | 21.00 | 21.20 | 21.40 |

STC :Irradiance 1000w/m², Cell Temperature 25°C Air Mass AM1.5 *Power Binning: +/-5W

ELECTRICAL DATA(NOCT)

| Maximum Power- $P_{MAX}(Wp)^*$ | 447 | 451 | 454 | 458 |
|-------------------------------------|-------|-------|-------|-------|
| Open Circuit Voltage- $V_{oc}(V)$ | 38.70 | 38.90 | 39.10 | 39.30 |
| Short Circuit Current- $I_{sc}(A)$ | 14.85 | 14.88 | 14.92 | 14.96 |
| Maximum Power Voltage- $V_{MPP}(V)$ | 31.70 | 31.90 | 32.00 | 32.20 |
| Maximum Power Current- $I_{MPP}(A)$ | 14.09 | 14.13 | 14.18 | 14.22 |

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

MECHANICAL DATA

| | |
|-------------------------------|--------------------------------------------------------------------|
| Panel Dimension(H/W/O) | 2172 x1303 x 35mm |
| Weight | 28.6kg |
| Cell Type | Monocrystalline |
| Cell Size | 210x105 mm |
| Cell Number | 120 |
| Glass Type | Tempered, Anti-reflection Coating |
| Glass Thickness | 3.2mm |
| Encapsulant Type | EVA /POE |
| Frame Type | Anodized Aluminium Alloy |
| Junction Box Diodes | 3 |
| Junction Box Protection Class | IP68 |
| Connector Type | MC4 or MC 4 Compatible |
| Cable | 1x4mm ² ,(+) : 350mm , (-) : 350mm or Customized Length |

TEMPERATURE RATINGS

| | |
|------------------------------------------|-------------|
| NOCT(Nominal Operating Cell Temperature) | 41°C (±3°C) |
| Temperature Coefficient of P_{MAX} | -0.36%/°C |
| Temperature Coefficient of V_{oc} | -0.28%/°C |
| Temperature Coefficient of I_{sc} | +0.05%/°C |

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

MAXIMUM RATINGS

| | |
|-------------------------|--------------|
| Operational Temperature | -40 ~ ±85 °C |
| Rear Side Load | 2400pa |
| Front Side Load | 5400pa |
| Max Series Fuse Rating | 35A |
| Max System Voltage | 1500V (IEC) |

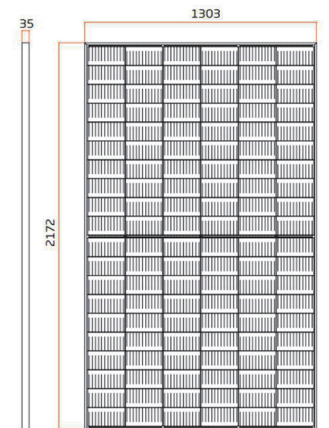
WARRANTY

| |
|---------------------------------------|
| 25 years Product Workmanship Warranty |
| 30 years Output Power Warranty |

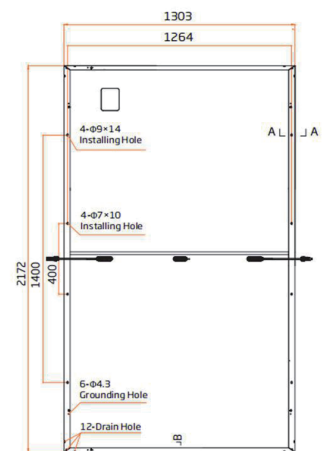
PACKAGING CONFIGURATION

| |
|-------------------------------------|
| Modules per box:31 pieces |
| Modules per 40'container:558 pieces |

DIMENSIONS OF PV MODULE(mm)

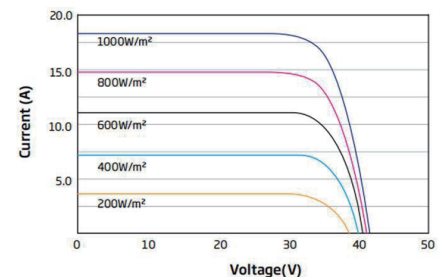


Front View



Back View

I-V CURVES OF PV MODULE



P-V CURVES OF PV MODULE

