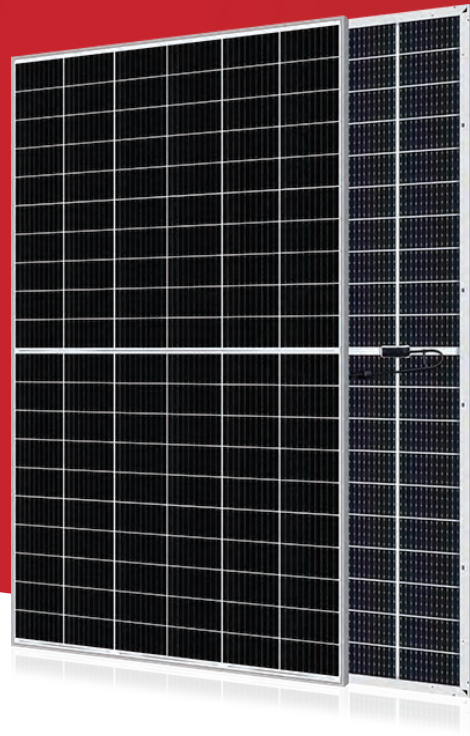


ONYX

590-605W

High Efficiency PERC Bifacial Module



Bifacial technology enables additional energy harvesting from rear side (up to 30%)



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.

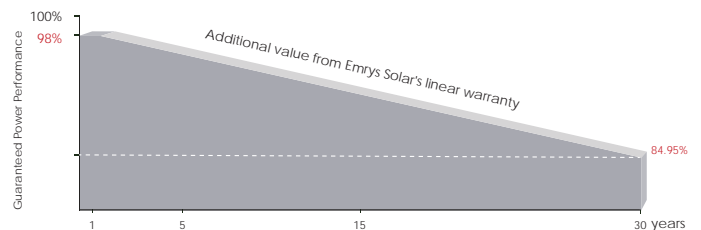


Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



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

### LINEAR PERFORMANCE WARRANTY



**30** years  
Product Workmanship Warranty

**30** years  
Output Power Warranty

### COMPREHENSIVE CERTIFICATES



## ELECTRICAL DATA(STC)

Model Number	ES590M60-S3-BF	ES595M60-S3-BF	ES600M60-S3-BF	ES605M60-S3-BF
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
Efficiency(%)	20.80	21.00	21.20	21.40

STC :Irradiance 1000w/m<sup>2</sup>,Cell Temperature 25°C,Measure Tolerance :+/- 3%

## 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/m<sup>2</sup>,Ambient Temperature 20°C,Wind Speed 1m/s

## MECHANICAL DATA

Dimensions	2172 x1303 x 35mm
Weight	35kg
Cell Type	Monocrystalline
Cell Size	210x105 mm
Cell Number	120
Glass Type	Tempered,Anti-reflection Coating
Glass Thickness	2.0mm + 2.0mm
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 <sup>2</sup> ,(+) : 350mm , (-) : 350mm or Customized Length

## TEMPERATURE RATINGS

NOCT	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)

## WARRANTY

30 years Product Workmanship Warranty
30 years Output Power Warranty

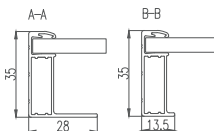
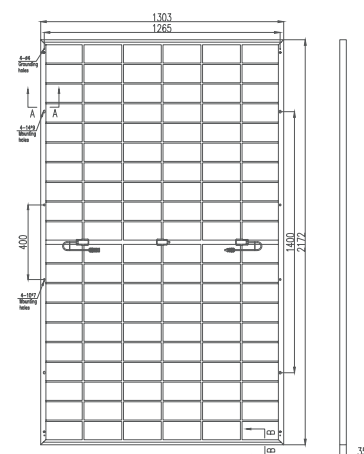
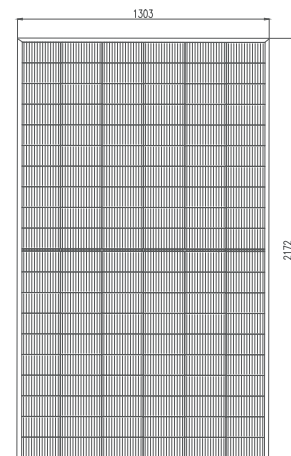
## MAXIMUM RATINGS

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

## PACKAGING CONFIGURATION

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

## DIMENSIONS OF PV MODULE(mm)



## CURVES OF PV MODULE

