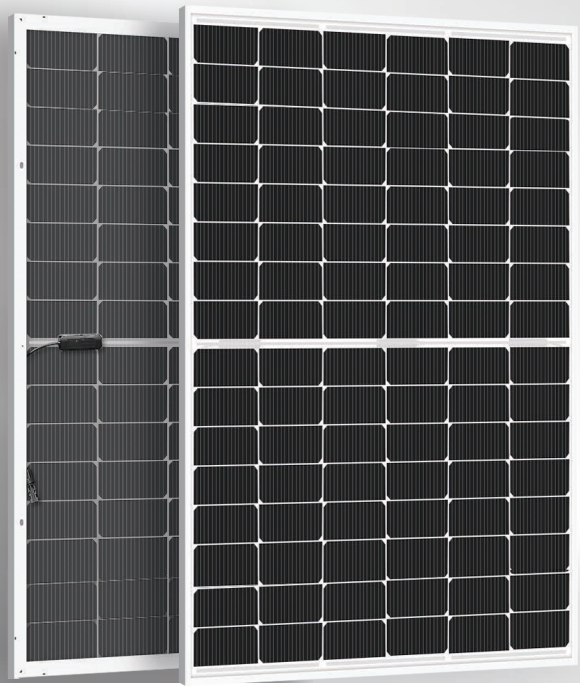


450~475W

Zeus series

Mono SMBB TOPCon double glass solar panel

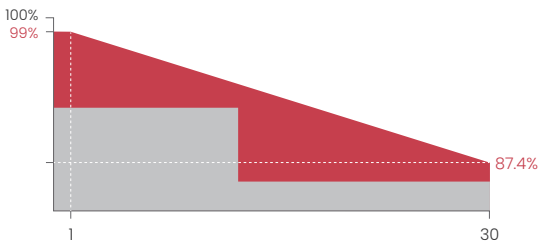
Products can match different installation conditions, taking into account high adaptability and high compatibility. With mature support and inverter scheme, customized design for distributed and centralized ground power stations.

MODULE CHARACTER

- Exceptional PID Resistance
- Salt mist resistance/Ammonia resistance /dust and hail resistance
- Production process reliability test
- 0~+3% Positive Tolerance
- Lower LID / LETID
- Reduce BOS cost increase ROI
- Non-destructive cutting
- Double-sided electricity generation

CERTIFICATION

IEC61215/IEC61730
ISO9001:Quality Management System
ISO14001:Environmental Management System
ISO45001:Occupational Health and Safety Management System



30 YEAR Linear performance warranty

30 YEAR Product warranty

SUNRISE ENERGY CO., LTD TEL: +86-519-81688389 E-mail: info@sunriseenergy.cn
Addr. No.20 Tongzi River West Road, Zhonglou Development Zone, Changzhou, Jiangsu

If any update, Sunrise would not make further notice. Sunrise reserves the right of final interpretation.

SR-48MxxxNHLProDR 450w-475w Zeus series

SUNRISE 昊宇光伏

Electrical Characteristics(STC)

Maximum Power:Pmax[W]	450	455	460	465	470	475
Open Circuit Vlotage: Voc [V]	36.30	36.53	36.76	36.99	37.22	37.45
Short Circuit Current: Isc [A]	15.85	15.93	16.00	16.08	16.15	16.22
Voltage at Maximum Power: Vmp [V]	29.99	30.18	30.37	30.56	30.75	30.94
Current at Maximum Power: Imp [A]	15.01	15.08	15.15	15.22	15.29	15.36
Module Efficiency: η [%]	22.52	22.77	23.02	23.27	23.52	23.77

*STC: Irradiance 1000W/m², Cell temperature 25°C, AM=1.5, Power measurement tolerance: ±3%

Electrical Characteristics(BNPI)

Maximum Power:Pmax[W]	498.6	504.14	509.68	515.22	520.76	526.3
Open Circuit Vlotage: Voc [V]	36.30	36.53	36.76	36.99	37.22	37.45
Short Circuit Current: Isc [A]	17.56	17.64	17.73	17.81	17.89	17.97
Voltage at Maximum Power: Vmp [V]	29.99	30.18	30.37	30.56	30.75	30.94
Current at Maximum Power: Imp [A]	16.63	16.70	16.78	16.86	16.94	17.01

* BNPI: Front side irradiance 1000W/m², Rear side irradiance 135W/m², Cell Temperature=25°C, AM=1.5，Power measurement tolerance:±3%

Electrical characteristics with different rear side power gain

5%	Maximum power:Pmax [W]	472.5	477.75	483.00	488.25	493.50	498.75
15%	Maximum power:Pmax [W]	517.5	523.25	529.00	534.75	540.50	546.25
25%	Maximum power:Pmax [W]	562.5	568.75	575.00	581.25	587.50	593.75

Temperature Rating

Temperature Coefficient of Pmax	-0.26%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.046%/°C

Operating Parameters

Operating Temperature	-40°C ~ +70°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0 ~ +3%
Bifaciality coefficient of Pmax/Voc/Isc	80±5%/98±5%/80±5%

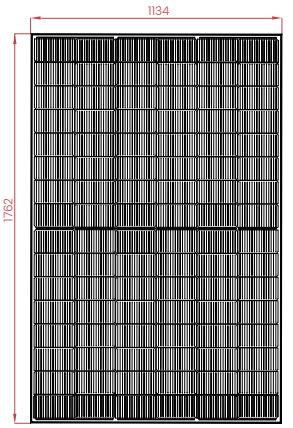
Mechanical Parameters

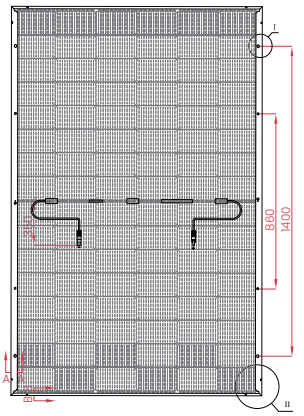
Cell type	N-type Mono-Crystalline
Cell Orientation	96(6×16)
Front /Rear Glass	2.0mm AR coating semi tempered glass/2.0mm Semi tempered glass
Electrical Protection Class	Anodized aluminum alloy frame
Frame	Class II
IEC Fire Safety Class	Class C
Junction Box	IP68，3 diodes
Cable&Connector	4mm, EVo2 or EVo2 compatible
Cable Length(Including Connector)	300mm or as customer's requirements
Maximum Static Test Load	5400 Pa (front) / 2400 Pa (rear)

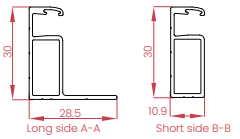
Packing Details

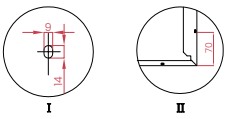
Dimension	1762×1134×30mm
Weight	24.2kg
Pallet Dimensions	1790×1130×1259mm
Packaging(Per pallet)	37pcs
Packaging	414 pcs/20'GP，962 pcs/40'HC

ENGINEERING DRAWINGS

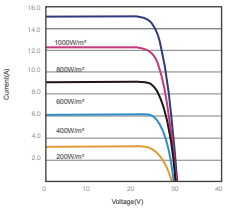




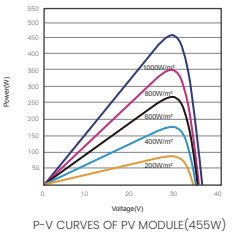




IV CURVES



I-V CURVES OF PV MODULE(455W)



P-V CURVES OF PV MODULE(455W)