



Photovoltaic Module



AmericanSolar

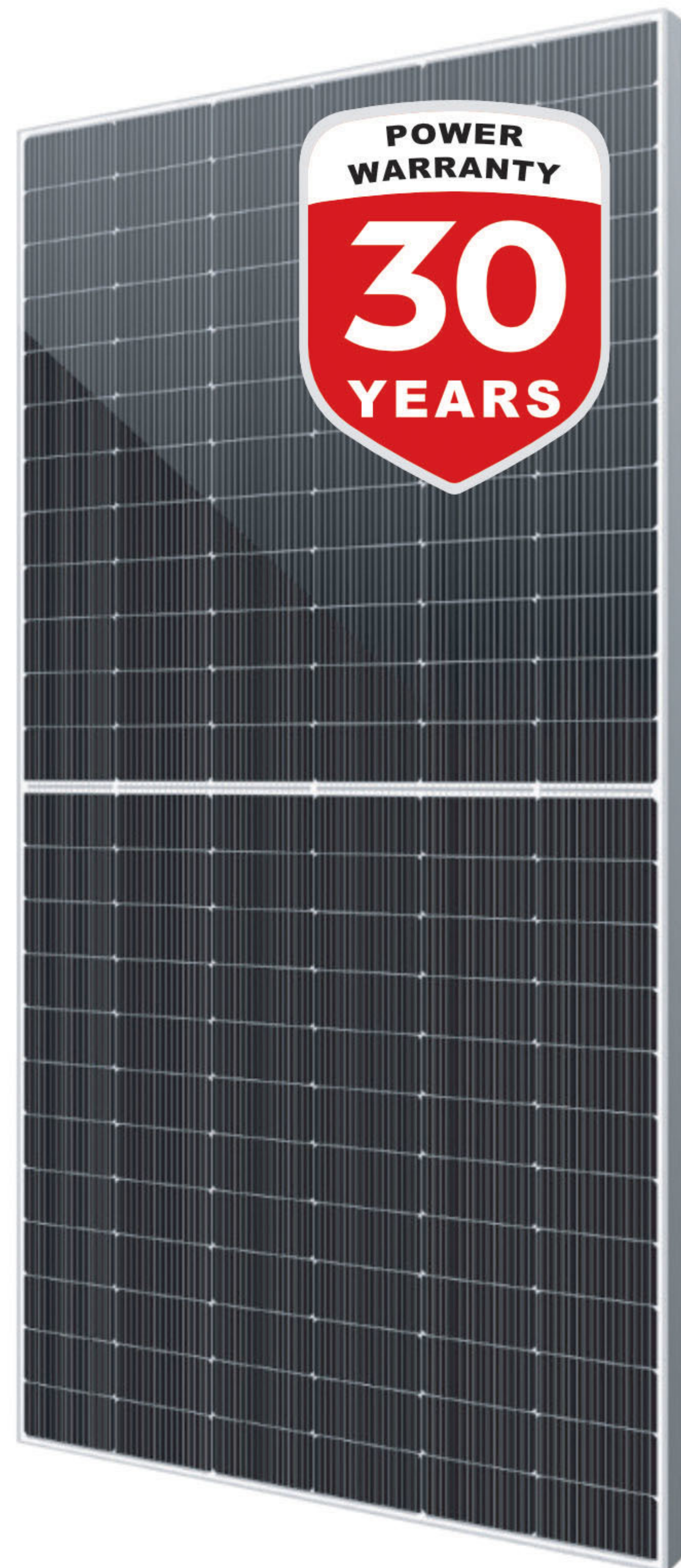
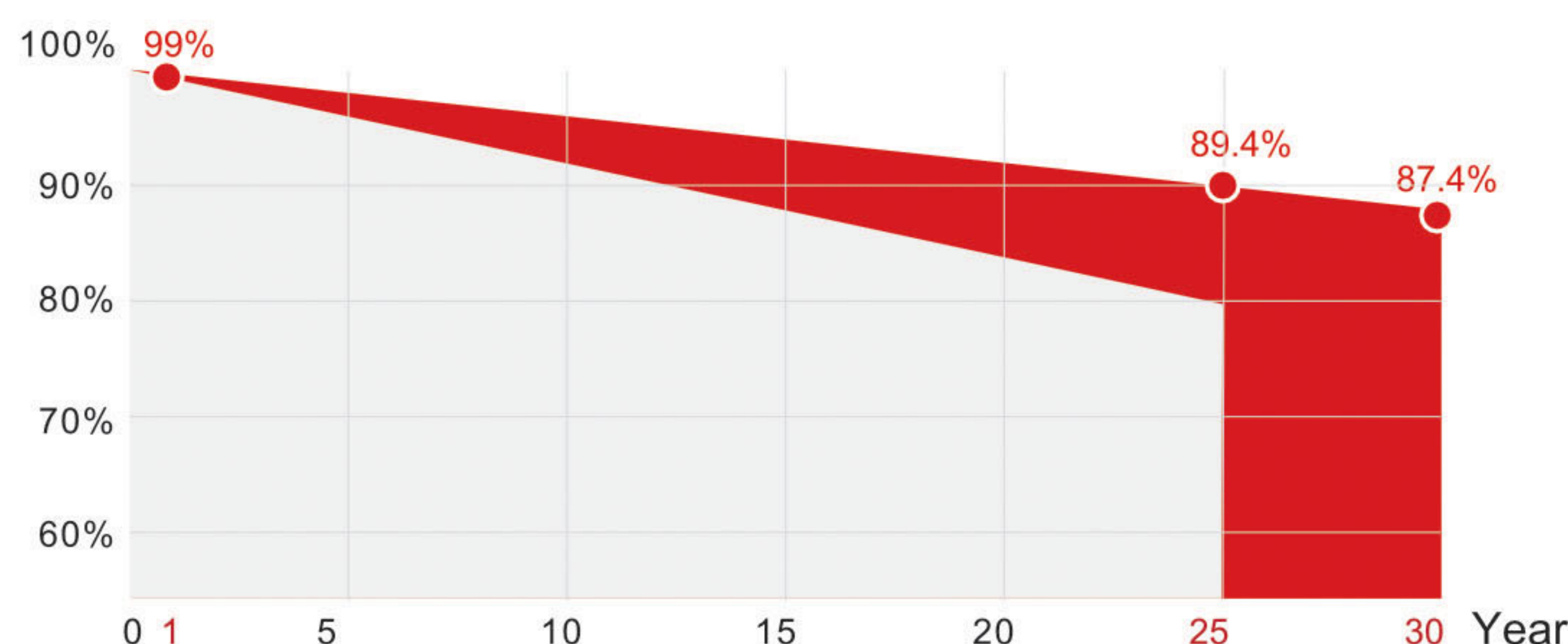
TOPCON MONO

590W

- Bifacial White Mesh
- Double glass
- Silver frame
- Black frame
- Full black

25 Yr quality guarantee | 30 Yr power warranty

- (Additional value from 30-year warranty)
- Common module



Factory:

American ELECTRONICS (SMC-PRIVATE) LIMITED
149 & 150, M3 Industrial City, Faisalabad



Regional Offices:

Head Office:

38, Shadman Colony 1, Lahore
Tel: 042 35409030, 35409031

Multan Office

Dera Adda Chowk MashaAllah Plaza Azmat
Wasti Road, Near Capri Cinema Multan
Tel: 061 4585510

Peshawar Office

City Tower First Floor Office# F21/F22,
Kabali Cinema Road, Peshawar

Sialkot Office

Basement Gourmet Bakery Opposite Shell
Patrol Pump, Daramowala Chowk Railway Road, Sialkot

Karachi Office

19/G-1, Block 6, PECHS, Near Leopards
Courier Service, Shahr-e-Faisal, Karachi
Tel: 021 34303648, Fax: 021 34303649

Faisalabad Office

Shop # 35,36 Prime Center Malik Road,
Near Gujjar Basti Faisalabad

Hyderabad Office

172 Block E, Unit#6 Ground Floor
Latifabad, Hyderabad

Sahiwal Office

Plaza 497/498/B-1, Near Furniture Bazar,
Near City Church, Sahiwal

Islamabad Office

Basement Chakwal Tyre PD-546, Fareed
Plaza Double Road, I-J Principle Road,
Opposite I-8/1 Islamabad. Tel: 051 4856553

Gujranwala Office

Gonda Wala Road, Nomania
Chowk Sardar Market, Gujranwala

Sargodha Office

Shop # 3-S-39 Block No. 16 Moti Masjid Road
Near Dr. Younis Sargodha



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Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m² ,Cells Temperature25°C)

Typical type	550W	555W	560W	565W	570W	575W	580W	585W	590W
Max power(Pmax)	550	555	560	565	570	575	580	585	590
Max power voltage(Vmp)	41.73	41.86	41.99	42.13	42.26	42.41	42.56	42.72	42.87
Max power current(Imp)	13.18	13.26	13.34	13.41	13.49	13.56	13.63	13.7	13.77
Open circuit voltage(Voc)	50.56	50.7	50.84	50.98	51.13	51.28	51.43	51.58	51.7
Short circuit current(Isc)	13.95	14.01	14.07	14.13	14.2	14.27	14.34	14.41	14.48
Module Efficiency(%)	21.28	21.48	21.67	21.86	22.06	22.25	22.44	22.64	22.83
Max system voltage	DC 1500V (TÜV,UL)								
Maximum Series Fuse Rating	30A								

Electrical Characteristics with 15% Rear Side Power Gain

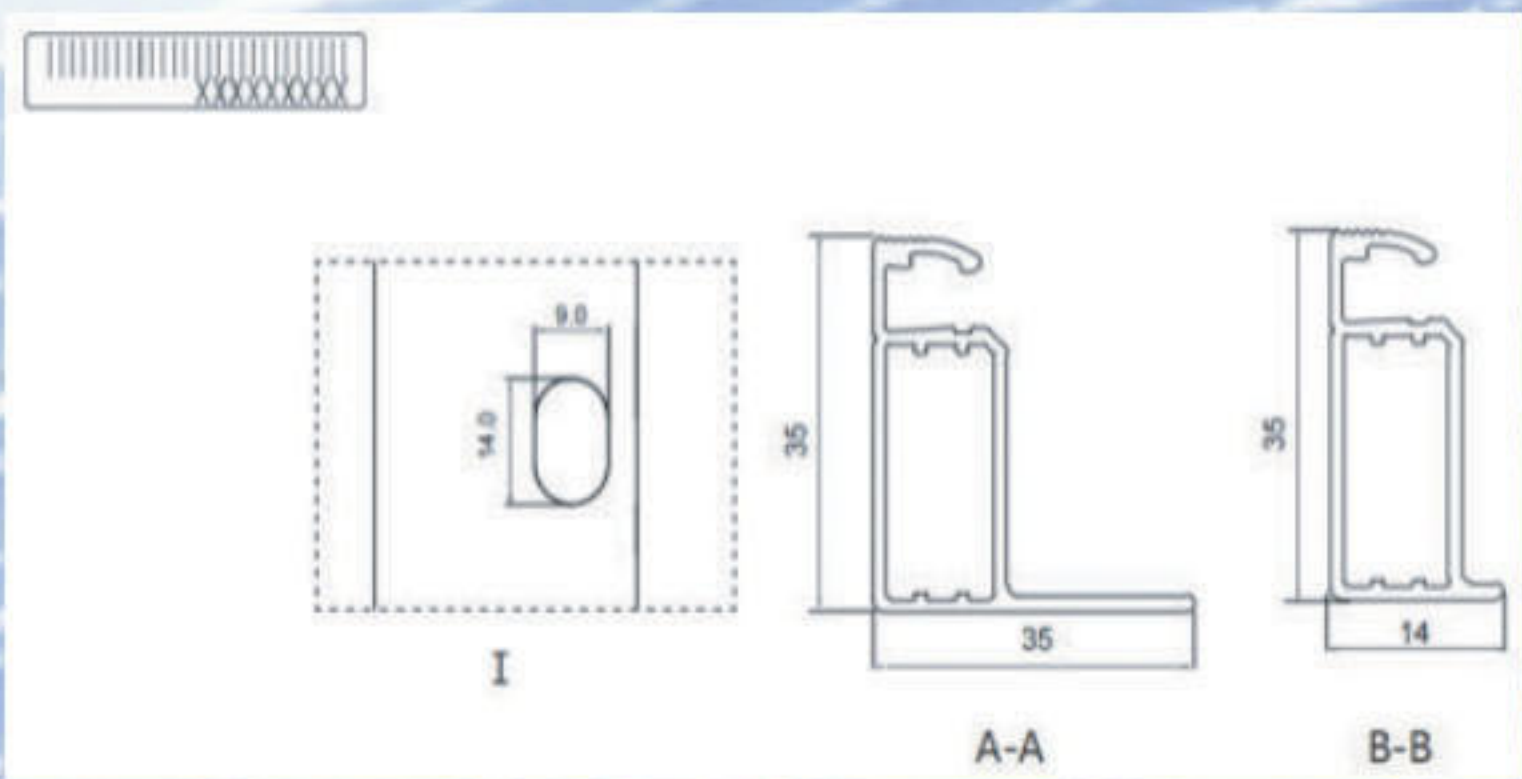
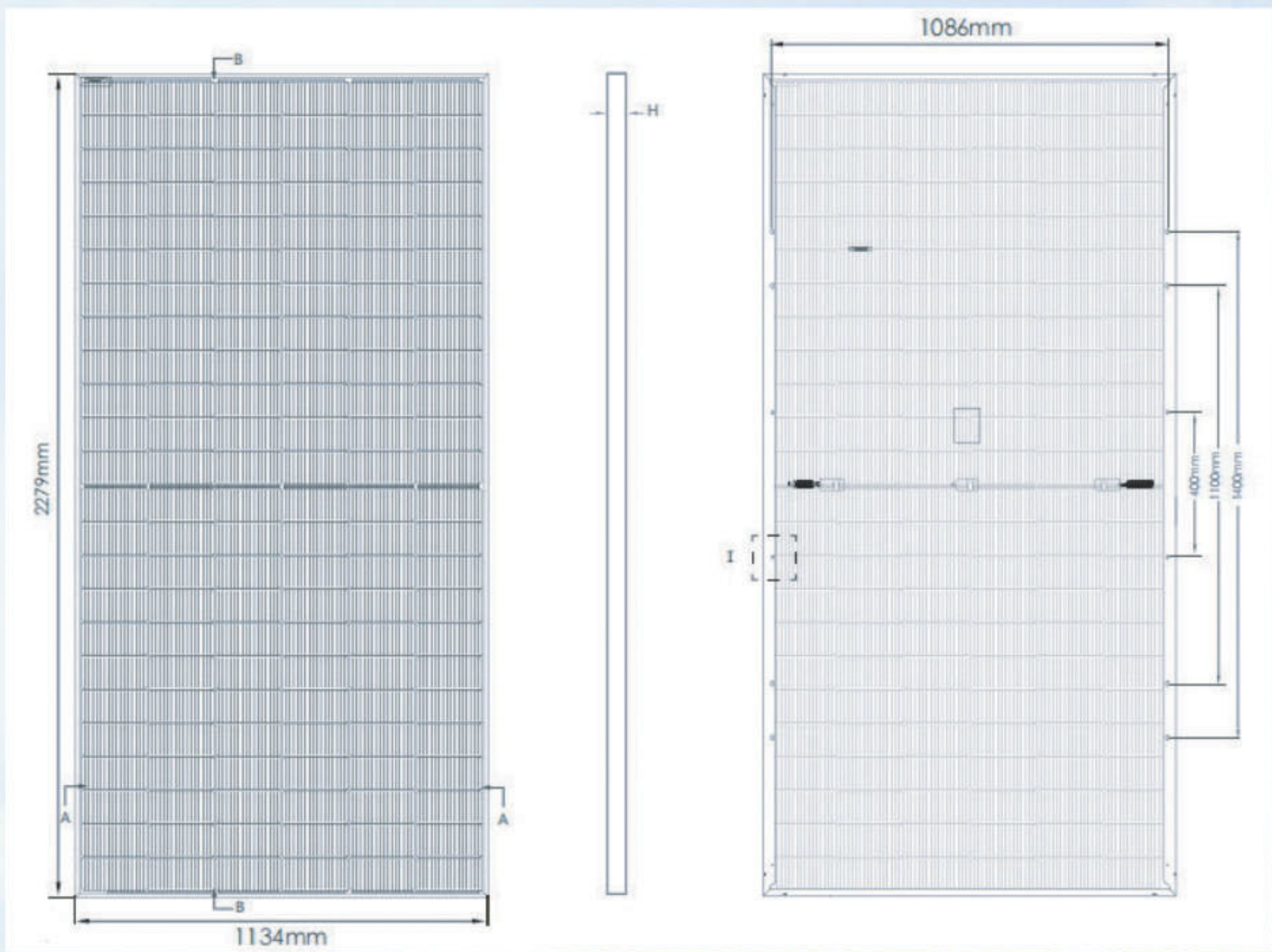
Front power Pmax/W	550W	555W	560W	565W	570W	575W	580W	585W	590W
Total power Pmax/W	632.5	638.25	644	649.75	655.5	661.25	667	672.75	678.5
Vmp/V(Total)	41.73	41.86	41.99	42.13	42.26	42.41	42.56	42.72	42.87
Imp/A(Total)	15.16	15.25	15.34	15.42	15.51	15.59	15.67	15.75	15.83
Voc/V(Total)	50.56	50.7	50.84	50.98	51.13	51.28	51.43	51.58	51.7
Isc/A(Total)	16.04	16.11	16.18	16.25	16.33	16.41	16.49	16.57	16.65

Electrical parameters at NMOT test conditions

(Irradiance 800W/m²,Ambient Temperature 20°C,AM 1.5,Wind Speed 1m/s)

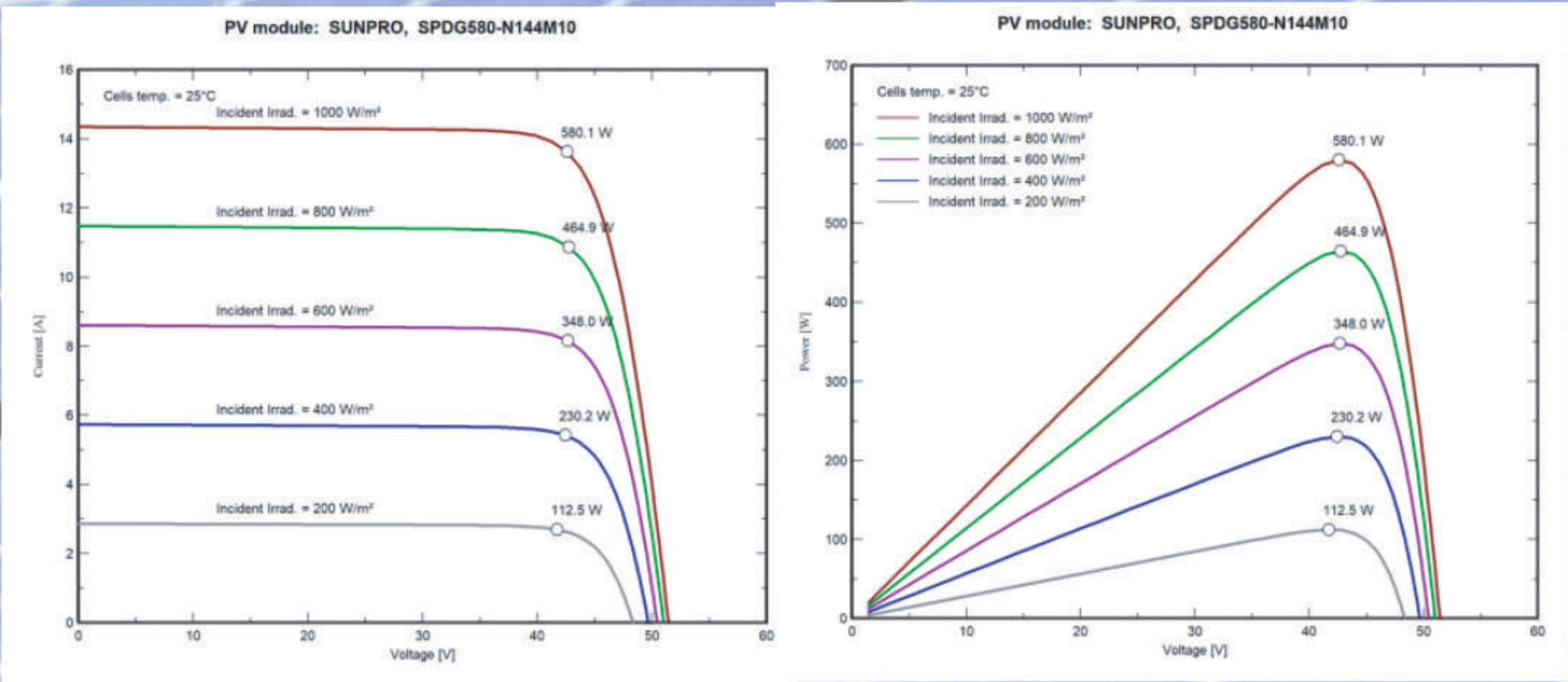
Typical type	550W	555W	560W	565W	570W	575W	580W	585W	590W
Max power(Pmax)	411	417	421	425	429	433	436.7	437.3	441
Max power voltage(Vmp)	38.9	39.3	39.5	39.7	39.7	39.9	40.1	39.9	40.00
Max power current(Imp)	10.56	10.62	10.67	10.72	10.79	10.85	10.90	10.96	11.02
Open circuit voltage(Voc)	47.4	47.7	47.9	48.1	48.2	48.4	48.5	48.3	48.40
Short circuit current(Isc)	11.24	11.29	11.34	11.39	11.44	11.50	11.56	11.61	11.67

DIMENSIONS AND STRUCTURE



LENGTH: + 2MM
WIDTH:+ 2MM
THICKNESS:+ 1MM
HOLE PITCH:+ 2MM

I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



Mechanical Data

Dimensions	2278x1134x30mm
Weight	34kg
Glass	(F)2.0mm ultra clear embossed double layer colorless glass (B) 2.0mm white mesh glazed tempered glass
Output cables	4mm², symmetrical lengths 1300mm
Connectors	MC4 compatible IP68
Cell type	Mono-Crystalline, N type Bifacial, 182x91mm
Number of cells	144cells (Half-Cell)

Temperature Characteristics

Packing Configuration

Temp.Coeff.of Isc(TK Isc)	0.046%/ °C	Container	40'GP
Temp.Coeff.of Voc(TK Voc)	-0.25%/°C	Pieces per pallet	62
Temp.Coeff.of Pmax(TK Pmax)	-0.30%/°C	Pallets per container	10
Operating temperature	-40~+85°C	Pieces per container	620
Normal operating cell temperature	45±2°C		

Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730, IEC 61701, IEC 62716, PPP 58042
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TÜV, CE, CEC, UL, WEEE
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+3%
Junction box	IP 68
Warranties	25 years product warranty and 30 years 87.4% of power