



OFTOB ENERGY Solar Panel Description

Solar Module OE-S/PV 555W – 585W

(TOPCon, Dual-Glass, Bifacial)



The **OE-S/PV series** represents premium dual-glass solar modules built on advanced **TOPCon 2.0 technology**, designed for high-demand industrial, commercial, and hybrid energy systems where maximum reliability, power output, and long-term stability are essential.



Key Advantages

✓ High Power Output: 555 - 585 W

These panels deliver one of the highest power ratings in their class—ideal for industrial facilities, commercial buildings, and hybrid off-grid/on-grid systems.



✓ Dual-Glass Construction (2 mm + 2 mm)

Front and rear 2 mm glass layers ensure:

- Superior resistance to temperature cycles
- No PID degradation
- High moisture resistance
- Salt-mist and ammonia corrosion resistance

Certified according to:

IEC61215 / IEC61730 / IEC61701 / IEC62716



✓ TOPCon 2.0 — Enhanced Efficiency

The upgraded N-type TOPCon cell structure provides:

- Module efficiency up to **22.64%**
 - Reduced thermal performance loss
 - Greater stability under heat, humidity, and voltage fluctuations
- (Performance verified by independent laboratory testing.)



✓ Ultra-Low Degradation

- < 2% in the first year
- ≤ 0.55% annual degradation afterward

Backed by a **30-year linear power-output warranty**.



✓ Bifaciality up to 90%

Thanks to the symmetrical N-type architecture, the rear side of the module generates:

- **+10–25% additional energy** from reflected light
- Most effective on concrete, tile, bright gravel, and other reflective surfaces.

Quality Guarantee

22.64% **0-+5W**

Max Module Eff. Positive Tolerance



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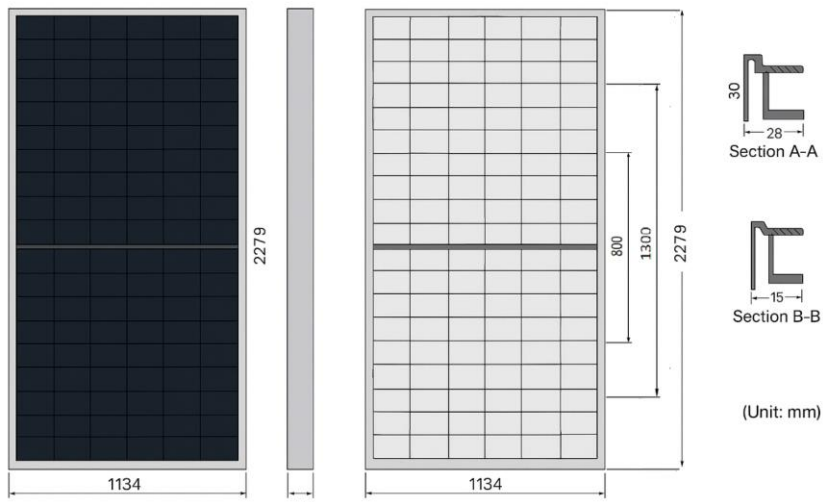
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- **Solar Cells** N-type Mono
- **No. of Cells** 144 (6×24)
- **Dimensions** 2279 × 1134 × 30 mm
- **Weight** 31.5 kg
- **Glass Thickness**
Front: 2.0mm coated semi-tempered glass;
Back: 2.0mm semi-tempered glass
- **Frame** Anodized aluminum alloy
- **Junction Box** Ip68 rated (3 bypass diodes)
- **Output Cables** 4 mm², 300 mm (+) / 300 mm (-)
Length can be customized
- **Connectors** MC4 compatible
- **Mechanical Load Test** 5400 Pa
- **Packaging** 31 pcs/box, 558 pcs / 40' HQ



Electrical Parameter

Module Type: OE-S/PV 555W – 585W	555	560	565	570	575	580	585
Maximum Power (Pmax/W)	555	560	565	570	575	580	585
Module Efficiency (%)	21.48%	21.67%	21.86%	22.06%	22.25%	22.44%	22.64%
Voltage at Maximum power (Vmpp/V)	41.95	42.11	42.26	42.41	42.56	42.71	42.86
Current at Maximum Power (Imp/A)	13.23	13.30	13.37	13.44	13.51	13.58	13.65
Open Circuit Voltage (Voc/V)	51.00	51.14	51.28	51.41	51.55	51.79	52.03
Short Circuit Current (Isc/A)	13.94	14.01	14.08	14.15	14.22	14.29	14.36

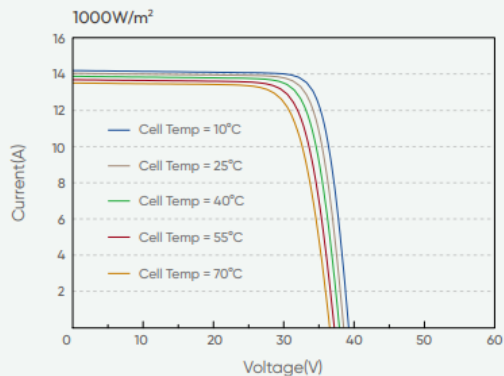
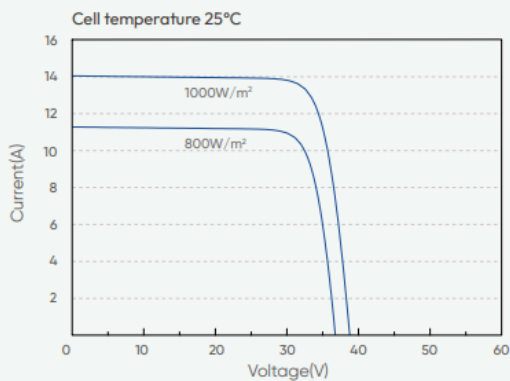
Bifacial Output-Rearside Power Gain

5%	Maximum power (Pmax/W)	583	588	593	599	604	609	614
	Module Efficiency STC (%)	22.55	22.75	22.96	23.16	23.36	23.55	23.76
15%	Maximum power (Pmax/W)	638	644	650	656	661	667	673
	Module Efficiency STC (%)	24.70	24.92	25.14	25.36	25.59	25.82	26.04
25%	Maximum power (Pmax/W)	694	700	706	713	719	725	731
	Module Efficiency STC (%)	26.84	27.04	27.33	27.57	27.81	28.04	28.28

1. Standard Test Conditions [STC]: irradiance 1000W/m² ; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.



I-V Curve



Temperature Characteristics

NMOT (Nominal Module Operating Temperature)	45°C (±2°C)
Temperature Coefficient of Voc	-0.25% / °C
Temperature Coefficient of Isc	+0.045% / °C
Temperature Coefficient of Pmax	-0.29% / °C

Operating Characteristics

Operating Module Temperature	-40°C ~ +85°C
Maximum System Voltage	DC 1500 (IEC)
Maximum Series Fuse Rating	30A
Power Tolerance	0 ~ +5W

Quality Management System and Product Certification

- IEC 61215 / IEC 61730 – Design & safety qualification
- IEC 62804 – PID resistance
- IEC 61701 – Salt mist corrosion test
- IEC 62716 – Ammonia corrosion test
- IEC 60068-2-68 – Sand abrasion test
- ISO 9001:2015 – Quality management system
- ISO 14001:2015 – Environmental management system
- ISO 45001:2018 – Occupational health & safety management
- ISO 50001:2011 – Energy management system

