



panda 3.0 Pro 1

635W

MAXIMUM MODULE EFFICIENCY

22.7%

POSITIVE POWER TOLERANCE

0~+5_w



N-type TOPCon Bifacial Module

**IMPROVED POWER
NEVER SETTLE FOR LESS**



Backside Yield



Wide Applications



Superior Yield



Outstanding Bifaciality



Excellent Durability



Yingli Solar Website



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE

ISO 9001: Quality management systems

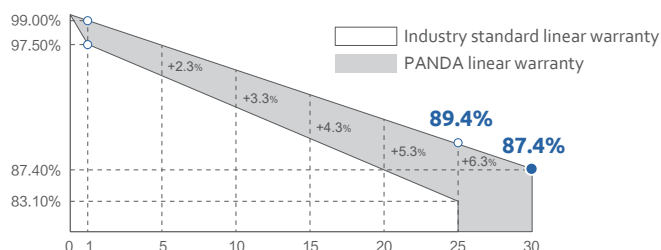
ISO 14001: Environmental management systems

IEC 62941: Quality system for PV module manufacturing

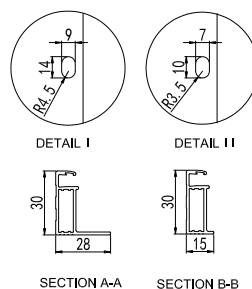
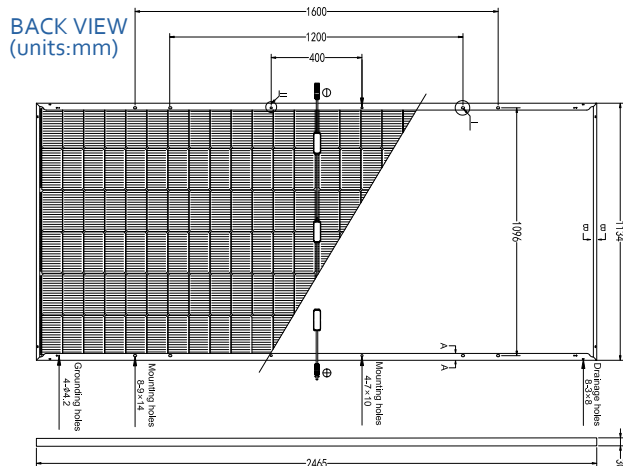
ISO 45001: Occupational health and safety management systems



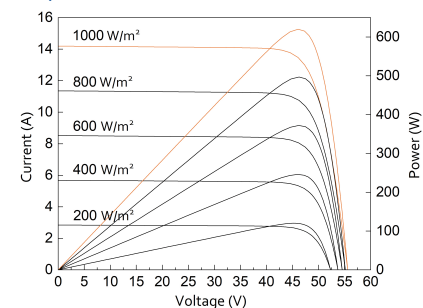
Munich RE



1.00% the 1st year power degradation
0.40% annual power degradation



I-V / P-V CURVES



Warning: Read the Installation and User Manual in its entirety before handling, installing and operating Yingli Solar modules.

Electrical Parameters at Standard Test Conditions (STC*)

Module type	YLxxxCF78 e/2 (xxx=Pmax)					
Power output-Pmax (W)	610	615	620	625	630	635
Power output tolerances-ΔPmax (W)	0 / + 5					
Module efficiency-η _m (%)	21.8	22.0	22.2	22.4	22.5	22.7
Voltage at Pmax - V _{mpp} (V)	45.59	45.77	45.95	46.13	46.31	46.49
Current at Pmax-I _{mpp} (A)	13.39	13.44	13.50	13.55	13.61	13.66
Open-circuit voltage-Voc (V)	55.30	55.44	55.58	55.72	55.86	56.00
Short-circuit current-Isc (A)	14.04	14.12	14.20	14.28	14.36	14.44

*STC: 1000 W·m⁻² irradiance, 25°C cell temperature, AM 1.5.

Electrical Parameters at Nominal Operating Cell Temperature (NOCT*)

Power output-Pmax (W)	464	468	472	475	479	483
Voltage at Pmax - V _{mpp} (V)	43.49	43.66	43.83	44.01	44.18	44.35
Current at Pmax-I _{mpp} (A)	10.68	10.72	10.76	10.80	10.85	10.89
Open-circuit voltage-Voc (V)	52.51	52.65	52.78	52.91	53.05	53.18
Short-circuit current-Isc (A)	11.31	11.38	11.44	11.51	11.57	11.63

*NOCT: open-circuit module operation temperature at 800 W·m⁻² irradiance, 20°C ambient temperature, 1 m · s⁻¹ wind speed.

Bifacial Electrical Parameters at Standard Test Conditions(BNPI*)

Power output-Pmax (W)	676	682	687	693	698	704
Voltage at Pmax - V _{mpp} (V)	45.59	45.77	45.95	46.13	46.31	46.49
Current at Pmax-I _{mpp} (A)	14.84	14.89	14.96	15.01	15.08	15.14
Open-circuit voltage-Voc (V)	55.30	55.44	55.58	55.72	55.86	56.00
Short-circuit current-Isc (A)	15.56	15.64	15.73	15.82	15.91	16.00

*1000W·m⁻² on the front side and 135 W·m⁻² on the back side , 25°C cell temperature, AM 1.5.
Bifaciality coefficient is 80% ± 5%.

Thermal Characteristics

Nominal operating cell temperature-NOCT(°C)	42 ± 2
Temperature coefficient of Pmax-γ (% / °C)	- 0.29
Temperature coefficient of Voc-β (% / °C)	- 0.24
Temperature coefficient of Isc-α (% / °C)	0.042

Packaging Specifications

Number of modules per pallet	36
Number of pallets per 40' container	16
Packaging box dimensions (L / W / H)	2480 mm / 1110 mm / 1245 mm
Box weight	1320 kg

Construction Materials

Cell (material / quantity)	n-type monocrystalline silicon / 6 x 26
Glass (thickness)	2.0 mm / 2.0 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm ²

• Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice.
• The specifications may deviate slightly and are not guaranteed.
• The data do not refer to a single module and they are not part of the offer, they only serve for comparison to different module types.

Operating Conditions

Max. system voltage	1500 V _{DC}
Max. series fuse rating*	30 A
Operating temperature range	- 40°C ~ 85°C
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter / velocity)	25 mm / 23 m·s ⁻¹

*Do not connect fuse in combiner box with two or more strings in parallel connection.

General Characteristics

Dimensions (L / W / H)	2465 mm / 1134 mm / 30 mm
Weight	35.0 kg



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