



pa η da 3.0 Plus 1

665W

MAXIMUM MODULE EFFICIENCY

23.5%

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

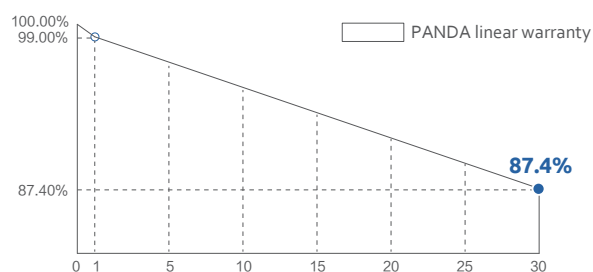
ISO 14001: Environmental management systems

IEC 62941: Quality system for PV module manufacturing

ISO 45001: Occupational health and safety management systems

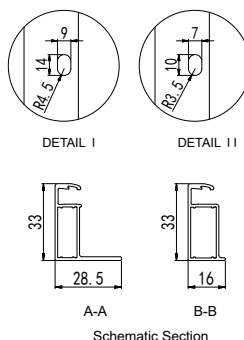
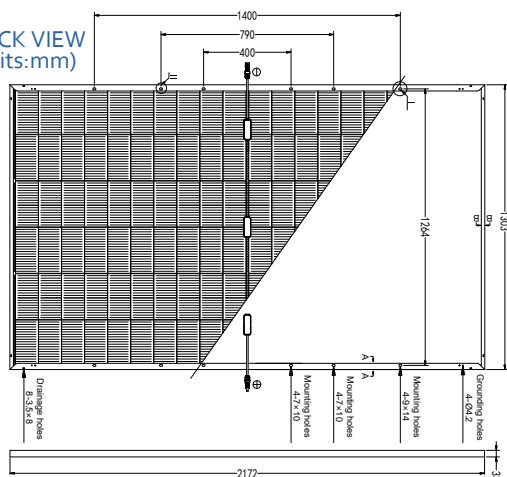


Warranty partner

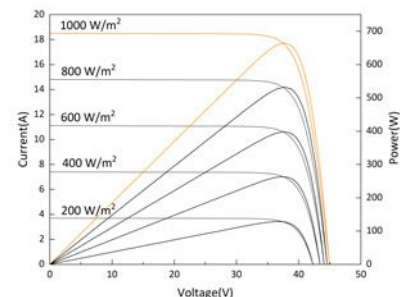


1.00% the 1st year power degradation
0.40% annual power degradation

BACK VIEW
(units:mm)



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	YLxxxCF60 f/2 (xxx=Pmax)					
Power output*-Pmax (W)	640	645	650	655	660	665
Power output tolerances-ΔPmax (W)	0 / + 5					
Module efficiency-η _m (%)	22.6	22.8	23.0	23.1	23.3	23.5
Voltage at Pmax - V _{mpp} (V)	37.00	37.14	37.27	37.41	37.55	37.68
Current at Pmax-I _{mpp} (A)	17.30	17.37	17.45	17.51	17.58	17.65
Open-circuit voltage*-V _{oc} (V)	43.97	44.16	44.35	44.54	44.73	44.92
Short-circuit current*-I _{sc} (A)	18.30	18.34	18.38	18.42	18.47	18.51

STC: 1000 W·m⁻² irradiance, 25°C cell temperature, AM 1.5. *Measuring tolerance: ±3%.

Electrical Parameters at Nominal Operating Cell Temperature (NOCT)

Power output-Pmax (W)	487	491	495	498	502	506
Voltage at Pmax - V _{mpp} (V)	35.30	35.43	35.55	35.69	35.82	35.94
Current at Pmax-I _{mpp} (A)	13.79	13.85	13.91	13.96	14.02	14.07
Open-circuit voltage-V _{oc} (V)	41.75	41.93	42.12	42.30	42.48	42.66
Short-circuit current-I _{sc} (A)	14.74	14.78	14.81	14.84	14.88	14.91

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)	709	715	721	726	731	737
Voltage at Pmax - V _{mpp} (V)	37.00	37.14	37.27	37.41	37.55	37.68
Current at Pmax-I _{mpp} (A)	19.17	19.25	19.33	19.40	19.48	19.56
Open-circuit voltage-V _{oc} (V)	43.97	44.16	44.35	44.54	44.73	44.92
Short-circuit current-I _{sc} (A)	20.28	20.32	20.37	20.41	20.46	20.51

BNPI: 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	33
Number of pallets per 40' container	17
Packaging box dimensions (L / W / H)	1340 mm / 1140 mm / 2290 mm
Box weight	1181 kg

Operating Conditions

Max. system voltage	1500 V _{DC}
Max. series fuse rating*	35 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)	2172 mm / 1303 mm / 33 mm
Weight	34.2 kg

Construction Materials

Cell (material / quantity)	n-type monocrystalline silicon / 6 x 20
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.



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