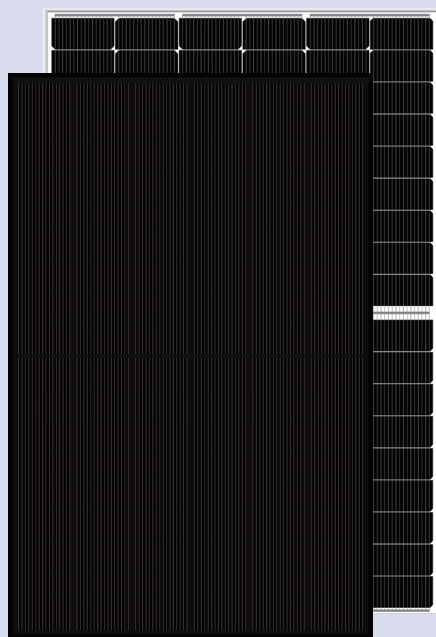


# PANDA 3.0 PRO 410-435 W

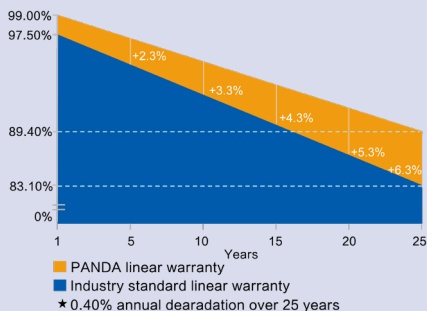


108 CELL  
CELL QUANTITY

0-5 W  
POWER TOLERANCE

12 YEAR  
PRODUCT WARRANTY

25 YEAR  
POWER WARRANTY



# IMPROVED POWER NEVER SETTLE FOR LESS

PANDA 3.0 modules use the industry's cutting-edge n-type monocrystalline TOPCon cell technology. With high quality encapsulation materials and classic glass-backsheet structure, PANDA 3.0 modules are perfectly suited to the harsh environment and provide you with high reliability and quality assurance.



### Classic Structure

The glass-backsheet structure and layout design have been proven in the market for a long time.



### Superior Yield

The large size cell enhances the module's power output, with the excellent temperature coefficient, superior low light performance and comprehensive LID/LeTID degradation suppression technology, allows the module to generate more energy yield once in use.



### Excellent Durability

The modules meet IEC standard testing requirements and are resistant to salt mist, ammonia, dust and sand, snail trail and PID risks.



### Wide Applications

The glass-backsheet structure, special material selection and extra-strong frames effectively enhance the mechanical performance of the modules, their compatibility with mainstream trackers and inverters, and their adaptability to harsh environments.



### Lower Losses

The multi-busbar design effectively reduces the impact of micro-cracks and broken busbars, and the half-cell structure effectively reduces the impact of shadow shading.

## QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE, IEC 62941:2019 Terrestrial photovoltaic (PV) modules—Quality system for PV module manufacturing, ISO 9001:2015 Quality management systems, ISO 14001:2015 Environmental management systems, ISO 45001:2018 Occupational health and safety management systems



Yingli Solar

Headquartered in Baoding, China, Yingli Energy Development Company Limited, known as Yingli Solar, is a leading solar solution provider. Yingli Solar is committed to providing clean, renewable energy through PV power generation technology for factories, homes and utilities around the world. Yingli Solar provides reliable products and services through continuous technological advancement and management innovation.

## Electrical parameters at Standard Test Conditions (STC\*)

Module type			YLxxxC-38e 1/2 (xxx=Pmax)					
			YLxxxC-38e 1500V 1/2 (xxx=Pmax)					
Power output	$P_{max}$	W	410	415	420	425	430	435
Power output tolerances	$\Delta P_{max}$	W	0 / + 5					
Module efficiency	$\eta_m$	%	21.00	21.25	21.51	21.76	22.02	22.28
Voltage at $P_{max}$	$V_{mpp}$	V	31.12	31.31	31.50	31.69	31.88	32.07
Current at $P_{max}$	$I_{mpp}$	A	13.18	13.26	13.34	13.42	13.49	13.57
Open-circuit voltage	$V_{oc}$	V	37.72	37.91	38.10	38.29	38.48	38.67
Short-circuit current	$I_{sc}$	A	13.92	14.00	14.08	14.16	14.24	14.32

\*STC: 1000 W · m<sup>-2</sup> irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-3.

## Electrical parameters at Nominal Operating Cell Temperature (NOCT\*)

Power output	$P_{max}$	W	311.39	315.20	319.02	322.87	326.50	330.40
Voltage at $P_{max}$	$V_{mpp}$	V	29.63	29.81	30.00	30.18	30.36	30.54
Current at $P_{max}$	$I_{mpp}$	A	10.51	10.57	10.64	10.70	10.76	10.82
Open-circuit voltage	$V_{oc}$	V	35.76	35.94	36.12	36.30	36.48	36.66
Short-circuit current	$I_{sc}$	A	11.22	11.29	11.35	11.42	11.48	11.55

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

## THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	42 ± 2
Temperature coefficient of $P_{max}$	$\gamma$	%/°C	- 0.30
Temperature coefficient of $V_{oc}$	$\beta$	%/°C	- 0.25
Temperature coefficient of $I_{sc}$	$\alpha$	%/°C	0.046

## OPERATING CONDITIONS

Max. system voltage	1000 $V_{DC}$ / 1500 $V_{DC}$
Max. series fuse rating*	25 A
Operating temperature range	- 40°C to 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 <sup>-1</sup>

\*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION.

## CONSTRUCTION MATERIALS

Cell ( material / quantity )	n-type monocrystalline silicon / 6 × 18
Glass (material / thickness)	low-iron tempered glass / 3.2 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 1200 mm / 4 mm <sup>2</sup>

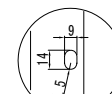
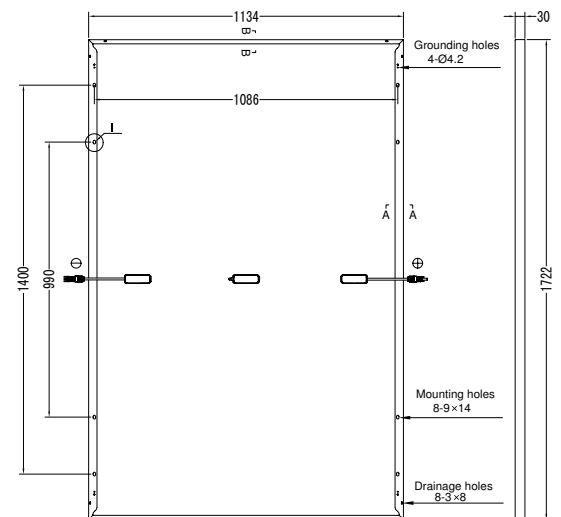
## GENERAL CHARACTERISTICS

Dimensions (L / W / H)	1722 mm / 1134 mm / 30 mm
Weight	21.5 kg

## PACKAGING SPECIFICATIONS

Number of modules per pallet	36
Number of pallets per 40' container	26
Packaging box dimensions (L / W / H)	1740 mm / 1110 mm / 1245 mm
Box weight	810 kg

## BACK VIEW (units: mm)



DETAIL I



SECTION A-A



SECTION B-B



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

- 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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