

ABOUT YINGLI GREEN ENERGY

Yingli Green Energy Holding Company Limited (NYSE: YGE) is one of the world's largest fully vertically integrated PV manufacturers, which markets its products under the brand "Yingli Solar". With over 2GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance. We are the first renewable energy company and the first Chinese company to sponsor the FIFA World Cup^{TM} .

PERFORMANCE

- Yingli Solar PANDA is a new monocrystalline module technology with n-type solar cells that have average efficiencies higher than 18.9%. Combined with high transmission glass, module efficiencies are up to 17.1%.
- Compared to traditional modules with p-type solar cells, PANDA modules have lower initial degradation and higher performance under both high temperature and low irradiation conditions.
- Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

QUALITY & RELIABILITY

- Robust, corrosion resistant aluminum frames independently tested to withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa ensuring a stable mechanical life for your modules.
- Module packaging optimized to protect product during transportation and minimize on-site waste.
- Modules independently tested to ensure conformance with certification and regulatory standards.
- Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.

WARRANTIES

- 10-year limited product warranty¹.
- Limited power warranty: 1 year at 98% of the minimal rated power output, 10 years at 92% of the minimal rated power output, 25 years at 82% of the minimal rated power output.

QUALIFICATIONS & CERTIFICATES²

IEC 61215, IEC 61730, MCS, CE, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, SA 8000, PV Cycle

² Certificates for YL280C-30b, YL275C-30b are pending













¹ In compliance with our Warranty Terms and Conditions.

PANDA 280 SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)					
Module name			PANDA 280	PANDA 275	PANDA 270
Module type			YL280C-30b	YL275C-30b	YL270C-30b
Power output	P _{max}	w	280	275	270
Power output tolerances	ΔP _{max}	W	-0 ~ +5		
Module efficiency	η"	%			16.5
Voltage at P _{max}	V _{mpp}	V			31.1
Current at P _{max}	l _{mpp}	Α			8.68
Open-circuit voltage	V _{oc}	V			39.0
Short-circuit current	I _{sc}	Α			9.06

STC: $1000W/m^2$ irradiance, $25^{\circ}C$ module temperature, AM 1.5g spectrum according to EN 60904-3. Ave. efficiency reduction of 5% at $200W/m^2$ according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)				
Power output	P _{max}	W		195.6
Voltage at P _{max}	V _{mpp}	٧		27.4
Current at P _{max}	I _{mpp}	Α		7.13
Open-circuit voltage	V _{oc}	V		35.3
Short-circuit current	I _{sc}	Α		7.64

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature, 1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P _{max}	γ	%/°C	-0.45
Temperature coefficient of V _{oc}	β _{Voc}	%/°C	-0.33
Temperature coefficient of I _{sc}	α _{lsc}	%/°C	0.04

OPERATING CONDITIONS

Max. system voltage	1000Vbc
Max. series fuse rating	20A
Limiting reverse current	Do not apply external voltages larger than $V_{\mbox{\tiny oc}}$ of the module.
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / type / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / type / dimensions)	60 / monocrystalline / 156mm x 156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver / clear
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	1000mm / 4mm ²
Plug connector (type / protection degree)	MC4 / IP67 or Amphenol H4 / IP68

- 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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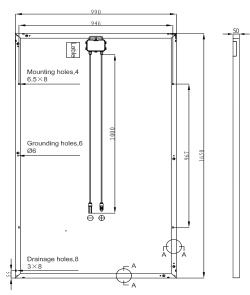
GENERAL CHARACTERISTICS

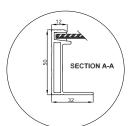
Dimensions (L / W / H)	1650mm / 990mm / 50mm
Weight	19.5kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	20
Number of pallets per 40' container	28
Packaging box dimensions (L / W / H)	1700mm / 1150mm / 1190mm
Box weight	427kg

Unit: mm







Warning: Read the instruction manual in its entirety before handling, installing, and operating Yingli Solar modules.



