## PANDA 60 Cell 40mm SERIES

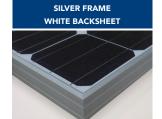
YL280C-30b YL275C-30b YL270C-30b YL265C-30b YL260C-30b





BLACK FRAME BLACK BACKSHEET





## **ABOUT YINGLI GREEN ENERGY**

With over 10GW of modules installed globally, Yingli Green Energy is the world's largest solar panel manufacturer (2012 & 2013) and a global leader in solar technology and manufacurting. Our success has been built upon world class technology, proven product reliability, sustain able performance and strong customer partnerships. Our mission is to provide affordable green energy for all.

### PERFORMANCE

- Yingli Solar PANDA is the first monocrystalline silicon module in volume production with n-type solar cells that have average efficiencies higher than 19.5%. Combined with high transmission glass, module efficiencies are up to 17.1%. Offering more yield per area and optiumum usage of the roof space.
- Compared to traditional modules with p-type cells. PANDA n-type modules have superior performance in low light conditions such as cloudy days and early mornings or later in the afternoon. This means more yield under real world conditions.
- Positive power tolerance of 0W to +5W together with practicly no innitial degradation ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.
- Top ranking in the "TÜV Rheinland Energy Yield Test" demonstrates high performance and annual energy production.

## RELIABILITY

-Tests by independent laboratories prove that Yingli Solar modules:

- Fully conform with certification and regulatory standards.
- Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.
- -Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.

## WARRANTIES

- 10-year limited product warranty<sup>1</sup>.
- Limited power warranty<sup>1</sup>: 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.
  <sup>1</sup>In compliance with our Warranty Terms and Conditions.

## **QUALIFICATIONS & CERTIFICATES**

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



## YINGLISOLAR.COM/AU

# PANDA 60 Cell 40mm SERIES

#### ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)							
Module type			YLxxxC-30b (xxx=P <sub>max</sub> )				
Power output	P <sub>max</sub>	w	280	275	270	265	260
Power output tolerances	ΔP <sub>max</sub>	w	0 / + 5				
Module efficiency	n"	%	17.1	16.8	16.5	16.2	15.9
Voltage at P <sub>max</sub>	V	v	31.3	30.9	30.5	30.1	29.7
Current at P <sub>max</sub>	I mpp	Α	8.96	8.91	8.85	8.79	8.74
Open-circuit voltage	V <sub>oc</sub>	v	39.1	38.8	38.6	38.3	38.1
Short-circuit current	I <sub>sc</sub>	А	9.50	9.47	9.43	9.37	9.35

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 3.5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)						
P <sub>max</sub>	w	204.2	200.6	196.9	193.3	189.7
V <sub>mpp</sub>	v	28.5	28.1	27.8	27.5	27.1
I <sub>mpp</sub>	Α	7.17	7.13	7.08	7.03	6.99
V <sub>oc</sub>	v	36.2	35.9	35.7	35.4	35.3
I <sub>sc</sub>	Α	7.66	7.64	7.61	7.56	7.54
	P <sub>max</sub> V <sub>mpp</sub> I <sub>mpp</sub> V <sub>oc</sub>	Pmax      W        Vmpp      V        Impp      A        Voc      V	P <sub>max</sub> W      204.2        V <sub>mpp</sub> V      28.5        I <sub>mpp</sub> A      7.17        V <sub>oc</sub> V      36.2        I      A      7.46	P <sub>max</sub> W      204.2      200.6        V <sub>mpp</sub> V      28.5      28.1        I <sub>mpp</sub> A      7.17      7.13        V <sub>oc</sub> V      36.2      35.9        I      A      7.46      7.44	P <sub>max</sub> W      204.2      200.6      196.9        V <sub>mpp</sub> V      28.5      28.1      27.8        I <sub>mpp</sub> A      7.17      7.13      7.08        V <sub>oc</sub> V      36.2      35.9      35.7	P <sub>max</sub> W      204.2      200.6      196.9      193.3        V <sub>mpp</sub> V      28.5      28.1      27.8      27.5        I <sub>mpp</sub> A      7.17      7.13      7.08      7.03        V <sub>oc</sub> V      36.2      35.9      35.7      35.4

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 <sub>max</sub>	Ŷ	%/°C	-0.42
Temperature coefficient of $V_{\scriptscriptstyle oc}$	β <sub>Voc</sub>	%/°C	-0.31
Temperature coefficient of I <sub>sc</sub>	α <sub>lsc</sub>	%/°C	0.04
Temperature coefficient of $V_{_{\rm mpp}}$	$\beta_{Vmpp}$	%/°C	-0.41

#### **OPERATING CONDITIONS**

Max. system voltage	1000V <sub>DC</sub>
Max. series fuse rating	15A
Limiting reverse current	15A
Operating temperature range	-40°C to 85°C
Max. static load, front (e.g., snow)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

#### **CONSTRUCTION MATERIALS**

Front cover (material / thickness)	low-iron tempered glass / 3.2mm		
Backsheet (color)	white or black		
Cell (quantity / material / dimensions)	60 / monocrystalline silicon / 156mm x 156mm		
Encapsulant (material)	ethylene vinyl acetate (EVA)		
Frame (material / color / anodization color)	anodized aluminum alloy / silver or black / clear		
Junction box (protection degree)	≥ IP65		
Cable (length / cross-sectional area)	1100mm / 4mm²		
Plug connector (type / protection degree)	MC4 / IP67 or YT08-1 / IP67		

• 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.

**Yingli Green Energy Australia Pty Ltd** australia@yingli.com Tel: 1300 309 489

YINGLISOLAR.COM/AU

© Yingli Green Energy Australia Pty. Ltd. DS\_PANDA60Cell\_AU\_SEPT14

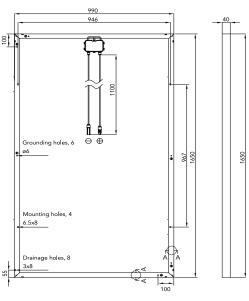
#### **GENERAL CHARACTERISTICS**

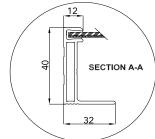
Dimensions (L / W / H)	1650mm / 990mm / 40mm		
Weight	18.5kg		

#### PACKAGING SPECIFICATIONS

Number of modules per pallet	26
Number of pallets per 40' container	28
Packaging box dimensions (L / W / H)	1710mm / 1160mm / 1178mm
Box weight	514kg

#### Unit: mm





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

Our Partners:

