

PANDA BIFACIAL 60CF

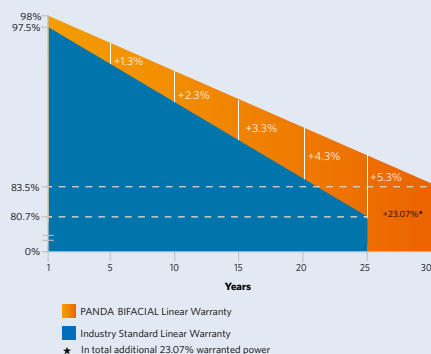


20.5%
CELL EFFICIENCY

10 YEAR
PRODUCT WARRANTY

0-5W
POWER TOLERANCE

PANDA BIFACIAL 30 Years Linear Warranty



DUAL POWER MAXIMIZED YIELD

PANDA BIFACIAL modules generate power from the front as well as from the back side. Together with the cutting-edge PANDA N-type crystalline silicon solar cells, which wake up earlier than conventional P-type and go to sleep later, the energy yield can be increased by 10-30%*.



Bifacial Power

In contrast to conventional modules, PANDA BIFACIAL modules generate energy from both sides. As the backside makes use of the reflected and scattered light from the surroundings, the modules can yield up to 30% power more, depending on the albedo.



High Yield

Once used, PANDA BIFACIAL modules generate more energy, because of low LID, good low-light performance and temperature coefficient of N-type monocrystalline silicon solar cells.



Durability

Durable PANDA BIFACIAL modules work well in muggy conditions, its glass on glass construction protects the cells in the most harsh environmental conditions.



Mechanical Performance

No shading aluminium frames enhance the mechanical performance of modules and the installation efficiency of system.

Yingli Green Energy

Yingli Green Energy Holding Company Limited (NYSE: YGE), known as "Yingli Solar", is one of the world's leading solar panel manufacturers with the mission to provide affordable green energy for all. Deploying more than 17 GW solar panels worldwide, Yingli Solar makes solar power possible for communities everywhere by using our global manufacturing and logistics expertise to address unique local challenges.

*Depending on the environmental condition of installation.

PANDA BIFACIAL 60CF 285W

ELECTRICAL PERFORMANCE

YL285CG2530F-1 Electrical parameters at STC & NOCT				
Test conditions			Electrical parameters at Standard Test Conditions (STC)	Electrical parameters at Nominal Operating Cell Temperature (NOCT)
Power output tolerance	ΔP_{max}	W	0 / + 5	/
Power output	P_{max}	W	285	209.8
Module efficiency	η_m	%	17.1	12.6
Voltage at P_{max}	V_{mpp}	V	32.0	29.6
Current at P_{max}	I_{mpp}	A	8.91	7.09
Open-circuit voltage	V_{oc}	V	39.0	36.2
Short-circuit current	I_{sc}	A	9.30	7.50

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5 spectrum according to EN 60904-3.

Average relative efficiency reduction of 1.9% at 200W/m² according to EN 60904-1.

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

YL285CG2530F-1 Optimized electrical parameters (considering the power gain from rear side)							
Energy yield			5%	10%	15%	20%	25%
Power output	P_{max}	W	299	313	327	342	356
Module efficiency	η_m	%	18.0	18.8	19.7	20.6	21.4
Voltage at P_{max}	V_{mpp}	V	32.0	32.0	32.0	32.0	32.0
Current at P_{max}	I_{mpp}	A	9.36	9.80	10.2	10.7	11.1
Open-circuit voltage	V_{oc}	V	39.0	39.0	39.0	39.0	39.0
Short-circuit current	I_{sc}	A	9.77	10.2	10.7	11.2	11.6

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 + / - 2
Temperature coefficient of P_{max}	γ	%/°C	-0.38
Temperature coefficient of V_{oc}	β_{voc}	%/°C	-0.30
Temperature coefficient of I_{sc}	α_{isc}	%/°C	0.04

OPERATING CONDITIONS

Max. system voltage	1500V _{DC}
Max. series fuse rating	20A
Limiting reverse current	20A
Operating temperature range	-40°C to 85°C
Max. snow load, front	5400Pa
Max. wind load, back	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s
Fire class	A

CONSTRUCTION MATERIALS

Front and back cover (material / thickness)	low-iron tempered glass / 2.5mm x 2
Cell (quantity / material / dimensions / number of busbar)	60 / monocrystalline silicon / 156.75mm x 156.75mm (±0.25mm) / 4 or 5
Frame	anodized aluminum alloy
Junction box (protection degree)	≥ IP67
Cable (length / cross-sectional area)	200mm / 4mm ²
Plug connector (type / protection degree)	STAUBLI MC4-Evo2 / IP68 or RH 05-8/IP67 or LSC-R1/IP68 or LSC-R4/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.

QUALIFICATIONS & CERTIFICATES

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



Proudly made in China

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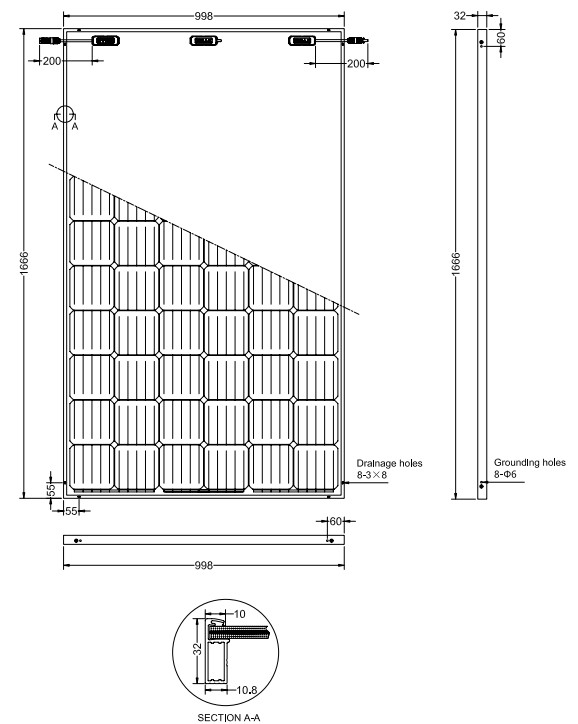
GENERAL CHARACTERISTICS

Dimensions (L / W / H)	1666mm / 998mm / 32mm
Weight	24.5kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	32
Number of pallets per 40' container	26
Packaging pallets dimensions (L / W / H)	1730mm / 1160mm / 1165mm
Pallet weight	835kg

Unit: mm



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

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