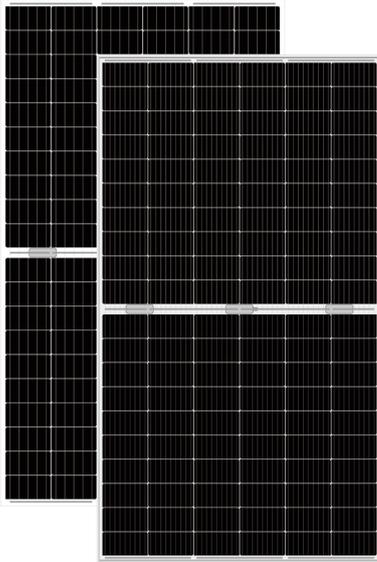


# PANDA BIFACIAL 120CELL



## DUAL POWER MAXIMIZED YIELD

PANDA BIFACIAL modules generate power from the front side as well as from the back. 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 highest increased by 30%.

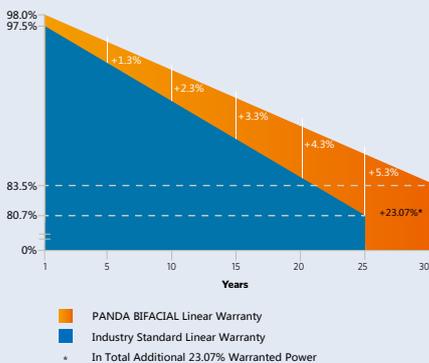


**22.5%**  
CELL EFFICIENCY

**12 YEAR**  
PRODUCT WARRANTY

**0 to +5W**  
POWER SELECTION TOLERANCE

### 30 Years Linear Warranty



#### Bifacial Power

In contrast to conventional modules, PANDA BIFACIAL modules can generate energy from both sides. As the backside makes use of the reflected and scattered light from the surroundings, these modules could yield significantly more power, depending upon the albedo.



#### High Yield

PANDA BIFACIAL modules often generate more energy due to their low LID, good low-light performance and the temperature coefficient of n-type monocrystalline silicon solar cells.



#### Higher Bifaciality

Imagine a solar module flipped upside down with its back to the sun. The amount of power that it can still produce is compared against the nameplate badge, which is the bifaciality factor. A major advantage of choosing PANDA BIFACIAL modules is that the backside will perform at an industry leading of bifacial modules.



#### Higher Durability

The double glass construction improves the long-term mechanical performance of the module. Furthermore, PANDA BIFACIAL modules work well in muggy conditions, and independently tested for harsh environmental conditions, such as exposure to salt mist, ammonia, dust or known PID risk factors.



#### Optimal Self-cleaning

Choose our frameless "CL" module for optimal self-cleaning.



#### Mechanical Performance

Choose our specially designed aluminium framed "CF" module for enhanced mechanical performance and more ease of use in traditional installation methods.

#### Yingli Solar

Founded in 1987, Yingli Energy (China) Company Limited, known as "Yingli Solar", is one of the world's oldest leading solar panel manufacturers with the mission to provide affordable green energy for all. Yingli Solar makes solar power possible for communities everywhere by using our global manufacturing and logistics expertise to address unique local challenges.

# PANDA BIFACIAL 120CELL

## ELECTRICAL PERFORMANCE



Module type	120CL (120 cell, n-type mono-Si, frameless): YLxxxCG2530L-2 1/2 (xxx=Pmax) 120CF (120 cell, n-type mono-Si, framed): YLxxxCG2530F-2 1/2 (xxx=Pmax)
-------------	---

Electrical Parameters at Standard Test Conditions (STC)								
Power output	$P_{max}$	W	345	340	335	330	325	320
Voltage at $P_{max}$	$V_{Pmax}$	V	35.35	35.02	34.68	34.34	34.00	33.65
Current at $P_{max}$	$I_{Pmax}$	A	9.76	9.71	9.66	9.61	9.56	9.51
Open-circuit voltage	$V_{oc}$	V	42.03	41.66	41.29	40.92	40.55	40.18
Short-circuit current	$I_{sc}$	A	10.22	10.17	10.12	10.07	10.02	9.97
Power output tolerance	$\Delta P_{max}$	W	0 / +5					
Module efficiency@120CL	$\eta_{Pmax}$	%	20.25	19.96	19.67	19.37	19.08	18.79
Module efficiency@120CF	$\eta_{Pmax}$	%	20.06	19.77	19.48	19.19	18.90	18.61

Electrical Parameters at Nominal Module Operating Temperature (NMOT)								
Power output	$P_{max}$	W	262.49	258.71	254.87	251.07	247.29	243.46
Voltage at $P_{max}$	$V_{Pmax}$	V	33.71	33.40	33.07	32.75	32.42	32.09
Current at $P_{max}$	$I_{Pmax}$	A	7.79	7.75	7.71	7.67	7.63	7.59
Open-circuit voltage	$V_{oc}$	V	39.86	39.51	39.16	38.81	38.46	38.11
Short-circuit current	$I_{sc}$	A	8.22	8.18	8.14	8.10	8.06	8.02

Bifacial Power Output (Backside Power Gain)								
Power output (power gain 10%)	$P_{max10}$	W	380	374	369	363	358	352
Power output (power gain 15%)	$P_{max15}$	W	397	391	385	380	374	368
Power output (power gain 25%)	$P_{max25}$	W	431	425	419	413	406	400

Other Characteristics								
Nominal module operating temperature	NMOT	°C	39±2	Temperature coefficient of $I_{sc}$	$\alpha_{Isc}$	% / °C	0.04	
Bifaciality factor	$\phi$	%	80±5	Temperature coefficient of $V_{oc}$	$\beta_{Voc}$	% / °C	-0.30	
Measurement tolerance of $P_{max}$ , $V_{oc}$ and $I_{sc}$		%	±3	Temperature coefficient of $P_{max}$	$\gamma_{Pmax}$	% / °C	-0.35	

STC: 1000W·m<sup>-2</sup> irradiance, 25°C cell temperature, AM1.5 spectrum according to EN 60904-3.  
NMOT: temperature near maximum power point at 800W·m<sup>-2</sup> irradiance, 20°C ambient temperature, 1m·s<sup>-1</sup> wind speed.

### OPERATING CONDITIONS

### CONSTRUCTION MATERIALS

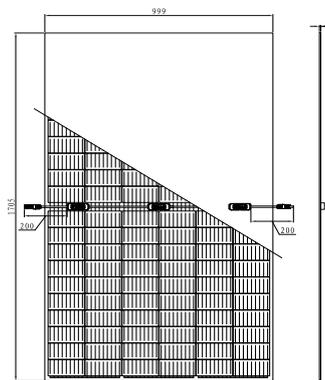
Max. system voltage	1500V <sub>DC</sub>	Cell (material / number)	n-type mono-Si / 2 x 6 x 10
Max. series fuse rating*	20A	Glass (material / thickness)	low-iron semi-tempered glass / 2.5mm x 2
Operating temperature range	-40°C to 85°C	Frame (120CL / 120CF)	none / anodized aluminium alloy
Fire resistance	Class A	Junction box (type / protection degree)	3 diodes / ≥ IP67
Hailstone impact (diameter / velocity)	25mm / 23m·s <sup>-1</sup>	Cable (length / cross-sectional area)	200mm, can be customized / 4mm <sup>2</sup>
Snow load, front (120CL / 120CF)	3000Pa / 5400Pa	Plug connector (type / protection degree)	match the junction box / IP67
Wind load, back (120CL / 120CF)	2400Pa / 2400Pa		

\*DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection.

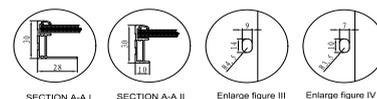
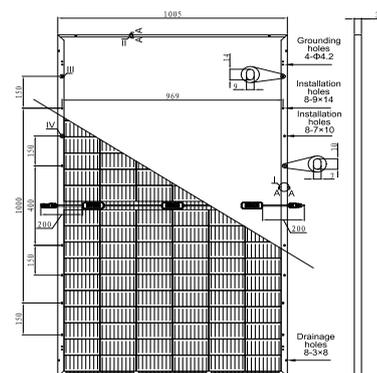
### PACKAGING SPECIFICATIONS

Packaging Specifications@120CL		Packaging Specifications@120CF	
Dimensions (L / W / H)	1705mm / 999mm / 6mm	Dimensions (L / W / H)	1711mm / 1005mm / 30mm
Weight	24.7kg	Weight	26.2kg
Number of modules per pallet	36	Number of modules per pallet	36
Number of pallets per 40' container*	24	Number of pallets per 40' container*	26
Packaging pallets dimensions (L / W / H)	1832mm / 1138mm / 1182mm	Packaging pallets dimensions (L / W / H)	1725mm / 1110mm / 1157mm
Pallet weight	954kg	Pallet weight	980kg

\*Truck transport is prohibited to exceed its maximum load.



Figure@120CL unit: mm



Figure@120CF unit: mm

### QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE, ISO 9001: 2015, ISO 14001: 2015, BS OHSAS 18001: 2007



- 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 does not refer to a single module and they are not part of the offer, they only serve for comparison to different module types. The company reserves the final right to explain any of the data included here.
- Proudly made in China.



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

**Yingli Energy (China) Company Limited**

Tel: +86-312-8922216

service@yingli.com