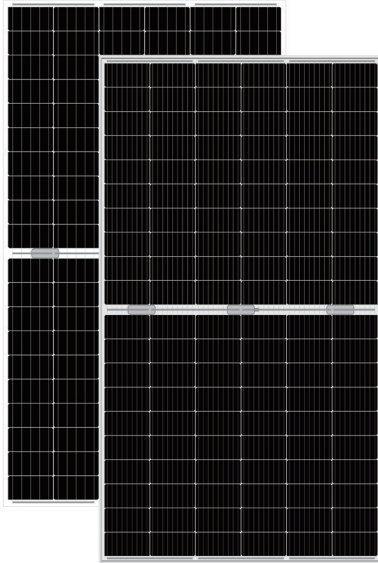


PANDA BIFACIAL 120HC

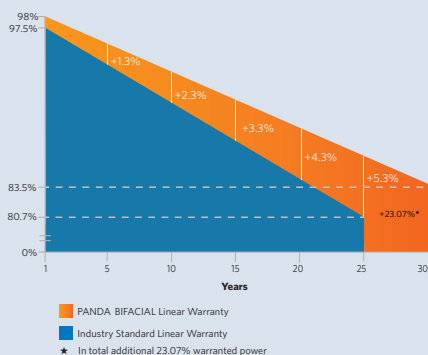


22.0%
CELL EFFICIENCY

10 YEAR
PRODUCT WARRANTY

0-5W
POWER TOLERANCE

30 Years Linear Warranty



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%.



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 could yield more.



High Power Output

Multi-busbar half cells and series & parallel electrical structure could reduce CTM loss and increase module output power.



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, and independently tested for harsh environmental conditions beyond IEC standards, such as exposure to salt mist, ammonia, dust or known PID risk factors.



Optimal Self-cleaning@CL

Optimal self-cleaning due to frameless module design.



Mechanical Performance@CF

Specially designed aluminium frames enhance the mechanical performance of modules and the installation efficiency of systems.

Yingli Green Energy

Yingli Green Energy Holding Company Limited, known as "Yingli Solar", is one of the world's 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 120HC

ELECTRICAL PERFORMANCE

Module type	120HCL (120 half-cell, frameless): YLxxxCG2530L-2 1/2									
	120HCF (120 half-cell, 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	315	310
Voltage at P_{max}	V_{mpp}	V	35.35	35.02	34.68	34.34	34.00	33.65	33.30	32.95
Current at P_{max}	I_{mpp}	A	9.76	9.71	9.66	9.61	9.56	9.51	9.46	9.41
Open-circuit voltage	V_{oc}	V	42.03	41.66	41.29	40.92	40.55	40.18	39.81	39.44
Short-circuit current	I_{sc}	A	10.22	10.17	10.12	10.07	10.02	9.97	9.92	9.87
Power output tolerance	ΔP_{max}	W	0 / +5							
Module efficiency@120HCL	η_{mpp}	%	20.25	19.96	19.67	19.37	19.08	18.79	18.49	18.20
Module efficiency@120HCF	η_{mpp}	%	20.06	19.77	19.48	19.19	18.90	18.61	18.32	18.03

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	239.67	235.89
Voltage at P_{max}	V_{mpp}	V	33.71	33.40	33.07	32.75	32.42	32.09	31.76	31.42
Current at P_{max}	I_{mpp}	A	7.79	7.75	7.71	7.67	7.63	7.59	7.55	7.51
Open-circuit voltage	V_{oc}	V	39.86	39.51	39.16	38.81	38.46	38.11	37.76	37.41
Short-circuit current	I_{sc}	A	8.22	8.18	8.14	8.10	8.06	8.02	7.98	7.94

Bifacial Output (Backside Power Gain)										
Power output (power gain 10%)	W	380	374	369	363	358	352	347	341	
Power output (power gain 15%)	W	397	391	385	380	374	368	362	357	
Power output (power gain 25%)	W	431	425	419	413	406	400	394	388	

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

THERMAL CHARACTERISTICS

Nominal module operating temperature	NMOT	°C	39±2	Bifaciality			
Temperature coefficient of P_{max}	γ_{Pmax}	% / °C	-0.35	Bifaciality of P_{max}	ϕ_{Pmax}	%	82.0
Temperature coefficient of V_{oc}	β_{Voc}	% / °C	-0.30	Bifaciality of V_{oc}	ϕ_{Voc}	%	99.1
Temperature coefficient of I_{sc}	α_{Isc}	% / °C	0.04	Bifaciality of I_{sc}	ϕ_{Isc}	%	81.5

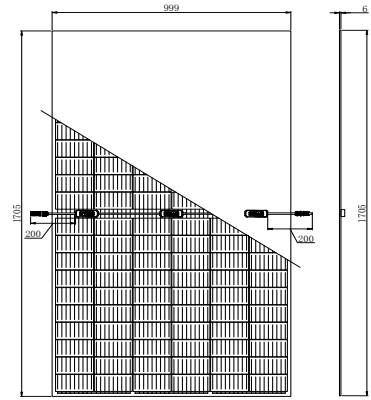
OPERATING CONDITIONS

Max. system voltage	1500V _{DC}	Front and back cover (material / thickness)	low-iron semi-tempered glass / 2.5mm x 2
Max. series fuse rating*	20A	Cell (material / number of busbar)	n-type monocrystalline / 5-12
Operating temperature range	-40°C to 85°C	Frame (120HCL / 120HCF)	none / anodized aluminium alloy
Fire resistance	Class A	Cable (length / cross-sectional area)	200mm / 4mm ²
Hailstone impact (diameter / velocity)	25mm / 23m·s ⁻¹	Junction box (protection degree)	≥ IP67
Snow load, front (120HCL / 120HCF) Wind load, back (120HCL / 120HCF)	3000Pa / 5400Pa 2400Pa / 2400Pa	Plug connector (type / protection degree)	RH 05-8 / IP67

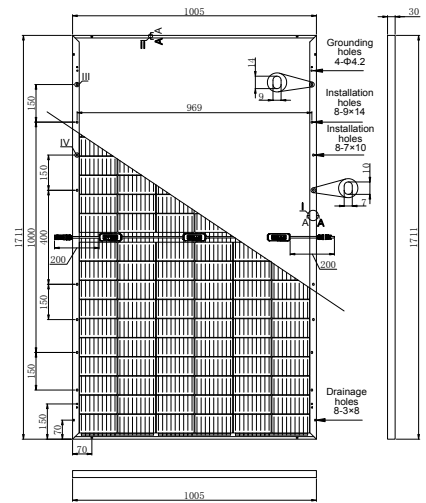
*DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection.

PACKAGING SPECIFICATIONS

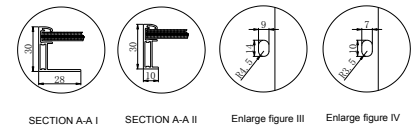
Packaging Specifications@120HCL		Packaging Specifications@120HCF	
Dimensions (L / W / H)	1705mm/999mm/6mm	Dimensions (L / W / H)	1711mm/1005mm/30mm
Weight	23.8kg	Weight	25.2kg
Number of modules per pallet	36	Number of modules per pallet	35
Number of pallets per 40' container	24	Number of pallets per 40' container	26
Packaging pallets dimensions (L / W / H)	1832mm / 1138mm / 1182mm	Packaging pallets dimensions (L / W / H)	1760mm / 1110mm / 1157mm
Pallet weight	923kg	Pallet weight	916kg



Figure@120HCL unit: mm



Figure@120HCF 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 do 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.



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

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