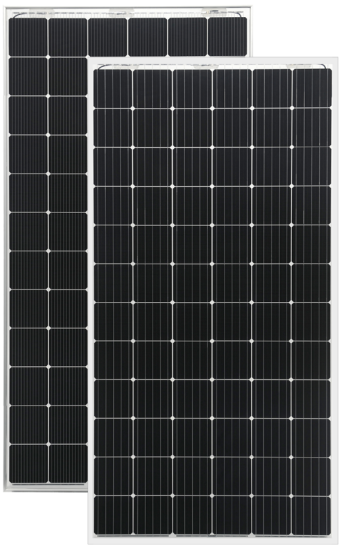
YINGLI SOLAR

PANDA BIFACIAL 72CELL

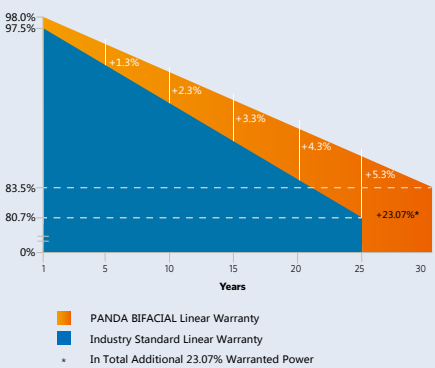


22.5%
CELL EFFICIENCY

12 YEAR
PRODUCT WARRANTY

0 to +5W
POWER SELECTION TOLERANCE

30 Years Linear Warranty



YINGLISOLAR.COM

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 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 bifacialilty 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 72CELL

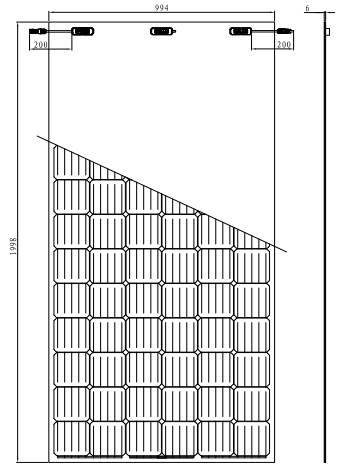
ELECTRICAL PERFORMANCE

Module type	72CL (72 cell, n-type mono-Si, frameless): YLxxxCG2536L-2 (xxx=Pmax) 72CF (72 cell, n-type mono-Si, framed): YLxxxCG2536F-2 (xxx=Pmax)

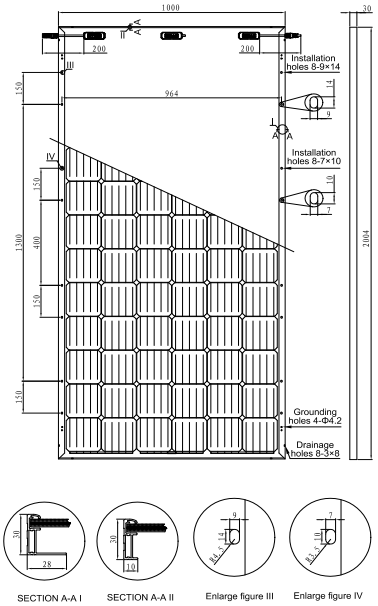
Electrical Parameters at Standard Test Conditions (STC)								
Power output	P_{max}	W	400	395	390	385	380	375
Voltage at P_{max}	V_{Pmax}	V	41.72	41.37	41.01	40.66	40.30	39.94
Current at P_{max}	I_{Pmax}	A	9.59	9.55	9.51	9.47	9.43	9.39
Open-circuit voltage	V_{oc}	V	49.50	49.10	48.70	48.30	47.90	47.50
Short-circuit current	I_{sc}	A	10.08	10.04	10.00	9.96	9.92	9.88
Power output tolerance	ΔP_{max}	W	0 / + 5					
Module efficiency@72CL	H_{Pmax}	%	20.14	19.89	19.64	19.39	19.13	18.88
Module efficiency@72CF	η_{Pmax}	%	19.96	19.71	19.46	19.21	18.96	18.71
Electrical Parameters at Nominal Module Operating Temperature (NMOT)								
Power output	P_{max}'	W	304.39	300.58	296.72	292.95	289.13	285.33
Voltage at P_{max}'	V_{Pmax}'	V	39.79	39.45	39.11	38.78	38.43	38.09
Current at P_{max}'	I_{Pmax}'	A	7.65	7.62	7.59	7.55	7.52	7.49
Open-circuit voltage	V_{oc}'	V	46.95	46.57	46.19	45.81	45.43	45.05
Short-circuit current	I_{sc}'	A	8.11	8.08	8.04	8.01	7.98	7.95
Bifacial Power Output (Backside Power Gain)								
Power output (power gain 10%)	P_{max10}	W	440	435	429	424	418	413
Power output (power gain 15%)	P_{max15}	W	460	454	449	443	437	431
Power output (power gain 25%)	P_{max25}	W	500	494	488	481	475	469

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

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.



Figure@72CL unit: mm



Figure@72CF unit: mm

OPERATING CONDITIONS

Max. system voltage	1500V_{DC}
Max. series fuse rating*	20A
Operating temperature range	-40°C to 85°C
Fire resistance	Class A
Hailstone impact (diameter / velocity)	25mm / 23m·s^{-1}
Snow load, front (72CL / 72CF) Wind load, back (72CL / 72CF)	3000Pa / 5400Pa 2400Pa / 2400Pa

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

CONSTRUCTION MATERIALS

Cell (material / number)	n-type mono-Si / 6 x 12
Glass (material / thickness)	low-iron semi-tempered glass / 2.5mm x 2
Frame (72CL / 72CF)	none / anodized aluminium alloy
Junction box (type / protection degree)	3 diodes / ≥ IP67
Cable (length / cross-sectional area)	200mm, can be customized / 4mm^2
Plug connector (type / protection degree)	match the junction box / IP67

PACKAGING SPECIFICATIONS

Packaging Specifications@72CL		Packaging Specifications@72CF	
Dimensions (L / W / H)	1998mm / 994mm / 6mm	Dimensions (L / W / H)	2004mm / 1000mm / 30mm
Weight	28.7kg	Weight	30.4kg
Number of modules per pallet	32	Number of modules per pallet	36
Number of pallets per 40' container*	22	Number of pallets per 40' container*	22
Packaging pallets dimensions (L / W / H)	2127mm / 1125mm / 1177mm	Packaging pallets dimensions (L / W / H)	2020mm / 1110mm / 1152mm
Pallet weight	990kg	Pallet weight	1137kg

*Truck transport is prohibited to exceed its maximum load.

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