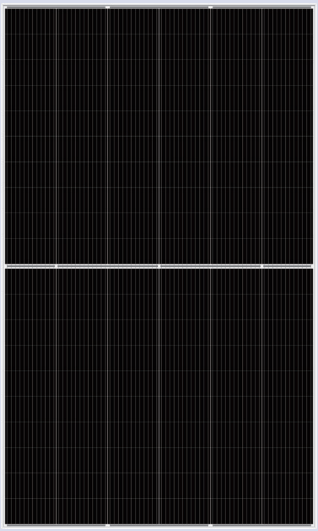
YINGLI SOLAR

YLM 3.0 PLUS
580-605 W

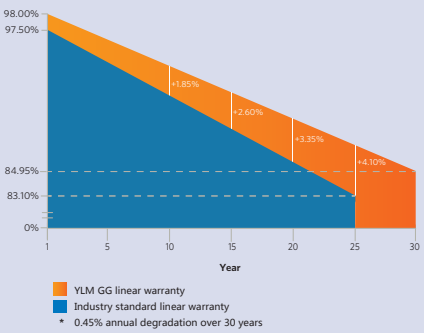


120 CELL
CELL QUANTITY

0-5 W
POWER TOLERANCE

12 YEAR
PRODUCT WARRANTY

30 YEAR
POWER WARRANTY



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IMPROVED POWER
NEVER SETTLE FOR LESS

YLM 3.0 modules use high efficiency p-type monocrystalline PERC cell technology. With high quality encapsulation materials and excellent glass-glass structure, YLM 3.0 modules are perfectly suited to the harsh environment and provide you with high reliability and quality assurance.

Backside Yield
The backside of the module effectively uses reflected and scattered light from the environment to generate electricity. Superior backside power generation reduces LCOE.

Superior Yield
The large size cell enhances the module's power output, with the excellent temperature coefficient and comprehensive LID/LeTID degradation suppression technology, allows the module to generate more energy yield once in use.

Excellent Durability
The modules meet IEC standard testing requirements and are resistant to salt mist, ammonia, dust and sand, snail trail and PID risks.

Wide Applications
The The glass-glass structure, special material selection and extra-strong frames effectively enhance the mechanical performance of the modules, their compatibility with mainstream trackers and inverters, and their adaptability to harsh environments.

Lower Losses
The multi-busbar design effectively reduces the impact of micro-cracks and broken busbars, and the half-cell structure effectively reduces the impact of shadow shading.

QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE

Yingli Solar

Headquartered in Baoding, China, Yingli Energy Development Company Limited, known as Yingli Solar, is a leading solar solution provider. Yingli Solar is committed to providing clean, renewable energy through PV power generation technology for factories, homes and utilities around the world. Yingli Solar provides reliable products and services through continuous technological advancement and management innovation.

YLM 3.0 PLUS

Electrical parameters at Standard Test Conditions (STC*)

Module type			YLxxxDF60 f/2 (xxx=Pmax)					
Power output	P_{max}	W	580	585	590	595	600	605
Power output tolerances	ΔP_{max}	W	0 / + 5					
Module efficiency	η_m	%	20.49	20.67	20.85	21.02	21.20	21.38
Voltage at P_{max}	V_{mpp}	V	33.70	33.90	34.10	34.30	34.50	34.70
Current at P_{max}	I_{mpp}	A	17.21	17.26	17.31	17.35	17.39	17.44
Open-circuit voltage	V_{oc}	V	40.70	40.90	41.10	41.30	41.50	41.70
Short-circuit current	I_{sc}	A	18.23	18.28	18.32	18.45	18.51	18.56

*STC: 1000 W·m^{-2} irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-3.

Electrical parameters at Nominal Operating Cell Temperature (NOCT*)

Power output	P_{max}	W	435.60	439.36	443.11	446.87	450.62	454.38
Voltage at P_{max}	V_{mpp}	V	31.64	31.82	32.00	32.20	32.39	32.57
Current at P_{max}	I_{mpp}	A	13.77	13.81	13.85	13.88	13.91	13.95
Open-circuit voltage	V_{oc}	V	37.83	38.01	38.20	38.38	38.57	38.76
Short-circuit current	I_{sc}	A	14.69	14.73	14.76	14.87	14.91	14.95

*NOCT: open-circuit module operation temperature at 800 W·m^{-2} irradiance, 20°C ambient temperature, 1 m·s^{-1} wind speed.

Bifacial electrical parameters at Standard Test Conditions (STC*)

Power output	P_{max}	W	634.81	640.28	645.76	651.23	656.70	662.17
Voltage at P_{max}	V_{mpp}	V	33.70	33.90	34.10	34.30	34.50	34.70
Current at P_{max}	I_{mpp}	A	18.84	18.89	18.94	18.99	19.03	19.08
Open-circuit voltage	V_{oc}	V	40.70	40.90	41.10	41.30	41.50	41.70
Short-circuit current	I_{sc}	A	19.95	20.01	20.05	20.19	20.26	20.31

*Bifaciality coefficient is 70% ± 5%, rear irradiance is 135 W·m^{-2}.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	43 ± 2
Temperature coefficient of P_{max}	γ	%/°C	- 0.34
Temperature coefficient of V_{oc}	β	%/°C	- 0.25
Temperature coefficient of I_{sc}	α	%/°C	0.04

OPERATING CONDITIONS

Max. system voltage	1500 V_{DC}
Max. series fuse rating*	35 A
Operating temperature range	- 40°C to 85°C
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter / velocity)	25 mm / 23 m·s^{-1}

*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION.

CONSTRUCTION MATERIALS

Cell (material / quantity)	p-type monocrystalline silicon / 6 x 20
Glass (material / thickness)	low-iron semi-tempered glass / 2.0 mm (front), 2.0 mm (back)
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP67
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm^2

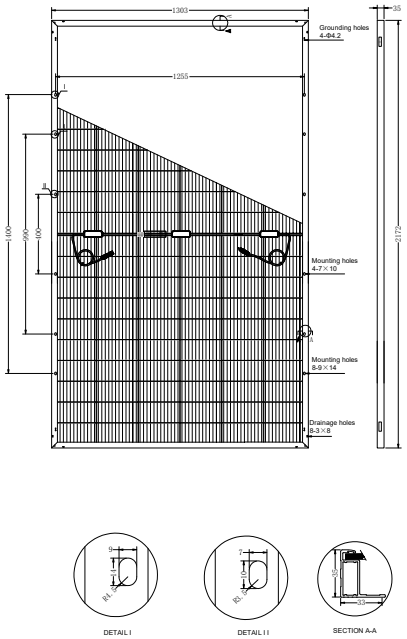
GENERAL CHARACTERISTICS

Dimensions (L / W / H)	2172 mm / 1303 mm / 35 mm
Weight	35.1 kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	31
Number of pallets per 40' container	17
Packaging box dimensions (L / W / H)	1340 mm / 1140 mm / 2290 mm
Box weight	1140 kg

Unit: mm



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

• 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.

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