JS 10 SERIES

YL010P-17b 1/13

GAIN SOLAR

YINGLI SOLAR
Power Your Life

ABOUT GAIN SOLAR

Founded in 2007, Baoding Jiasheng Photovoltaic Technology Co., Ltd which markets its products under the brand "Gain Solar", is a wholly owned subsidiary of Yingli Solar, specializing in R&D, manufacturing and marketing of photovoltaic (PV) off-grid products and systems. What started as the in-house off-grid PV module production of Yingli Solar has developed over the years into a full-blown provider of off-grid PV modules,building-integrated PV modules, off-grid PV systems and solar application products. Founded on the Yingli Solar technology development, production, and distribution platform, Gain Solar has rapidly grown to set up branches in major provinces and cities of China and is now expanding its presence to the global level. Gain solar is dedicated to provide high quality off-grid PV products and systems to customers and received a series of certificate,including ISO9001,TUV,UL,CE,CQCandRoHS.

PERFORMANCE

High efficiency, polycrystalline solar cells with high transmission and textured glass delivering a module efficiency of up to 15.0%, minimizing installation costs and maximizing the kWh output of your system per unit area.

QUALITY AND RELIABILITY

- Industry leading in-house manufacturing of polysilicon, ingots, wafers, cells and modules ensures tight control of our material and production quality.
- Robust, corrosion resistant aluminum frame independently tested to withstand wind loads of 2.4 kPa and snow loads of 2.4 kPa ensuring a stable mechanical life for your modules.
- Module packaging optimized to protect product during transportation and minimize on-site waste.
- This type of module is commonly use for the small off-grid system.

JS 10 SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)			
Module name			JS 10
Module type			YL10P-17b 1/13
Power output	P_{max}	W	10
Power output tolerances	ΔP_{max}	%	+/- 5
Module efficiency	η_m	%	10.80
Voltage at P_{max}	V_{mpp}	V	17.10
Current at P_{max}	I_{mpp}	A	0.59
Open-circuit voltage	V_{oc}	V	21.8
Short-circuit current	I_{sc}	A	0.65

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

GENERAL CHARACTERISTICS

Dimensions (L / W / H)	245mm / 375mm / 25mm
Weight	1.34kg

PACKAGING SPECIFICATIONS

Number of modules per box	6
Packaging box dimensions (L / W / H)	275mm / 405mm / 190mm

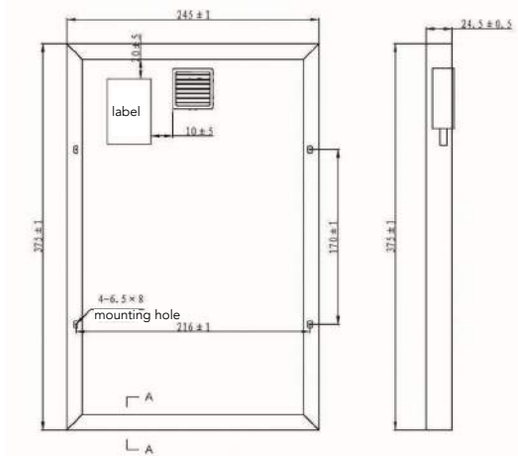
THERMAL CHARACTERISTICS

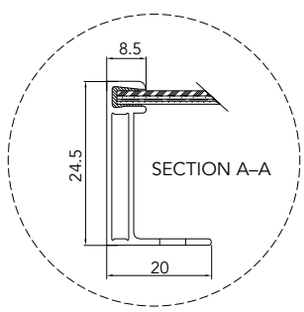
Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.45
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.37
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.06

OPERATING CONDITIONS

Max. system voltage	$50V_{DC}$
Max. series fuse rating	2A
Limiting reverse current	Don't apply external voltages larger than Voc of the module
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	2400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

Unit: mm





CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	36 / multicrystalline silicon /52mm x35mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver / clear

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

Our Partners:

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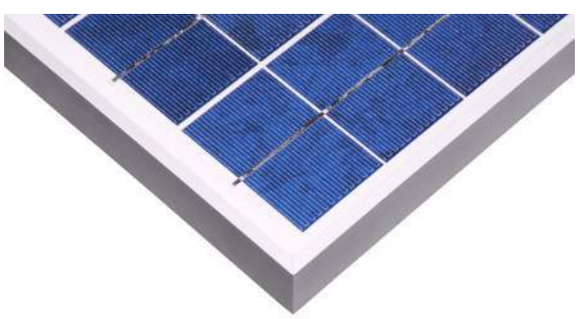
JS 20 SERIES

YL020P-17b 1/7



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PERFORMANCE

High efficiency, polycrystalline solar cells with high transmission and textured glass delivering a module efficiency of up to 15.0%, minimizing installation costs and maximizing the kWh output of your system per unit area.

QUALITY AND RELIABILITY

- Industry leading in-house manufacturing of polysilicon, ingots, wafers, cells and modules ensures tight control of our material and production quality.
- Robust, corrosion resistant aluminum frame independently tested to withstand wind loads of 2.4 kPa and snow loads of 2.4 kPa ensuring a stable mechanical life for your modules.
- Module packaging optimized to protect product during transportation and minimize on-site waste.
- This type of module is commonly use for the small off-grid system.

JS 20 SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)			
Module name			JS 20
Module type			YL20P-17b 1/7
Power output	P_{max}	W	20
Power output tolerances	ΔP_{max}	%	+/- 5
Module efficiency	η_m	%	11.50
Voltage at P_{max}	V_{mpp}	V	16.60
Current at P_{max}	I_{mpp}	A	1.20
Open-circuit voltage	V_{oc}	V	21.4
Short-circuit current	I_{sc}	A	1.31

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.45
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.37
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.06

OPERATING CONDITIONS

Max. system voltage	$50V_{DC}$
Max. series fuse rating	5A
Limiting reverse current	Don't apply external voltages larger than Voc of the module
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	2400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	36 / multicrystalline silicon /70mm x 52mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver / clear

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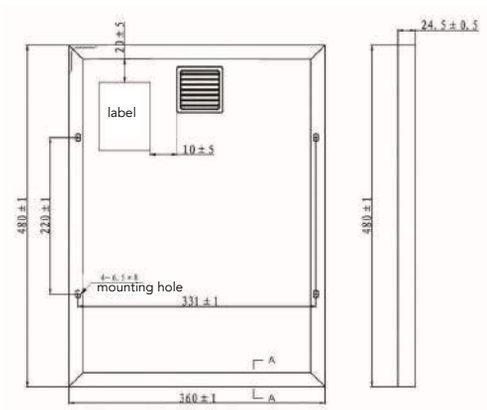
GENERAL CHARACTERISTICS

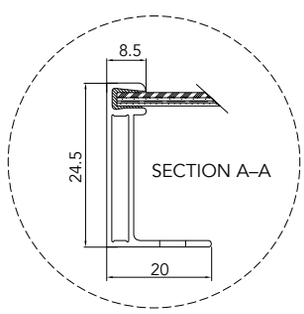
Dimensions (L / W / H)	360mm / 480mm / 25mm
Weight	2.26kg

PACKAGING SPECIFICATIONS

Number of modules per box	6
Packaging box dimensions (L / W / H)	390mm / 510mm / 190mm

Unit: mm





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JS 60 SERIES

YL055P-17b 2/5
YL060P-17b 2/5

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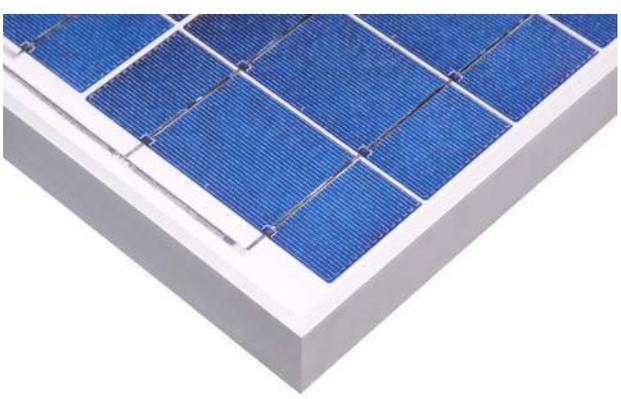
ABOUT GAIN SOLAR

Founded in 2007, Baoding Jiasheng Photovoltaic Technology Co., Ltd which markets its products under the brand "Gain Solar", is a wholly owned subsidiary of Yingli Solar, specializing in R&D, manufacturing and marketing of photovoltaic (PV) off-grid products and systems. What started as the in-house off-grid PV module production of Yingli Solar has developed over the years into a full-blown provider of off-grid PV modules,building-integrated PV modules, off-grid PV systems and solar application products. Founded on the Yingli Solar technology development, production, and distribution platform, Gain Solar has rapidly grown to set up branches in major provinces and cities of China and is now expanding its presence to the global level. Gain solar is dedicated to provide high quality off-grid PV products and systems to customers and received a series of certificate,including ISO9001,TUV,UL,CE,CQCandRoHS.

PERFORMANCE

High efficiency, polycrystalline solar cells with high transmission and textured glass delivering a module efficiency of up to 15.0%, minimizing installation costs and maximizing the kWh output of your system per unit area.



QUALITY AND RELIABILITY

- Industry leading in-house manufacturing of polysilicon, ingots, wafers, cells and modules ensures tight control of our material and production quality.
- Robust, corrosion resistant aluminum frame independently tested to withstand wind loads of 2.4 kPa and snow loads of 2.4 kPa ensuring a stable mechanical life for your modules.
- Module packaging optimized to protect product during transportation and minimize on-site waste.
- This type of module is commonly use for the small off-grid system.

JS 60 SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)				
Module name			JS 60	JS 55
Module type			YL60P-17b 2/5	YL55P-17b 2/5
Power output	P_{max}	W	60	55
Power output tolerances	ΔP_{max}	%	+/- 5	+/- 5
Module efficiency	η_m	%	14.4	13.20
Voltage at P_{max}	V_{mpp}	V	18.5	17.80
Current at P_{max}	I_{mpp}	A	3.25	3.08
Open-circuit voltage	V_{oc}	V	22.9	22.10
Short-circuit current	I_{sc}	A	3.44	3.28

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.45
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.37
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.06

OPERATING CONDITIONS

Max. system voltage	50V_{DC}
Max. series fuse rating	10A
Limiting reverse current	Don't apply external voltages larger than Voc of the module
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	2400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	36 / multicrystalline silicon /62.4mm x 156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver / clear

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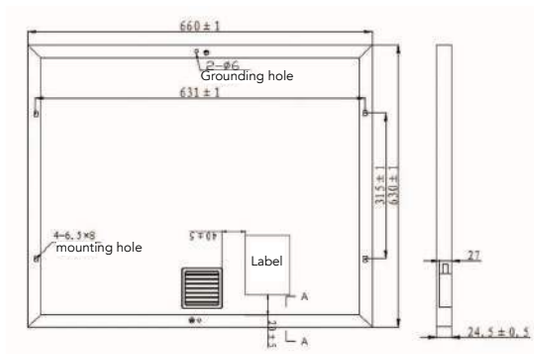
GENERAL CHARACTERISTICS

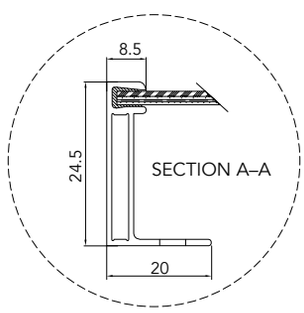
Dimensions (L / W / H)	660mm / 630mm / 25mm
Weight	4.79kg

PACKAGING SPECIFICATIONS

Number of modules per box	6
Packaging box dimensions (L / W / H)	690mm / 660mm / 190mm

Unit: mm





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JS 95 SERIES

YL100P-17b 2/3
YL095P-17b 2/3
YL090P-17b 2/3

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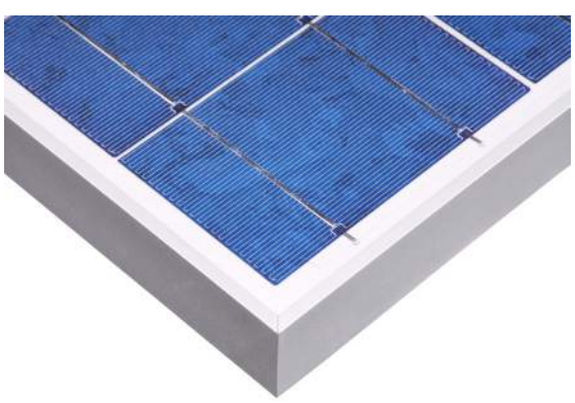

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PERFORMANCE

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QUALITY AND RELIABILITY

- Industry leading in-house manufacturing of polysilicon, ingots, wafers, cells and modules ensures tight control of our material and production quality.
- Robust, corrosion resistant aluminum frame independently tested to withstand wind loads of 2.4 kPa and snow loads of 2.4 kPa ensuring a stable mechanical life for your modules.
- Module packaging optimized to protect product during transportation and minimize on-site waste.
- This type of module is commonly use for the small off-grid system.

JS 95 SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)					
Module name			JS 100	JS 95	JS 90
Module type			YL100P-17b 2/3	YL95P-17b 2/3	YL90P-17b 2/3
Power output	P_{max}	W	100	95	90
Power output tolerances	ΔP_{max}	%	+/- 5		
Module efficiency	η_m	%	15.0	14.20	13.50
Voltage at P_{max}	V_{mpp}	V	18.5	18.20	17.80
Current at P_{max}	I_{mpp}	A	5.41	5.23	5.06
Open-circuit voltage	V_{oc}	V	22.9	22.5	22.0
Short-circuit current	I_{sc}	A	5.74	5.59	5.44

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.45
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.37
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.06

OPERATING CONDITIONS

Max. system voltage	50V_{DC}
Max. series fuse rating	10A
Limiting reverse current	Don't apply external voltages larger than Voc of the module
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	2400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	36 / multicrystalline silicon / 104mm x 156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver / clear

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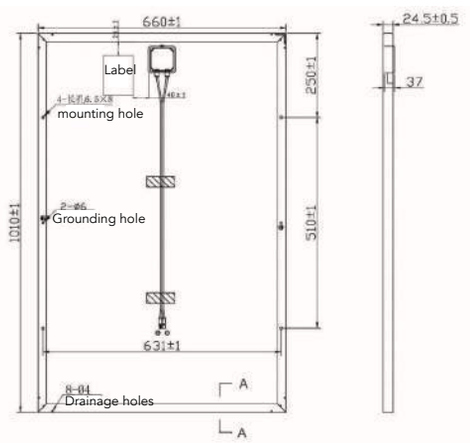
GENERAL CHARACTERISTICS

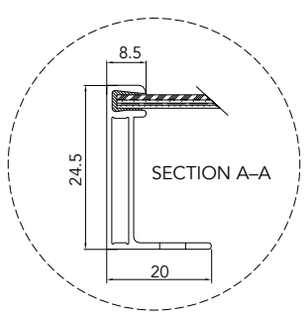
Dimensions (L / W / H)	1010mm / 660mm / 25mm
Weight	7.65kg

PACKAGING SPECIFICATIONS

Number of modules per box	6
Packaging box dimensions (L / W / H)	1040mm / 690mm / 190mm

Unit: mm





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JS 145 SERIES

YL145P-17b
YL140P-17b
YL135P-17b
YL130P-17b

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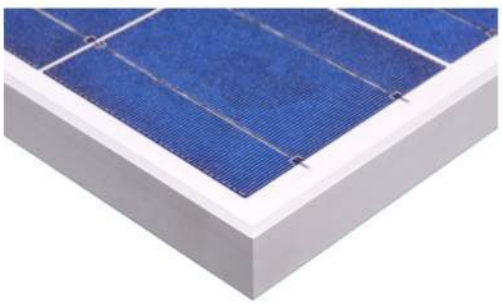

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- Module packaging optimized to protect product during transportation and minimize on-site waste.
- This type of module is commonly use for the small off-grid system.

JS 145 SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)						
Module name			JS 145	JS 140	JS 135	JS 130
Module type			YLxxxP-17b			
Power output	P_{max}	W	145	140	135	130
Power output tolerances	ΔP_{max}	%	+/- 5			
Module efficiency	η_m	%	14.50	14.0	13.50	13.00
Voltage at P_{max}	V_{mpp}	V	18.20	18.00	17.80	17.5
Current at P_{max}	I_{mpp}	A	7.99	7.77	7.60	7.42
Open-circuit voltage	V_{oc}	V	22.50	22.30	22.00	21.7
Short-circuit current	I_{sc}	A	8.47	8.30	8.12	8.00

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.45
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.37
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.06

OPERATING CONDITIONS

Max. system voltage	600V_{DC}
Max. series fuse rating	15A
Limiting reverse current	Do not apply external voltages larger than Voc of the module
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	2400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	36 / multicrystalline silicon / 156mm x 156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver / clear

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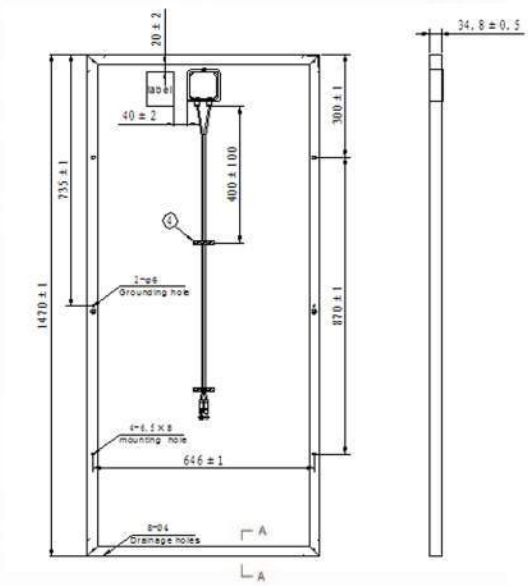
GENERAL CHARACTERISTICS

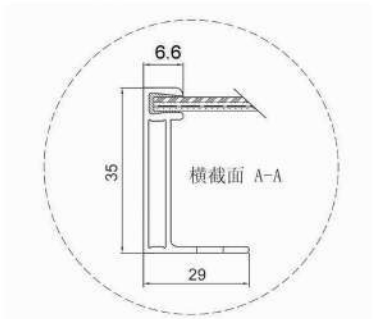
Dimensions (L / W / H)	1470mm / 680mm / 35mm
Weight	11.5kg

PACKAGING SPECIFICATIONS

Number of modules per box	2
Packaging box dimensions (L / W / H)	1500mm / 710mm / 80mm
Number of modules per box	26
Packaging box dimensions (L / W / H)	1480mm / 980mm / 685mm

Unit: mm





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Our Partners:

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Email:jsgd@yinglisolar.com
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YINGLI SOLAR
Power Your Life

YGE 48 Cell 40mm SERIES

Powered by YINGLI

YL210P-23b
YL205P-23b
YL200P-23b
YL195P-23b
YL190P-23b

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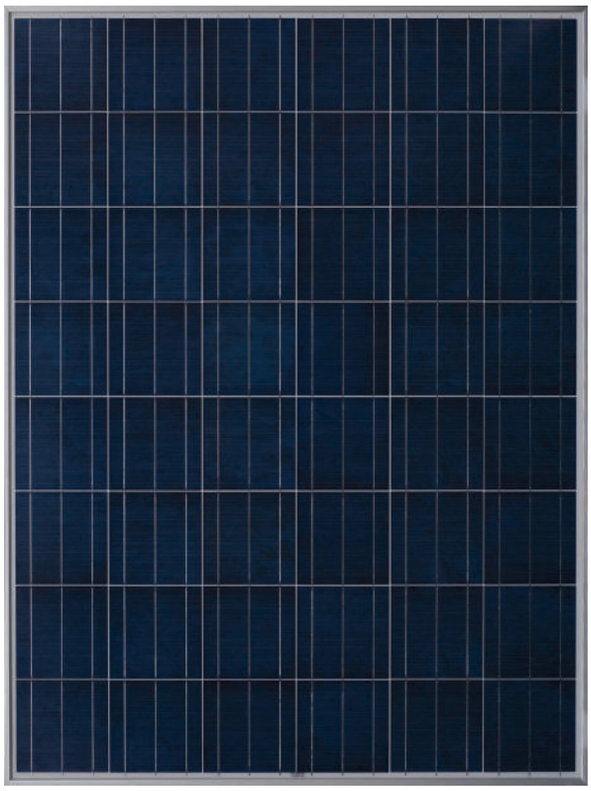
FIFA WORLD CUP Brasil 2014



ABOUT YINGLI GREEN ENERGY

Yingli Green Energy Holding Company Limited (NYSE: YGE) is one of the world's largest fully vertically integrated PV manufacturers, which markets its products under the brand "Yingli Solar". With over 7.0GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance. We are the first renewable energy company and the first Chinese company to sponsor the FIFA World Cup™.

PERFORMANCE

- High efficiency, multicrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.2%, minimizing installation costs and maximizing the kWh output of your system per unit area.
- Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.
- Top ranking in the "TÜV Rheinland Energy Yield Test" and the "PHOTON Test" demonstrates high performance and annual energy production.

RELIABILITY

- Tests by independent laboratories prove that Yingli Solar modules:
  - ✓ Fully conform to certification and regulatory standards.
  - ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
  - ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.
- Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.

WARRANTIES

- 10-year limited product warranty[1].
- Limited power warranty[1]: 10 years at 91.2% of the minimal rated power output, 25 years at 80.7% of the minimal rated power output.

[1]In compliance with our Warranty Terms and Conditions.

QUALIFICATIONS & CERTIFICATES

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

YGE 48 Cell 40mm SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)							
Module type			YLxxxP-23b (xxx=P_{max})				
Power output	P_{max}	W	210	205	200	195	190
Power output tolerances	ΔP_{max}	W	0 / + 5				
Module efficiency	η_m	%	16.2	15.8	15.4	15.0	14.7
Voltage at P_{max}	V_{mpp}	V	24.8	24.5	24.2	24.0	23.7
Current at P_{max}	I_{mpp}	A	8.47	8.36	8.25	8.14	8.03
Open-circuit voltage	V_{oc}	V	31.2	30.9	30.7	30.4	30.1
Short-circuit current	I_{sc}	A	9.04	8.94	8.85	8.75	8.65

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 3.3% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)							
Power output	P_{max}	W	153.2	149.5	145.9	142.2	138.6
Voltage at P_{max}	V_{mpp}	V	22.6	22.4	22.1	21.8	21.6
Current at P_{max}	I_{mpp}	A	6.78	6.69	6.60	6.51	6.42
Open-circuit voltage	V_{oc}	V	28.8	28.5	28.4	28.1	27.8
Short-circuit current	I_{sc}	A	7.31	7.23	7.15	7.07	6.99

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

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.42
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.32
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.05
Temperature coefficient of V_{mpp}	β_{Vmpp}	%/°C	-0.42

OPERATING CONDITIONS

Max. system voltage	1000V_{DC}
Max. series fuse rating	15A
Limiting reverse current	15A
Operating temperature range	-40°C to 85°C
Max. static load, front (e.g., snow)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions / number of busbars)	48 / multicrystalline silicon / 156mm x 156mm / 2 or 3
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color / edge sealing)	anodized aluminum alloy / silver / clear / silicone or tape
Junction box (protection degree)	≥ IP65
Cable (length / cross-sectional area)	900mm / 4mm²
Plug connector (type / protection degree)	MC4 / IP67 or YT08-1 / IP67 or Amphenol H4 / 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.

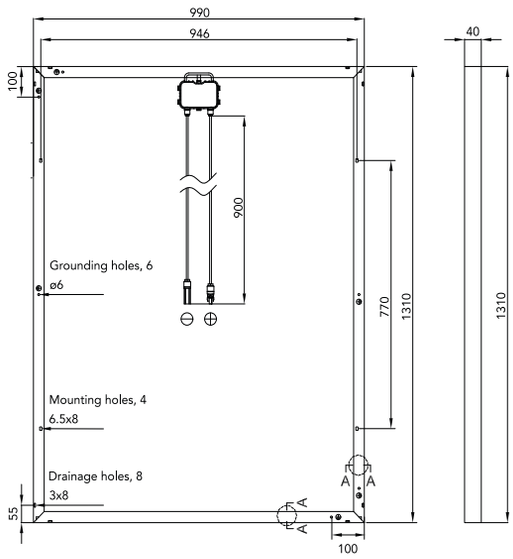
GENERAL CHARACTERISTICS

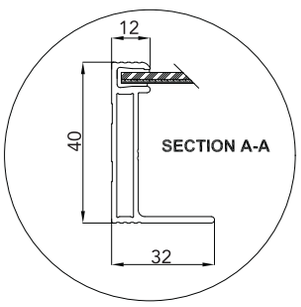
Dimensions (L / W / H)	1310mm / 990mm / 40mm
Weight	14.7kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	26
Number of pallets per 40' container	32
Packaging box dimensions (L / W / H)	1380mm / 1160mm / 1178mm
Box weight	410kg

Unit: mm





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Our Partners:

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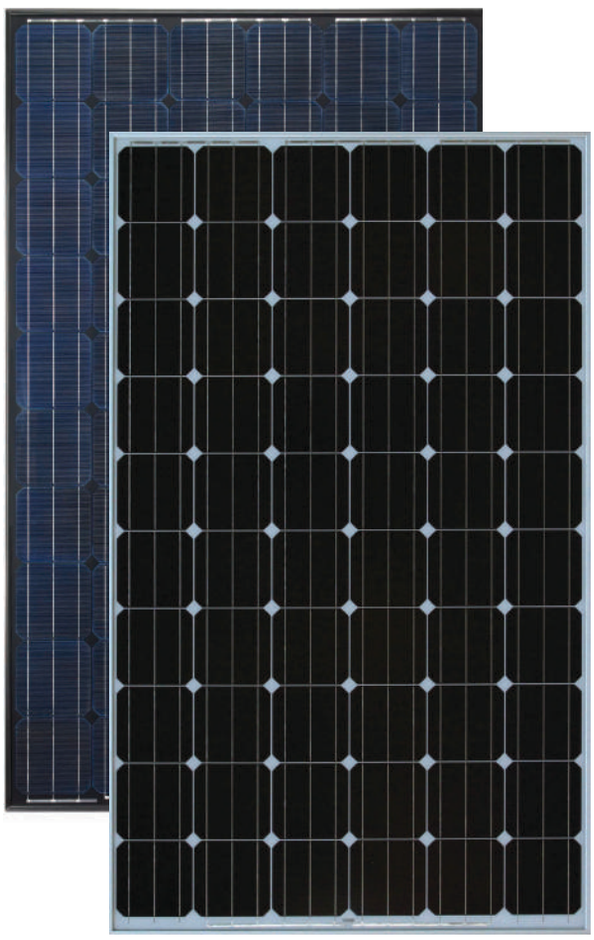
PANDA 60 Cell
40mm SERIES

YL280C-30b
YL275C-30b
YL270C-30b
YL265C-30b
YL260C-30b

panda
Powered by YINGLI



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PERFORMANCE

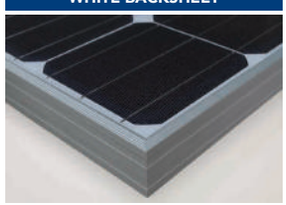
- Yingli Solar PANDA is a new monocrystalline silicon module technology with n-type solar cells that have average efficiencies higher than 19.5%. Combined with high transmission glass, module efficiencies are up to 17.1%.
- Compared to traditional modules with p-type solar cells, PANDA modules have lower initial degradation and higher performance under both high temperature and low irradiation conditions.
- Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.
- Top ranking in the "TÜV Rheinland Energy Yield Test" demonstrates high performance and annual energy production.

RELIABILITY

- Tests by independent laboratories prove that Yingli Solar modules:
  - ✓ Fully conform with certification and regulatory standards.
  - ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
  - ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.
- Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.

BLACK FRAME
BLACK BACKSHEET

SILVER FRAME
WHITE BACKSHEET



WARRANTIES

- 10-year limited product warranty[1].
- Limited power warranty[1]: 1 year at 98% of the minimal rated power output, 10 years at 92% of the minimal rated power output, 25 years at 82% of the minimal rated power output.

[1]In compliance with our Warranty Terms and Conditions.

QUALIFICATIONS & CERTIFICATES

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

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PANDA 60 Cell 40mm SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)							
Module type			YLxxxC-30b (xxx=P_{max})				
Power output	P_{max}	W	280	275	270	265	260
Power output tolerances	ΔP_{max}	W	0 / + 5				
Module efficiency	η_m	%	17.1	16.8	16.5	16.2	15.9
Voltage at P_{max}	V_{mpp}	V	31.3	30.9	30.5	30.1	29.7
Current at P_{max}	I_{mpp}	A	8.96	8.91	8.85	8.79	8.74
Open-circuit voltage	V_{oc}	V	39.1	38.8	38.6	38.3	38.1
Short-circuit current	I_{sc}	A	9.50	9.47	9.43	9.37	9.35

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 3.5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)							
Power output	P_{max}	W	204.2	200.6	196.9	193.3	189.7
Voltage at P_{max}	V_{mpp}	V	28.5	28.1	27.8	27.5	27.1
Current at P_{max}	I_{mpp}	A	7.17	7.13	7.08	7.03	6.99
Open-circuit voltage	V_{oc}	V	36.2	35.9	35.7	35.4	35.3
Short-circuit current	I_{sc}	A	7.66	7.64	7.61	7.56	7.54

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

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.42
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.31
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.04
Temperature coefficient of V_{mpp}	β_{Vmpp}	%/°C	-0.41

OPERATING CONDITIONS

Max. system voltage	1000V_{DC}
Max. series fuse rating	15A
Limiting reverse current	15A
Operating temperature range	-40°C to 85°C
Max. static load, front (e.g., snow)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter / velocity)	25mm / 23m/s

CONSTRUCTION MATERIALS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	white or black
Cell (quantity / material / dimensions)	60 / monocrystalline silicon / 156mm x 156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material / color / anodization color)	anodized aluminum alloy / silver or black / clear
Junction box (protection degree)	≥ IP65
Cable (length / cross-sectional area)	1100mm / 4mm²
Plug connector (type / protection degree)	MC4 / IP67 or YT08-1 / IP67 or Amphenol H4 / IP68

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- 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.

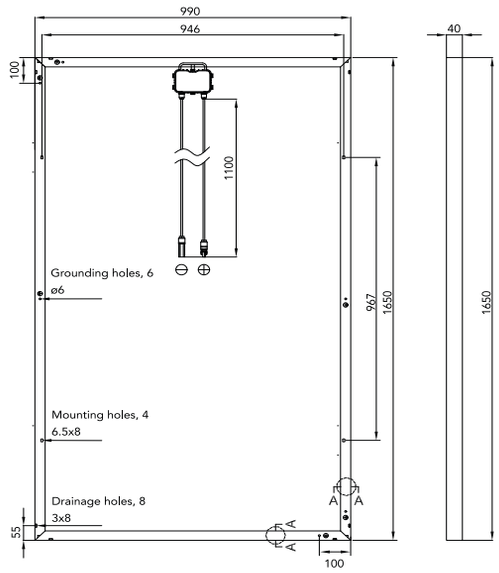
GENERAL CHARACTERISTICS

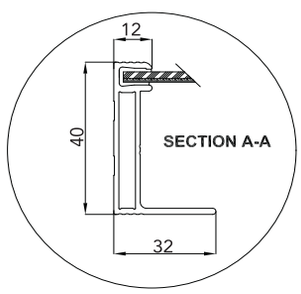
Dimensions (L / W / H)	1650mm / 990mm / 40mm
Weight	18.5kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	26
Number of pallets per 40' container	28
Packaging box dimensions (L / W / H)	1710mm / 1160mm / 1178mm
Box weight	514kg

Unit: mm





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