

GES-P180 GES-P185

GES-P175 GES-P190 GES-P195

Polycrystalline Photovoltaic Module

Features

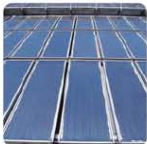
- High efficient solar cells are utilized in photovoltaic module
Cell efficiency up to 17.4%
- High module efficiency and stable power output based on leading process technology
- Outstanding electrical performance under high-temperature conditions or low-irradiance conditions
- Ease of installation and all-weather applications due to the innovative engineering design

Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid residential systems

Quality and Warranty

- Peak power of single module is guaranteed in (0, +5)W power tolerance
- Rigorous quality control meets the highest international standard
- Product quality and liability are insured
- 5 years limited warranty on material and workmanship
- 12 years and 25 years limited warranty for minimum power output

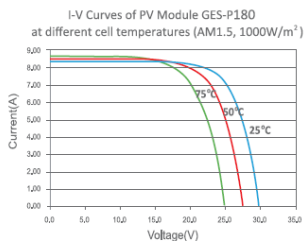
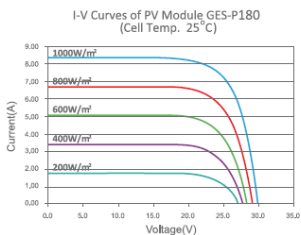


ELECTRICAL CHARACTERISTICS

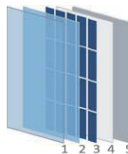
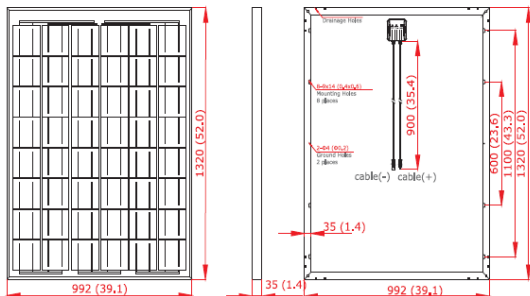
Module Type	Unit	GES-P175	GES-P180	GES-P185	GES-P190	GES-P195
Maximum Power (Pmax)	W	175	180	185	190	195
Power Tolerance	W	(0, +5)	(0, +5)	(0, +5)	(0,+5)	(0,+5)
Open Circuit Voltage (Voc)	V	29.6	29.7	29.8	29.9	30.0
Short Circuit Current (Isc)	A	8.20	8.33	8.45	8.56	8.78
Maximum Power Voltage (Vmp)	V	22.5	22.6	23.2	23.4	23.6
Maximum Power Current (Imp)	A	7.78	7.95	7.96	8.12	8.26
Cell Efficiency (ηc)	%	15.4 ~ 15.9	15.9 ~ 16.3	16.3 ~ 16.8	16.8 ~ 17.2	17.2 ~ 17.7
Module Efficiency (ηm)	%	13.4 ~ 13.7	13.7 ~ 14.1	14.1 ~ 14.5	14.5 ~ 14.9	14.9 ~ 15.7
Cell Technology	156mm x 156mm Polycrystalline Silicon; 48pcs (6x8)					
Pmax Temperature Coefficient	%/°C					-0.35
Voc Temperature Coefficient	%/°C					-0.32
Isc Temperature Coefficient	%/°C					+0.04
Maximum System Voltage	VDC					1000(TUV);600(UL)
Maximum Series Fuse Rating	A					13
Operating Temperature	°C					-40 ~ +85
NOCT	°C					45±2

I-V CURVES

STC: 1000W/m²; AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature



PHYSICAL CHARACTERISTICS Unit: mm(inch)



1. Tempered Glass
2. EVA (Ethylene Vinyl Acetate)
3. Solar Cells
4. EVA (Ethylene Vinyl Acetate)
5. Backsheet

Dimension	1320 x 992 x 35 mm (52.0 x 39.1 x 1.4 inch)
Weight	16.5 kg (36.4 lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	3 pcs
Junction Box	IP65 rated
Front Glass	3.2 mm (0.1 inch) tempered low-iron glass
Frame	Anodized aluminum alloy

*Specifications are subjected to change without further notice

GES-P205 GES-P210

GES-P200 GES-P215 GES-P220

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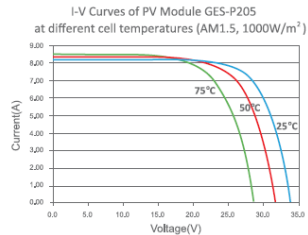
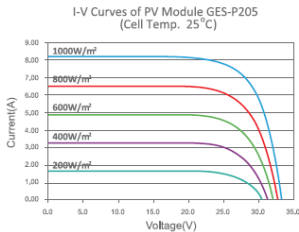


ELECTRICAL CHARACTERISTICS

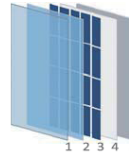
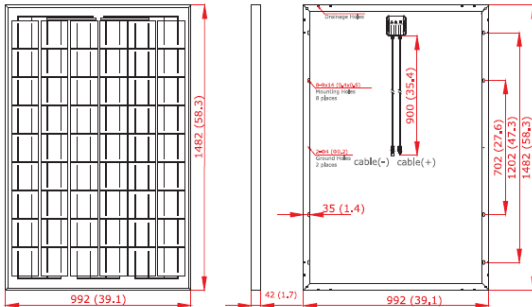
Module Type	Unit	GES-P200	GES-P205	GES-P210	GES-P215	GES-P220
Maximum Power (Pmax)	W	200	205	210	215	220
Power Tolerance	W	(0, +5)	(0, +5)	(0, +5)	(0, +5)	(0, +5)
Open Circuit Voltage (Voc)	V	33.4	33.5	33.6	33.7	33.8
Short Circuit Current (Isc)	A	8.12	8.23	8.33	8.34	8.68
Maximum Power Voltage (Vmp)	V	26.2	26.3	26.4	26.9	27.4
Maximum Power Current (Imp)	A	7.63	7.79	7.95	8.00	80.3
Cell Efficiency(ηc)	%	15.7 ~ 16.1	16.1 ~ 16.5	16.5 ~ 16.9	16.9 ~ 17.3	17.3 ~ 17.7
Module Efficiency(ηm)	%	13.6 ~ 13.9	13.9 ~ 14.3	14.3 ~ 14.6	14.6 ~ 15.0	15.0 ~ 15.3
Cell Technology		156mm x 156mm Polycrystalline Silicon; 54pcs (6x9)				
Pmax Temperature Coefficient	%/°C	-0.35				
Voc Temperature Coefficient	%/°C	-0.32				
Isc Temperature Coefficient	%/°C	+0.04				
Maximum System Voltage	VDC	1000(TUV);600(UL)				
Maximum Series Fuse Rating	A	13				
Operating Temperature	°C	-40 ~ +85				
NOCT	°C	45±2				

I-V CURVES

STC: 1000W/m², AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature



PHYSICAL CHARACTERISTICS Unit: mm(inch)



1. Tempered Glass
2. EVA (Ethylene Vinyl Acetate)
3. Solar Cells
4. EVA (Ethylene Vinyl Acetate)
5. Backsheet

Dimension	1482 x 992 x 42 mm (58.3 x 39.1 x 1.7 inch)
Weight	18.5 kg (40.8 lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	3 pcs
Junction Box	IP65 rated
Front Glass	3.2 mm (0.1 inch) tempered low-iron glass
Frame	Anodized aluminum alloy

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GES-P230 GES-P235

GES-P225 GES-P240 GES-P245

Polycrystalline Photovoltaic Module

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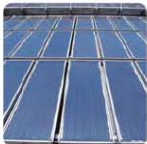
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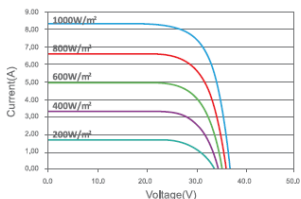
ELECTRICAL CHARACTERISTICS

Module Type	Unit	GES-P225	GES-P230	GES-P235	GES-P240	GES-P245
Maximum Power (Pmax)	W	225	230	235	240	245
Power Tolerance	W	(0, +5)	(0, +5)	(0, +5)	(0, +5)	(0, +5)
Open Circuit Voltage (Voc)	V	37.0	37.0	37.1	37.2	37.3
Short Circuit Current (Isc)	A	8.16	8.22	8.28	8.33	8.75
Maximum Power Voltage (Vmp)	V	29.7	29.8	30.0	30.2	30.4
Maximum Power Current (Imp)	A	7.59	7.73	7.84	7.95	8.06
Cell Efficiency(ηc)	%	15.9 ~ 16.2	16.2 ~ 16.6	16.6 ~ 16.9	16.9 ~ 17.3	17.3 ~ 17.7
Module Efficiency(ηm)	%	13.8 ~ 14.1	14.1 ~ 14.4	14.4 ~ 14.8	14.8 ~ 15.1	15.1 ~ 15.4
Cell Technology		156mm x 156mm Polycrystalline Silicon; 60pcs (6x10)				
Pmax Temperature Coefficient	%/°C	-0.35				
Voc Temperature Coefficient	%/°C	-0.32				
Isc Temperature Coefficient	%/°C	+0.04				
Maximum System Voltage	VDC	1000(TUV);600(UL)				
Maximum Series Fuse Rating	A	13				
Operating Temperature	°C	-40 ~ +85				
NOCT	°C	45±2				

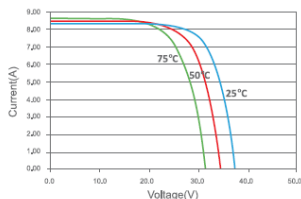
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I-V CURVES

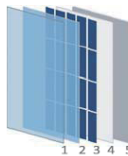
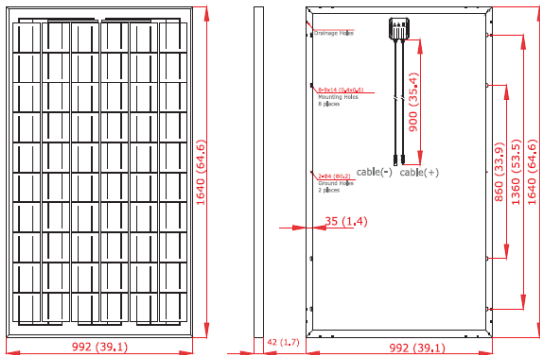
I-V Curves of PV Module GES-P230
(Cell Temp. 25°C)



I-V Curves of PV Module GES-P230
at different cell temperatures (AM1.5, 1000W/m²)



PHYSICAL CHARACTERISTICS Unit: mm(inch)



1. Tempered Glass
2. EVA (Ethylene Vinyl Acetate)
3. Solar Cells
4. EVA (Ethylene Vinyl Acetate)
5. Backsheet

Dimension	1640 x 992 x 42mm (64.6 x 39.1 x 1.7 inch)
Weight	19.5 kg (43.0 lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	3 pcs
Junction Box	IP65 rated
Front Glass	3.2 mm (0.1 inch) tempered low-iron glass
Frame	Anodized aluminum alloy

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