

## 170W, 175W, 180W

### Monocrystalline Photovoltaic Module

#### Features

- 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  $\pm 3\%$  power tolerance
- Average power of modules in single order is guaranteed not less than the peak power
- Manufacture meets the requirements of Quality Management System (ISO 9001) and Environmental Management System (ISO 14001)
- 5 years limited warranty on material and workmanship
- 10 years and 25 years limited warranty for minimum power output  
(Refer to Warranty issued by GESolar)



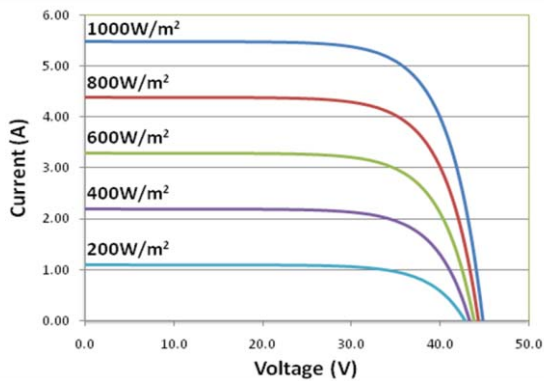
### ELECTRICAL CHARACTERISTICS

Module Type	Unit	GES-M150	GES-M160	GES-M165	GES-M170	GES-M175	GES-M180
Maximum Power (Pmax)	W	150	160	165	170	175	180
Power Tolerance	%	±3	±3	±3	±3	±3	±3
Open Circuit Voltage (Voc)	V	43.2	43.6	43.8	44.0	44.2	44.4
Short Circuit Current (Isc)	A	4.95	5.05	5.10	5.15	5.25	5.35
Maximum Power Voltage (Vmp)	V	34.2	34.6	34.8	35.0	35.2	35.4
Maximum Power Current (Imp)	A	4.39	4.62	4.74	4.86	4.97	5.08
Average Cell Efficiency (η <sub>c</sub> )	%	14.0	15.0	15.4	15.9	16.4	16.8
Cell Technology	125mm×125mm Mono-Crystalline Silicon; 72pcs (6×12)						
Pmax Temperature Coefficient	%/°C	-0.48					
Voc Temperature Coefficient	%/°C	-0.35					
Isc Temperature Coefficient	%/°C	+0.04					
Maximum System Voltage	VDC	1000					
Maximum Series Fuse Rating	A	15					
Operating Temperature	°C	-40 ~ +85					
NOCT	°C	45±2					

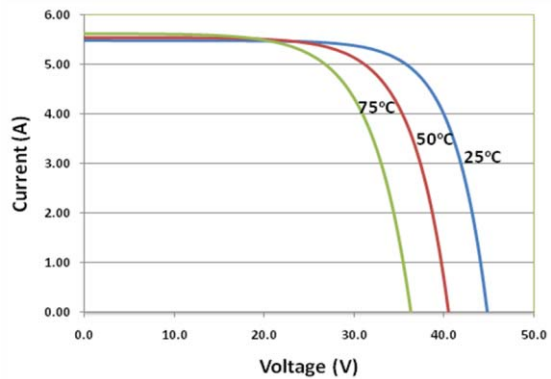
STC: 1000W/m<sup>2</sup>, AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature

### I-V CURVES

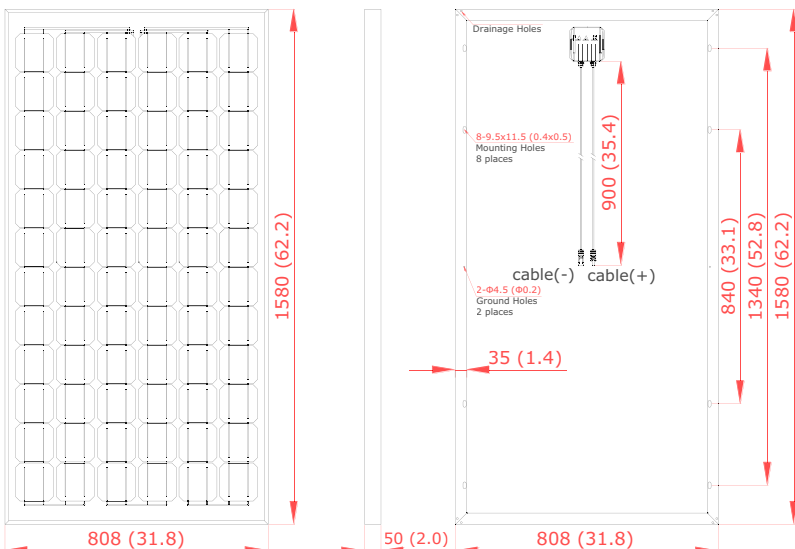
I-V Curves of PV Module GES-M180  
(Cell Temp. 25°C)



I-V Curves of PV Module GES-M180  
at different cell temperatures (AM1.5, 1000W/m<sup>2</sup>)



### PHYSICAL CHARACTERISTICS Unit: mm (inch)



Dimension	1580×808×50 mm (62.2×31.8×2.0 inch)
Weight	16 kg (35.3lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	3pcs
Junction Box	IP65 rated
Front Glass	3.2mm(0.1inch) tempered low-iron glass
Frame	Anodized aluminum alloy

## 230W, 240W, 250W

### Monocrystalline Photovoltaic Module

#### Features

- 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  $\pm 3\%$  power tolerance
- Average power of modules in single order is guaranteed not less than the peak power
- Rigorous quality control meets the highest international standard
- 5 years limited warranty on material and workmanship
- 10 years and 25 years limited warranty for minimum power output  
(Refer to Warranty issued by GESolar)



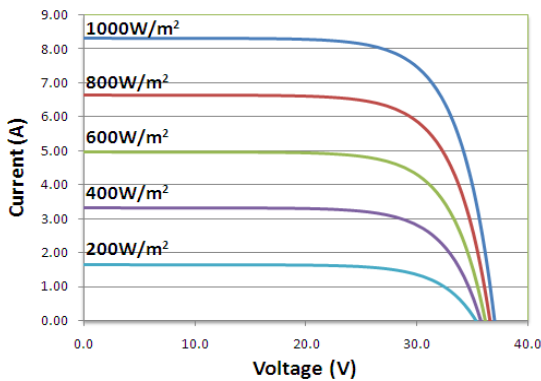
### ELECTRICAL CHARACTERISTICS

Module Type	Unit	GES-M6-210	GES-M6-220	GES-M6-230	GES-M6-240	GES-M6-250
Maximum Power (Pmax)	W	210	220	230	240	250
Power Tolerance	%	±3	±3	±3	±3	±3
Open Circuit Voltage (Voc)	V	36.0	36.5	37.0	37.0	37.2
Short Circuit Current (Isc)	A	7.76	8.02	8.10	8.31	8.38
Maximum Power Voltage (Vmp)	V	29.6	29.9	30.1	30.3	31.4
Maximum Power Current (Imp)	A	7.10	7.35	7.65	7.92	7.96
Average Cell Efficiency (η <sub>c</sub> )	%	14.6	15.3	16.0	16.7	17.4
Cell Technology	156mm×156mm Mono-Crystalline Silicon; 60pcs (6×10)					
Pmax Temperature Coefficient	%/°C	-0.48				
Voc Temperature Coefficient	%/°C	-0.35				
Isc Temperature Coefficient	%/°C	+0.04				
Maximum System Voltage	VDC	1000				
Maximum Series Fuse Rating	A	15				
Operating Temperature	°C	-40 ~ +85				
NOCT	°C	45±2				

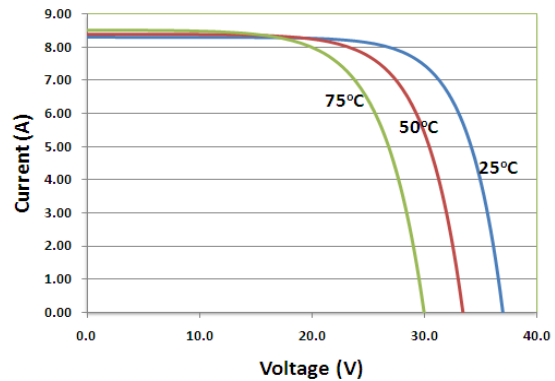
STC: 1000W/m<sup>2</sup>, AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature

### I-V CURVES

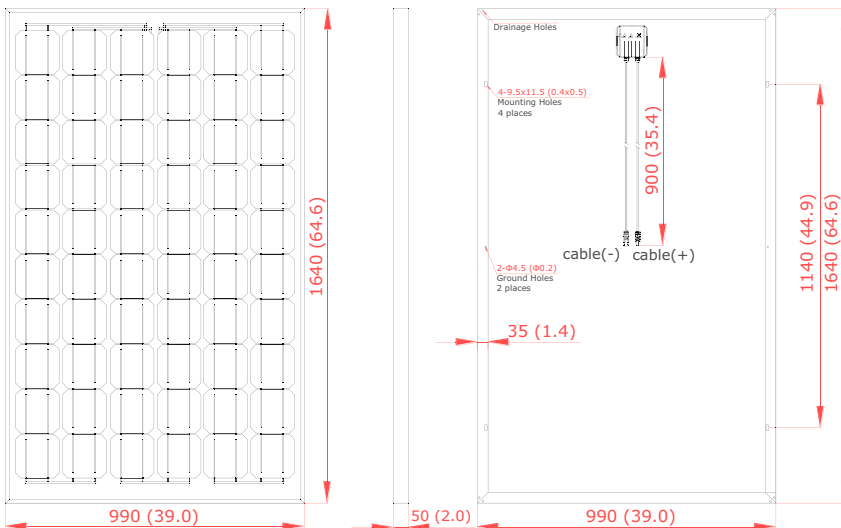
I-V Curves of PV Module GES-M6-240  
(Cell Temp. 25°C)



I-V Curves of PV Module GES-M6-240  
at different cell temperatures (AM1.5, 1000W/m<sup>2</sup>)



### PHYSICAL CHARACTERISTICS Unit: mm (inch)



Dimension	1640×990×50 mm (64.6×39.0×2.0 inch)
Weight	21 kg (46.3 lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	6pcs
Junction Box	IP65 rated
Front Glass	3.2mm(0.1inch) tempered low-iron glass
Frame	Anodized aluminum alloy

## 180W~220W

### Polycrystalline Photovoltaic Module



#### Features

- 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  $\pm 3\%$  power tolerance
- Average power of modules in single order is guaranteed not less than the peak power
- Rigorous quality control meets the highest international standard
- 5 years limited warranty on material and workmanship
- 10 years and 25 years limited warranty for minimum power output

*(Refer to Warranty issued by GESolar)*



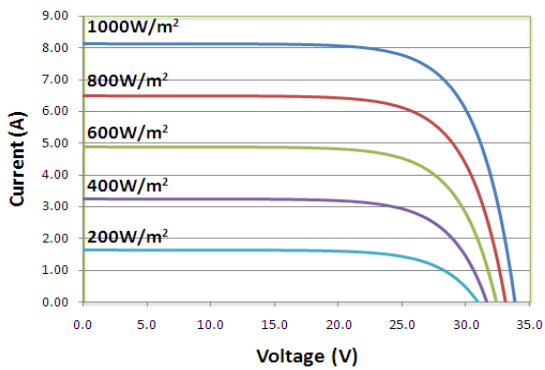
## ELECTRICAL CHARACTERISTICS

Module Type	Unit	GES-P180	GES-P190	GES-P200	GES-P210	GES-P220
Maximum Power (Pmax)	W	180	190	200	210	220
Power Tolerance	%	±3	±3	±3	±3	±3
Open Circuit Voltage (Voc)	V	32.7	33.0	33.4	33.6	33.8
Short Circuit Current (Isc)	A	7.65	7.89	8.12	8.33	8.35
Maximum Power Voltage (Vmp)	V	25.8	26.0	26.2	26.4	27.3
Maximum Power Current (Imp)	A	6.98	7.31	7.63	7.95	8.06
Average Cell Efficiency (η <sub>c</sub> )	%	13.7	14.5	15.2	16.0	16.7
Cell Technology	156mm×156mm Poly-Crystalline Silicon; 54pcs (6×9)					
Pmax Temperature Coefficient	%/°C					-0.47
Voc Temperature Coefficient	%/°C					-0.34
Isc Temperature Coefficient	%/°C					+0.05
Maximum System Voltage	VDC					1000
Maximum Series Fuse Rating	A					15
Operating Temperature	°C					-40 ~ +85
NOCT	°C					45±2

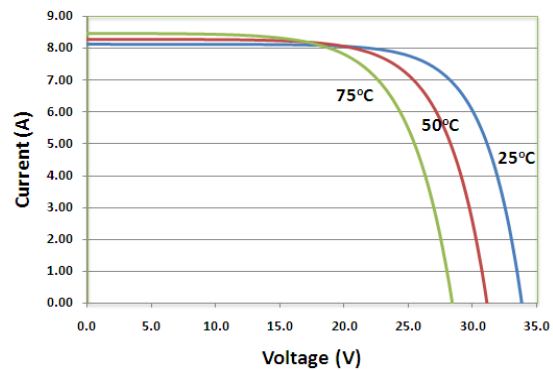
STC: 1000W/m<sup>2</sup>, AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature

## I-V CURVES

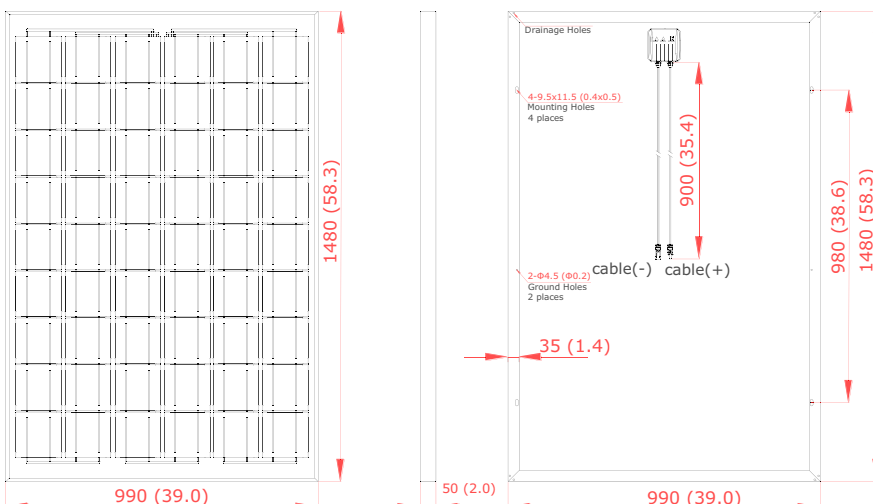
I-V Curves of PV Module GES-P200  
(Cell Temp. 25°C)



I-V Curves of PV Module GES-P200  
at different cell temperatures (AM1.5, 1000W/m<sup>2</sup>)



## PHYSICAL CHARACTERISTICS Unit: mm (inch)



Dimension	1480×990×50 mm (58.3×39.0×2.0 inch)
Weight	18.5 kg (40.8 lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	6pcs
Junction Box	IP65 rated
Front Glass	3.2mm(0.1inch) tempered low-iron glass
Frame	Anodized aluminum alloy

## 220W, 230W, 240W

### Polycrystalline Photovoltaic Module



#### Features

- 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  $\pm 3\%$  power tolerance
- Average power of modules in single order is guaranteed not less than the peak power
- Rigorous quality control meets the highest international standard
- 5 years limited warranty on material and workmanship
- 10 years and 25 years limited warranty for minimum power output

*(Refer to Warranty issued by GESolar)*



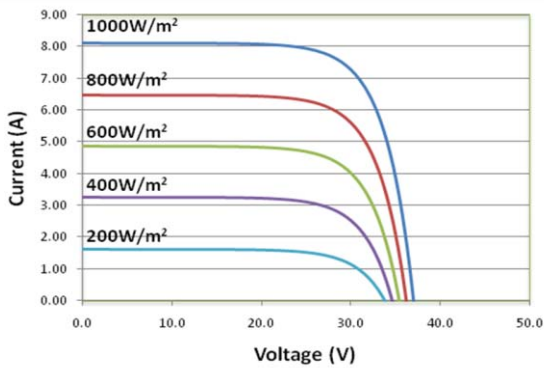
**ELECTRICAL CHARACTERISTICS**

Module Type	Unit	GES-P200	GES-P210	GES-P220	GES-P230	GES-P240
Maximum Power (Pmax)	W	200	210	220	230	240
Power Tolerance	%	±3	±3	±3	±3	±3
Open Circuit Voltage (Voc)	V	36.5	36.5	37.0	37.0	37.2
Short Circuit Current (Isc)	A	7.65	7.88	8.10	8.22	8.33
Maximum Power Voltage (Vmp)	V	28.6	29.0	29.5	29.8	30.2
Maximum Power Current (Imp)	A	6.98	7.24	7.45	7.73	7.95
Average Cell Efficiency (η <sub>c</sub> )	%	13.7	14.4	15.1	15.8	16.4
Cell Technology	156mm×156mm Poly-Crystalline Silicon; 60pcs (6×10)					
Pmax Temperature Coefficient	%/°C	-0.47				
Voc Temperature Coefficient	%/°C	-0.34				
Isc Temperature Coefficient	%/°C	+0.05				
Maximum System Voltage	VDC	1000				
Maximum Series Fuse Rating	A	15				
Operating Temperature	°C	-40 ~ +85				
NOCT	°C	45±2				

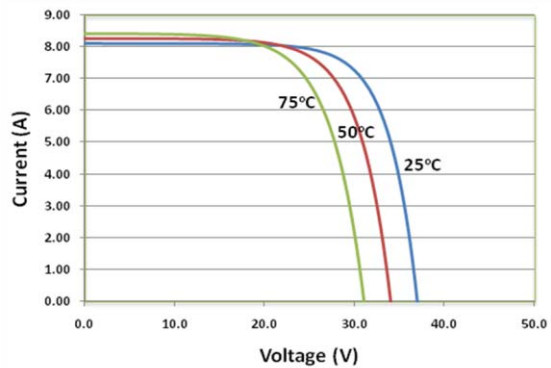
STC: 1000W/m<sup>2</sup>, AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature

**I-V CURVES**

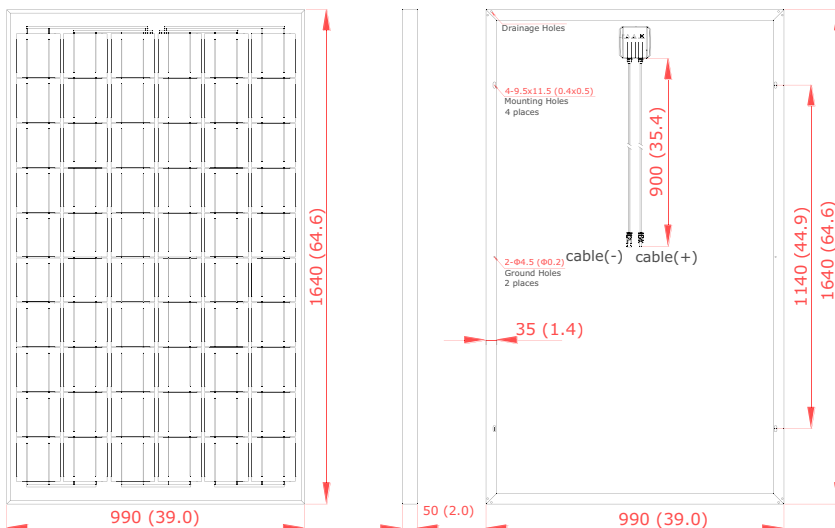
I-V Curves of PV Module GES-P220  
(Cell Temp. 25°C)



I-V Curves of PV Module GES-P220  
at different cell temperatures (AM1.5, 1000W/m<sup>2</sup>)



**PHYSICAL CHARACTERISTICS Unit: mm (inch)**



Dimension	1640×990×50 mm (64.6×39.0×2.0 inch)
Weight	21 kg (46.3lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	6pcs
Junction Box	IP65 rated
Front Glass	3.2mm(0.1inch) tempered low-iron glass
Frame	Anodized aluminum alloy

## 240W~280W

### Polycrystalline Photovoltaic Module

#### Features

- 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  $\pm 3\%$  power tolerance
- Average power of modules in single order is guaranteed not less than the peak power
- Rigorous quality control meets the highest international standard
- 5 years limited warranty on material and workmanship
- 10 years and 25 years limited warranty for minimum power output

*(Refer to Warranty issued by GESolar)*



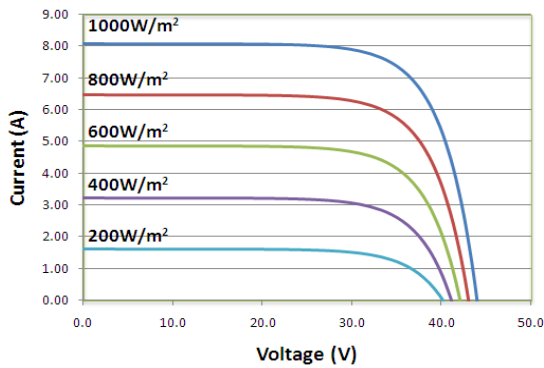
### ELECTRICAL CHARACTERISTICS

Module Type	Unit	GES-P240	GES-P250	GES-P260	GES-P270	GES-P280
Maximum Power (Pmax)	W	240	250	260	270	280
Power Tolerance	%	±3	±3	±3	±3	±3
Open Circuit Voltage (Voc)	V	43.6	43.8	44.0	44.5	44.8
Short Circuit Current (Isc)	A	7.65	7.87	8.09	8.20	8.33
Maximum Power Voltage (Vmp)	V	34.4	34.6	34.8	35.0	35.2
Maximum Power Current (Imp)	A	6.98	7.23	7.47	7.71	7.95
Average Cell Efficiency (η <sub>c</sub> )	%	13.7	14.3	14.8	15.4	16.0
Cell Technology	156mm×156mm Poly-Crystalline Silicon; 72pcs (6×12)					
Pmax Temperature Coefficient	%/°C					-0.47
Voc Temperature Coefficient	%/°C					-0.34
Isc Temperature Coefficient	%/°C					+0.05
Maximum System Voltage	VDC					1000
Maximum Series Fuse Rating	A					15
Operating Temperature	°C					-40 ~ +85
NOCT	°C					45±2

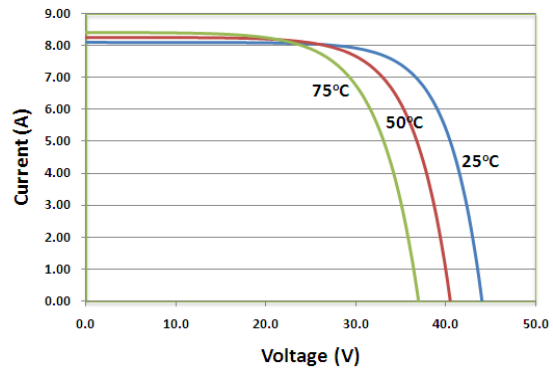
STC: 1000W/m<sup>2</sup>, AM1.5 and 25°C cell temperature; NOCT: Nominal Operating Cell Temperature

### I-V CURVES

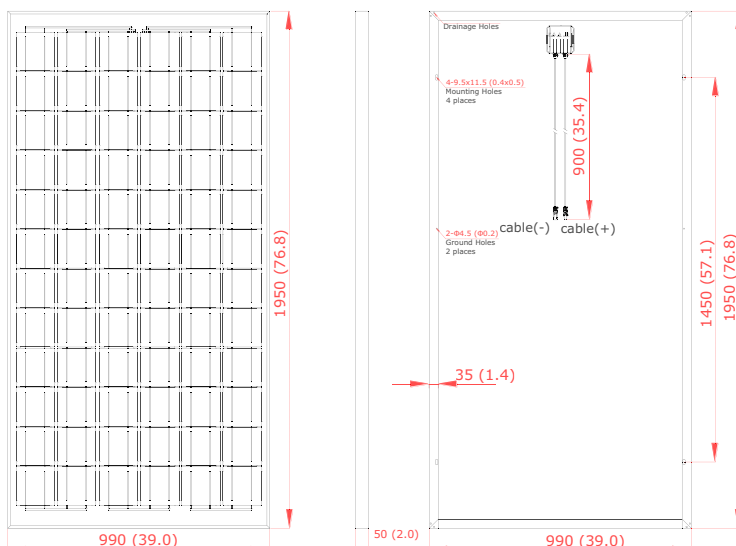
I-V Curves of PV Module GES-P260  
(Cell Temp. 25°C)



I-V Curves of PV Module GES-P260  
at different cell temperatures (AM1.5, 1000W/m<sup>2</sup>)



### PHYSICAL CHARACTERISTICS Unit: mm (inch)



Dimension	1950×990×50 mm (76.8×39.0×2.0 inch)
Weight	24 kg (52.9 lbs.)
Cable Length	900 mm (35.4 inch)
Bypass Diodes	6pcs
Junction Box	IP65 rated
Front Glass	3.2mm(0.1inch) tempered low-iron glass
Frame	Anodized aluminum alloy