SOPRAY
NEW ENERGY

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Transmits the unlimited of solar energy

Create a Better life.

SOPRAY
索日光电
www.sopraysolar.com

TUV UL IEC VDE

www.tuv.com
TÜV
TÜV Rheinland
ID:000025071

VDE
Aktenzeichen
5008474-3972-0001193242
Ausweis-Nr 40025450

CE

QIGU.E321746
LISTED

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PRODUCT IDENTITY
3VD8

- All of our products have passed the certificates of IEC61215, IEC61730, ISO9001:2000, UL, CUL, VDE, TUV, CE and so on

Sopray is dedicated to provide our customers with high-quality solar energy solutions through global applications of solar modules. We aim to build a greener future by providing Sopray's renewable energy solutions to our partners around the globe.

As a solar module manufacturer, Sopray leads the industry with our innovative designs on solar applications for a wide variety of clients. Our products strictly comply with IEC 61215, IEC 61730, ISO 9001, UL, CUL,TUV, CE, among other renowned international standards. Together with our global partners, Sopray currently operates in 10 international markets. Our annual combined production of Mono-Crystalline & Poly-Crystalline solar cell is 400MW and our annual production on Solar Modules is 400MW. We are currently expanding our R&D center as well as production capacity in order to meet the increasing demand of our products.

With a decade of experience in solar technology , Sopray not only can provide our customer with competitive prices, but also committed to building long term relationships with our clients, that's why all of our products are backed with 10-year workmanship warranty and 25-year power output guarantee insured by PICC. And now with our U.S. distribution center located in Los Angeles California, getting in touch with Sopray has never been easier.



Our monocrystalline/polycrystalline silicon solar cell has fully realized automation in the production link. High level of automation is achieved in the whole process from automatic cleaning and diffusion, to plasma boosted chemical vapor deposition, metalized automatic printing, metalized sintering and to total automatic sorting.

Through advanced process such as first-class texturing, P-N knot diffusing, plasma etching, dereflection membrane making, electrode sintering and layered encapsulating, our solar cell is characterized by high efficiency of photoelectric conversion, long life span, stability and reliability.

About Sopray

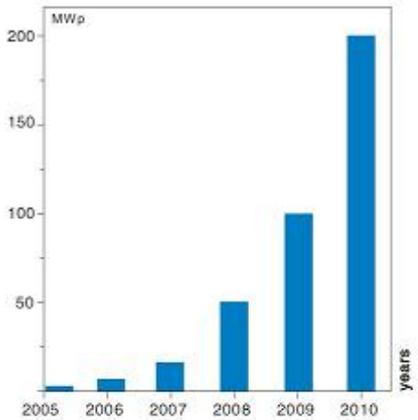



Packing and logistics

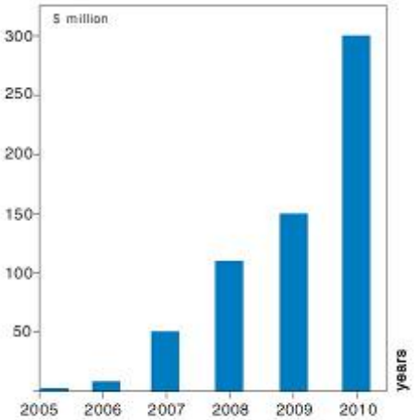
- Office Location
- Factory Location
- Marketing channel

Development of sopray

Production



Turnover



Why choose sopray

1.Every module has a unique serial number,for QC and after sales tracing back.

2.Module inspection for three times

- Inspection after lay out with Glass,EVA,cells & TPT
- Inspection after lamination
- Inspection with Junction Box after framing

3.sopray produces cell & module,so we can control our quality and delivery time very well. the annual capacity for modules is 400MW.

4.For technology,we can design the system according to customer's requirments.And also we can introduce good accessories(battery,inverter,controller)for our customers.

5.Sopray supply10years factory quality warranty.And25years performance warranty(10years of 90%and 25 years of 80%) .

6.Office and warehouse in Germany, USA, HK and Japan for fast delivery and after sales service .

90Watt Maximum power

Mono-crystalline solar panel

Sopray was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year

SR-70
SR-75
SR-80
SR-85
SR-90

Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

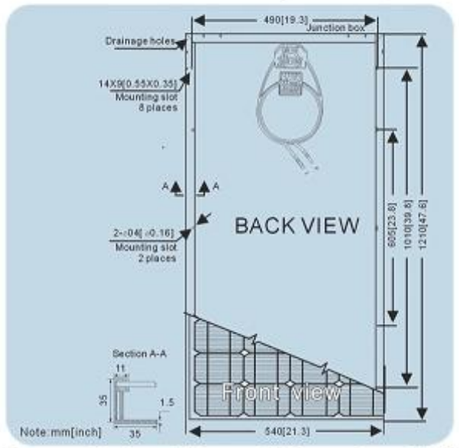
Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-70	SR-75	SR-80	SR-85	SR-90
Open-Circuit Voltage(Voc)	21.45V	21.65V	21.85V	22.05V	22.25V
Optimum Operating Voltage(Vmp)	17.2V	17.4V	17.6V	17.8V	18V
Short-Circuit Current(Isc)	4.6A	4.81A	5.02A	5.21A	5.39A
Optimum Operating Current(Imp)	4.07A	4.31A	4.55A	4.78A	5A
Maximum power at STC(Pmax)	70Wp	75Wp	80wp	85Wp	90Wp
Operating Temperature	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	11A	11A	11A	11A	11A
Power Tolerance	±3%	±3%	±3%	±3%	±3%

STC:Irradiance 1000w/㎡.Module temperature25° C,AM=1.5



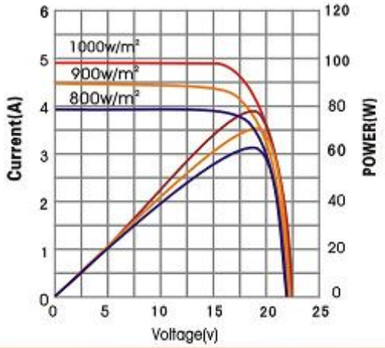
Mechanical Characeteristics

Solar Cell	Mono-crystalline 125X125mm(5inch)
No.of Cells	36(4X9)
Dimensions	1210X540X35mm(47.6X21.3X1.4inch)
Weight	8.2kg(18.1lbs)
Front Glass	3.2mm(0.13inch)tempered glass
Frame	Anodised aluminium alloy

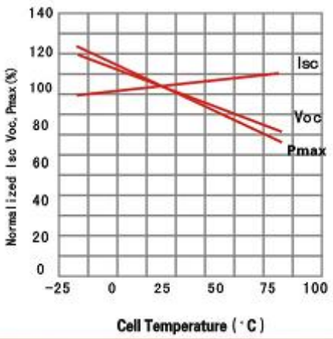
Temperature Coefficents

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of Pmax	-0.48%/℃
Temperature Coefficient of Voc	-0.34%/℃
Temperature Coefficient of Isc	0.017%/℃

Current-Voltage&Power-Voltage Curve(80W)



Temperature Dependence of Isc,Voc,Pmax



TUV UL IEC VDE

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SOPRAY NEW ENERGY

TRANSMITS THE UNLIMITED OF SOLAR ENERGY

CREATE A BETTER LIFE

SOPRAY

205Watt Maximum power

SR-175
SR-180
SR-185
SR-190
SR-195
SR-200
SR-205

Mono-crystalline solar panel

Sopray was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year

Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

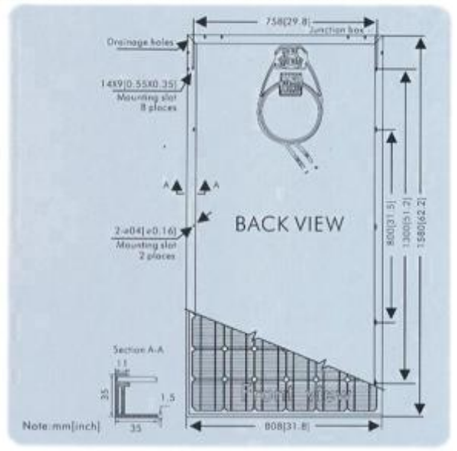
Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-175	SR-180	SR-185	SR-190	SR-195	SR-200	SR-205
Open-Circuit Voltage(Voc)	43.9V	44.2V	44.4V	44.8V	45.1V	45.3V	45.8V
Optimum Operating Voltage(Vmp)	36.2V	36.8V	37V	37.4V	37.6V	37.8V	38V
Short-Circuit Current(Isc)	5.3A	5.35A	5.92A	5.84A	5.99A	6.15A	6.27A
Optimum Operating Current(Imp)	4.85A	4.9A	5A	5.09A	5.24A	5.31A	5.49A
Maximum power at STC(Pmax)	175Wp	180Wp	185Wp	190Wp	195Wp	200Wp	205Wp
Operating Temperature	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	15A	15A	15A	15A	15A	15A	15A
Power Tolerance	±3%	±3%	±3%	±3%	±3%	±3%	±3%

STC:Irradiance 1000w/㎡.Module temperature25°C,AM=1.5



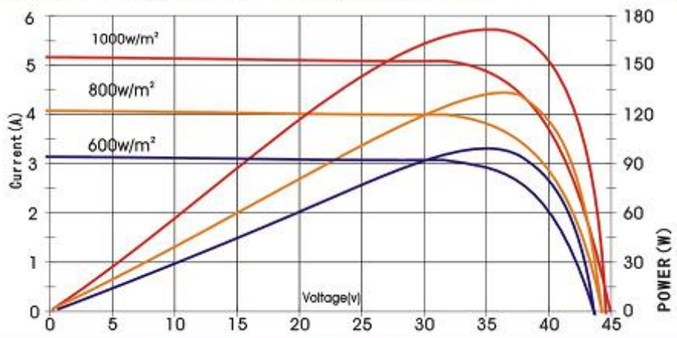
Mechanical Characeteristics

Solar Cell	Mono-crystalline 125X125mm(5inch)
No.of Cells	72(6X12)
Dimensions	1580X808X35mm(62.2X31.8X1.4inch)
Weight	15.5kg(34.1lbs)
Front Glass	3.2mm(0.13inch)tempered glass
Frame	Anodised aluminium alloy

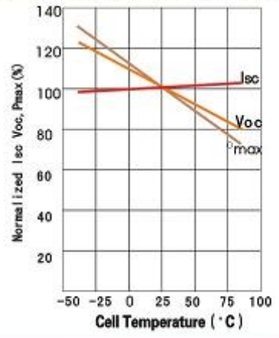
Temperature Coefficents

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of Pmax	-0.48%/℃
Temperature Coefficient of Voc	-0.34%/℃
Temperature Coefficient of Isc	0.017%/℃

Current-Voltage&Power-Voltage Curve(175W)



Temperature Dependence of Isc,Voc,Pmax



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SOPRAY NEW ENERGY

240Watt Maximum power

SR-220
SR-225
SR-230
SR-235
SR-240
SR-245
SR-250

Mono-crystalline solar panel

Sopray was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year

Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

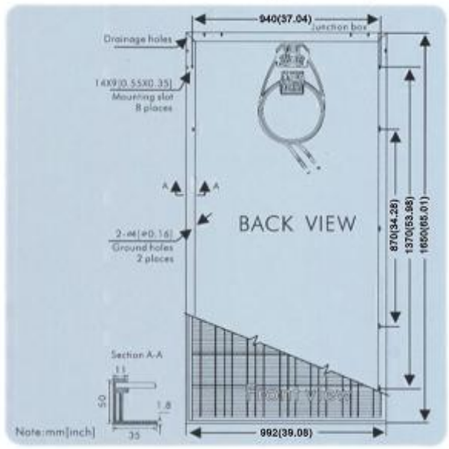
Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-220W	SR-225W	SR-230W	SR-235W	SR-240W	SR-245W	SR-250W
Open-Circuit Voltage(Voc)	36.21V	37.08V	37.26V	37.32V	37.44V	37.51V	37.62V
Optimum Operating Voltage(Vmp)	29.94V	30.12V	30.12V	30.48V	30.78V	30.84V	31.38V
Short-Circuit Current(Isc)	8.28A	8.32A	8.33A	8.35A	8.37A	8.49A	8.53A
Optimum Operating Current(Imp)	7.35A	7.47A	7.58A	7.71A	7.8A	7.95A	7.96A
Maximum power at STC(Pmax)	220Wp	225Wp	230Wp	235Wp	240Wp	245Wp	250Wp
Operating Temperature	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	16A	16A	16A	16A	16A	16A	16A
Power Tolerance	±3%	±3%	±3%	±3%	±3%	±3%	±3%

STC:Irradiance 1000w/㎡.Module temperature25° C,AM=1.5



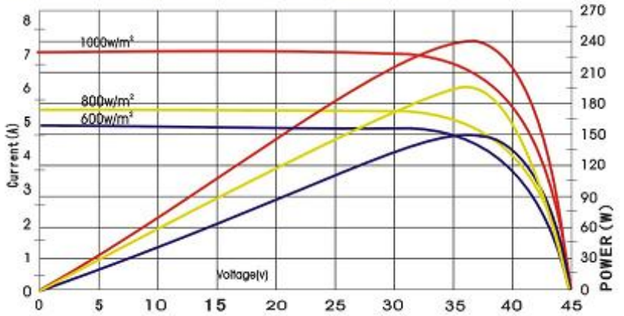
Mechanical Characeteristics

Solar Cell	Mono-crystalline 156X156mm(6inch)
No.of Cells	60(6X10)
Dimensions	1650X992X50mm(65X39.1X2.0inch)
Weight	23kg (50.6lbs)
Front Glass	3.2mm(0.13inch)tempered glass
Frame	Anodised aluminium alloy

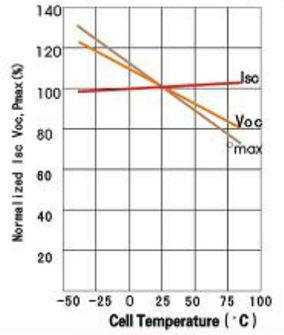
Temperature Coefficents

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of Pmax	-0.48%/℃
Temperature Coefficient of Voc	-0.34%/℃
Temperature Coefficient of Isc	0.017%/℃

Current-Voltage&Power-Voltage Curve(240W)



Temperature Dependence of Isc,Voc,Pmax



290Watt Maximum power

SR-270
SR-275
SR-280
SR-285
SR-290
SR-295
SR-300

Mono-crystalline solar panel

Sopray was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year

Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

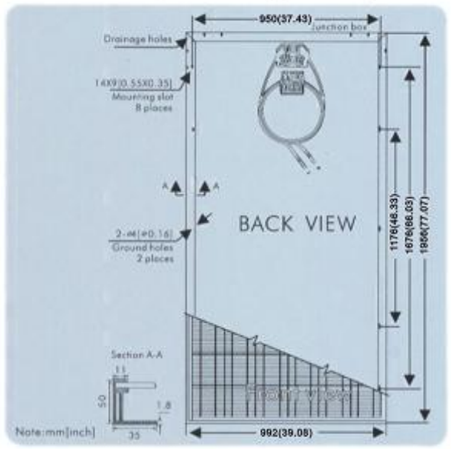
Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-270W	SR-275W	SR-280W	SR-285W	SR-290W	SR-295W	SR-300W
Open-Circuit Voltage(Voc)	44.5V	44.59V	44.75V	44.86V	44.92V	45.03V	45.14V
Optimum Operating Voltage(Vmp)	36.14V	36.29V	36.5V	36.64V	36.93V	37.29V	37.69V
Short-Circuit Current(Isc)	8.32A	8.34A	8.36A	8.37A	8.43A	8.46A	8.52A
Optimum Operating Current(Imp)	7.47A	7.58A	7.67A	7.78A	7.86A	7.91A	7.96A
Maximum power at STC(Pmax)	270Wp	275Wp	280Wp	285Wp	290Wp	295Wp	300Wp
Operating Temperature	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	20A	20A	20A	20A	20A	20A	20A
Power Tolerance	±3%	±3%	±3%	±3%	±3%	±3%	±3%

STC:Irradiance 1000w/㎡.Module temperature25° C,AM=1.5



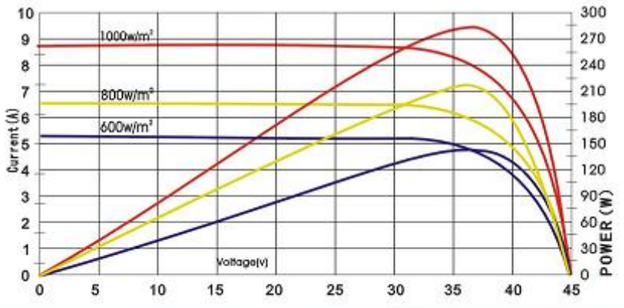
Mechanical Characeteristics

Solar Cell	Mono-crystalline 156X156mm(6inch)
No.of Cells	72(6X12)
Dimensions	1956X992X50mm(77.07X39.08X1.97inch)
Weight	27.1kg(59.62lbs)
Front Glass	4.0mm(0.16inch)tempered glass
Frame	Anodised aluminium alloy

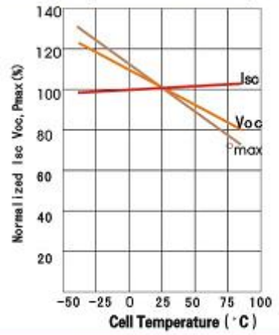
Temperature Coefficents

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of Pmax	-0.48%/℃
Temperature Coefficient of Voc	-0.34%/℃
Temperature Coefficient of Isc	0.017%/℃

Current-Voltage&Power-Voltage Curve(290W)



Temperature Dependence of Isc,Voc,Pmax



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SOPRAY NEW ENERGY

TRANSMITS THE UNLIMITED OF SOLAR ENERGY

CREATE A BETTER LIFE

SOPRAY

240Watt Maximum power

Poly-crystalline solar panel

Sopray was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year

SR-156P-200
SR-156P-210
SR-156P-220
SR-156P-230
SR-156P-240

Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

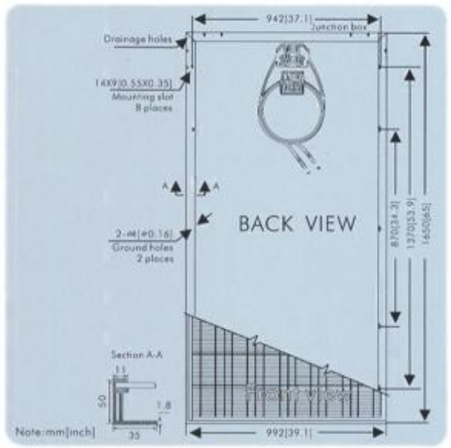
Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-156P-200	SR-156P-210	SR-156P-220	SR-156P-230	SR-156P-240
Open-Circuit Voltage(Voc)	36V	36.4V	36.8V	37V	37.5V
Optimum Operating Voltage(Vmp)	28.7V	29.2V	29.8V	30V	30.6V
Short-Circuit Current(Isc)	7.75A	7.86A	8A	8.18A	8.38A
Optimum Operating Current(Imp)	6.97A	7.19A	7.39A	7.66A	7.84A
Maximum power at STC(Pmax)	200Wp	210Wp	220wp	230Wp	240Wp
Operating Temperature	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	16A	16A	16A	16A	16A
Power Tolerance	±3%	±3%	±3%	±3%	±3%

STC:Irradiance 1000w/㎡.Module temperature25° C,AM=1.5



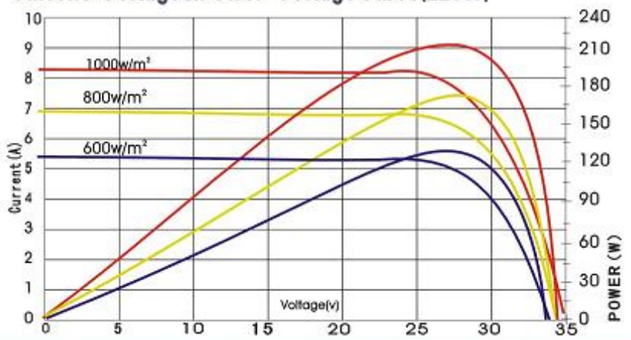
Mechanical Characeteristics

Solar Cell	Poly-crystalline 156X156mm(6inch)
No.of Cells	60(6X10)
Dimensions	1650X992X50mm(65X39.1X2.0inch)
Weight	20kg(44.06lbs)
Front Glass	3.2mm(0.13inch)tempered glass
Frame	Anodised aluminium alloy

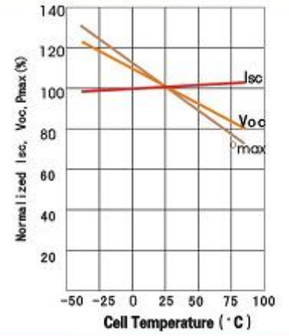
Temperature Coefficents

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of Pmax	-(0.47±0.05)%/℃
Temperature Coefficient of Voc	-(0.34±0.01)%/℃
Temperature Coefficient of Isc	0.055±0.01%/℃

Current-Voltage&Power-Voltage Curve(220W)



Temperature Dependence of Isc,Voc,Pmax



TUV UL IEC VDE

www.sopraysolar.com

SOPRAY NEW ENERGY

TRANSMITS THE UNLIMITED OF SOLAR ENERGY

CREATE A BETTER LIFE

SOPRAY

280Watt Maximum power

Poly-crystalline solar panel

Sopray was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year

SR-156P-240
SR-156P-250
SR-156P-260
SR-156P-270
SR-156P-280

Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

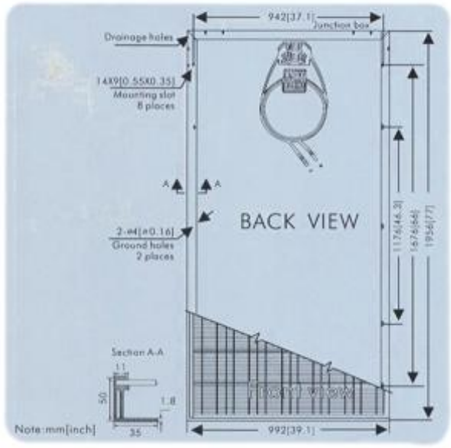
Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-156P-240	SR-156P-250	SR-156P-260	SR-156P-270	SR-156P-280
Open-Circuit Voltage(Voc)	43V	43.3V	43.5V	43.7V	44V
Optimum Operating Voltage(Vmp)	34.1V	34.4V	34.7V	35V	35.3V
Short-Circuit Current(Isc)	7.86A	8.05A	8.21A	8..4A	8.58A
Optimum Operating Current(Imp)	7.04A	7.27A	7.5A	7.72A	7.94A
Maximum power at STC(Pmax)	240Wp	250Wp	260wp	270Wp	280Wp
Operating Temperature	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C	-40° Cto+85° C
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	20A	20A	20A	20A	20A
Power Tolerance	±3%	±3%	±3%	±3%	±3%

STC:Irradiance 1000w/㎡.Module temperature25° C,AM=1.5



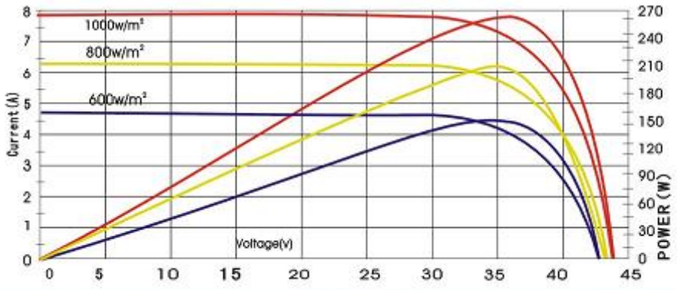
Mechanical Characeteristics

Solar Cell	poly-crystalline 156X156mm(6inch)
No.of Cells	72(6X12))
Dimensions	1956X992X50mm(77.0X39.1X2.0inch)
Weight	27kg(59.5lbs)
Front Glass	3.2mm(0.13inch)tempered glass
Frame	Anodised aluminium alloy

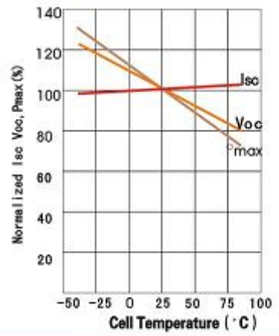
Temperature Coefficents

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of Pmax	-(0.48±0.05)%/℃
Temperature Coefficient of Voc	-(0.34±0.01)%/℃
Temperature Coefficient of Isc	0.055±0.01%/℃

Current-Voltage&Power-Voltage Curve(260W)

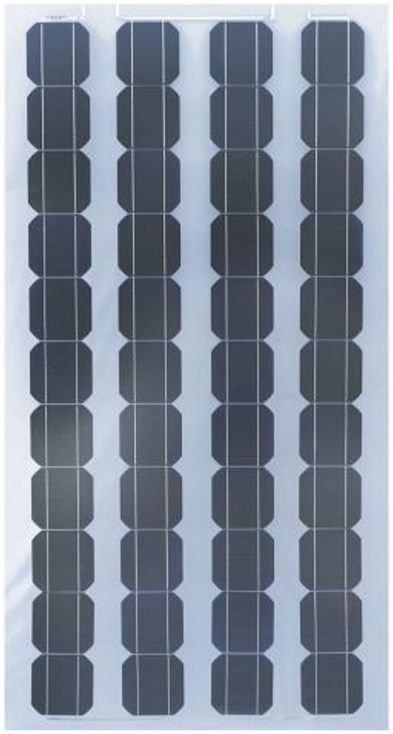


Temperature Dependence of Isc,Voc,Pmax



Building integrated Photovoltaic solar panel

(BIPV)



Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High stability with guaranteed+/-3%power output tolerance,ensuring return on investment
- Beautiful appearance
- Withstands high wind-pressure and snow load
- Easy to install

Quality and safety

- 25-year power output warranty with China Pacific Property Insurance Co.,Ltd
- Rigorous quality control meeting the highest international standards
- ISO 9001:2008(Quality Management System)certified factories manufacturing world-class products

Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems

Electrical Characteristics

Characteristics	SR-155	SR-160	SR-170	SR-180
Open-circuit Voltage (Voc)	42.2V	42.8V	43.6V	44.2 V
Optimum Operating Voltage(Vmp)	35.2V	35.5V	35.8V	36.8V
Short-Circuit Current (Isc)	4.96A	5.15A	5.25A	5.35A
Optimum Operating Current(Imp)	4.4A	4.51A	4.76A	4.9A
Maximum power at STC (Pmax)	155Wp	160Wp	170Wp	180Wp
Operating Temperature	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃	-40℃to+85℃
Maximum System Voltage	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)	1000V(IEC)/600V(UL)
Series Fuse Rating	15A	15A	15A	15A
PowerTolerance	±3%	±3%	±3%	±3%

Mechanical Characeteristics

Solar Cell	Mono-crystalline 125*125mm(5inch)
No.of Cells	72(6*12)
Dimensions	1574*802*7mm(62*31.6*0.27inch)
Weight	30Kg
Front Glass	3.2mm(0.13inch)tempered glass

Projects in spain

Location:	Aldanueva del Ebro –La Rioja
Type:	175Wp
Power:	2.5Mw
Date:	20.01.2008

Location:	Hierros Alfonso–Zaragoza
Type:	175Wp
Power:	450KW
Date:	20.01.2008

Projects in spain

Location:	Valencia Spain
Type:	175Wp
Power:	1.3Mw
Date:	20.6.2008

Projects in spain

Location:	Sadaba–Zaragoza
Type:	175Wp
Power:	3,3Mw
Date:	20.6.2008

Projects in italy

Location:	Via Meucci,53 –10040 Leini(to) Italy
Type:	175Wp
Power:	1.02Mw
Date:	15.07.2008

Location:	Genova,italy
Type:	175Wp
Power:	450KW
Date:	15.07.2008

Location:	France
Type:	185W
Power:	1.8MW
Date:	10.05.2009

Location:	Barcelona, Spain
Type:	180W
Power:	2.5MW
Date:	25.08.2009