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# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

**Topraysol Group Co., Ltd.**

**FS280-315M6-60P**

**FS315M6-60P**

Also available on the web at  
[EnergyPal.com/topraysol-group-co-ltd-solar-panels/fs315m6-60p](http://EnergyPal.com/topraysol-group-co-ltd-solar-panels/fs315m6-60p)

## Recommended For



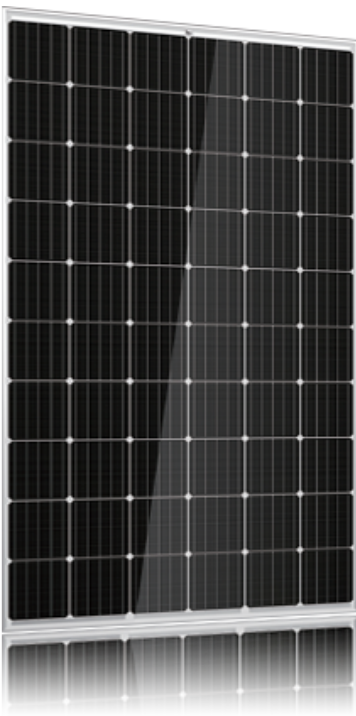
Residential roof



Commercial roof



Mounted ground



### Highest module Conversion Efficiency 19.20%

Through superior cell technology and leading manufacturing capability



### Easy Installation and Handling

With perfect compatibility to industry standard inverters and mounting systems



### Excellent Weak Light Performance

Excellent performance under low light environments



### Withstand High Wind and Snow Loads

Entire module withstand strong wind-pressure(2400Pa) and snow load(5400Pa)



### Authoritative PV Standards

Conform with PV standards: IEC61215, IEC61730, MCS and UL1703



### QC System: ISO9001

Processes comply with ISO9001 ensures Zero Defect

## Warranties

**10** years

Manufacturing warranty

**12** years

90% output power warranty

**25** years

80% output power warranty



## Qualifications & Certificates

CE, UL 1703, IEC 61215, IEC 61730, MCS, CEC Australia,  
PV CYCLE, ISO 9001, ISO 14001, RoHS



# MONO 280-315 Watt PLUS

Electrical Data at STC	FS280M6-60P	FS285M6-60P	FS290M6-60P	FS295M6-60P	FS300M6-60P	FS305M6-60P	FS310M6-60P	FS315M6-60P
Maximum Power (Pmax)	280W	285W	290W	295W	300W	305W	310W	315W
Power Tolerance	0 to 5W							
Efficiency of Module	17.10%	17.40%	17.70%	18.00%	18.30%	18.70%	19.00%	19.20%
Optimum Operation Current (Imp)	8.84A	8.97A	9.01A	9.08A	9.19A	9.28A	9.37A	9.46A
Optimum Operation of Voltage (Vmp)	31.7V	31.8V	32.2V	32.5V	32.6V	32.9V	33.1V	33.3V
Short Circuit Current (Isc)	9.42A	9.51A	9.66A	9.68A	9.77A	9.85A	9.94A	10.00A
Open Circuit Voltage (Voc)	38.4V	38.5V	38.9V	39.6V	39.8V	40.0V	40.2V	40.5V

Values at Standard Test Conditions STC (Air mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

Thermal Characteristic	
Nominal operating cell temperature (NOCT)	45±2°C
Temperature coefficient of Pmax	-0.40%/°C
Temperature coefficient of Voc	-0.29%/°C
Temperature coefficient of Isc	0.05%/°C

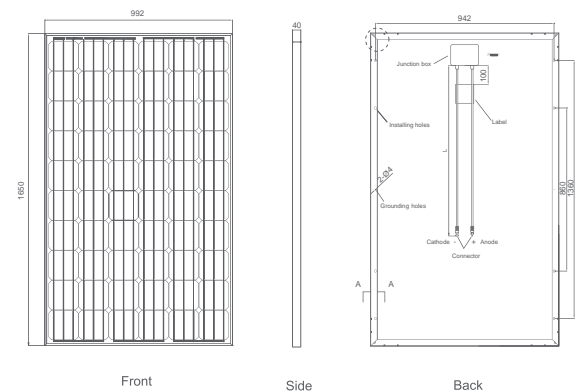
Operating Conditions	
Max. system voltage	1000VDC (IEC), 1000VDC (UL)
Max. series fuse rating	15A (≅ 285W), 20A (≅ 290W)
Operating temperature range	-40 to 85°C
Max. static load, front (e.g., snow and wind)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter/velocity)	25mm/23m/s

Construction Materials	
Front cover (material/type/thickness)	low-iron tempered glass/3.2mm
Cell (quantity/material/type/dimensions)	60/monocrystalline/156mm×156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material/color/anodization color)	anodization aluminum alloy/silver/clear
Junction box (protection degree)	TUV certified/IP65
Cable (length/cross-sectional area)	900m/4.0mm <sup>2</sup>
Plug connector (type/protection degree)	MC4/IP67
Number of bypass diodes	3 or 6 pieces as options

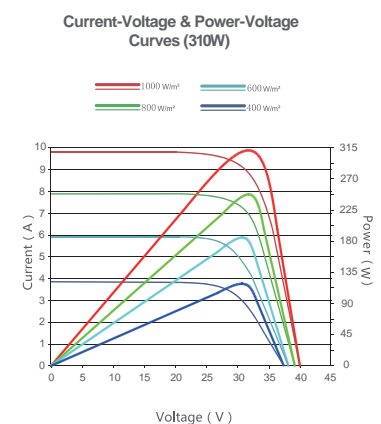
General Characteristics	
Dimensions (L/W/H)	1650mm×992mm×40mm
Weight	19±0.5kgs

Packaging Specifications			
Container	20'GP	40'GP	40'HQ
Number (modules×pallets)	22×12	22×28	28×28

## Dimensions of Module



## I-V Curves of Module



Distributor informations: