



# Wuxi Guofei Green Energy Source Co., Ltd.

## Specifications of GFM220P Photovoltaic Modules

### 1. Electrical characteristics

*P<sub>max</sub>, V<sub>oc</sub>, I<sub>sc</sub>, V<sub>mp</sub> and I<sub>mp</sub> at STC(1000W/m<sup>2</sup>,25±2 °C,AM 1.5); Test of the power: +5w/-0 w,  
Tolerance of Other electrical characteristics: +/-10%*

Maximum Power(P <sub>max</sub> )	200W	205W	210W	215W	220W	225W	230W	235W	240W
Open Circuit Voltage(V <sub>oc</sub> )	36.5V	36.5V	36.5V	36.5V	37.0V	37.0V	37.0V	37.0	37.2V
Short Circuit Current(I <sub>sc</sub> )	7.65A	7.71A	7.88A	8.03A	8.10A	8.17A	8.22A	8.29A	8.33A
Maximum Power Voltage(V <sub>mp</sub> )	28.6V	28.8V	29.0V	29.3V	29.5V	29.6V	29.8V	30.0V	30.2V
Maximum Power Current(I <sub>mp</sub> )	6.98A	7.12A	7.24A	7.34A	7.45A	7.60A	7.73A	7.83A	7.95A
Nominal Operation Cell Temperature (NOCT)	46°C±2°C								
Temperature Coefficients of P <sub>max</sub>	-0.38%/°C								
Temperature Coefficients of V <sub>oc</sub>	-0.32%/°C								
Temperature Coefficients of I <sub>sc</sub>	+0.08%/°C								
Temperature Coefficients of V <sub>mp</sub>	-0.32%/°C								
Temperature Coefficients of I <sub>mp</sub>	+0.08%/°C								
Maximum System Voltage(V)	1000V								
Maximum series Fuse Rating	15A								
FF(%)	69~77								
Cell Efficiency(%)	14.3~17.1								

### 2. Mechanical Characteristics

Cell Technology	156mm×156mm Poly-crystalline Silicon Cell
Number of Cells(Pcs)	60(6×10)
Dimensions	1640mm×990mm×50mm
Length of Cables(mm)	1100
Weight	19Kg
Frame	Aluminium-alloy
Backing	TPT

### 3. Qualification test parameters

Temperature cycling rang	50 and 200 cycles at -40°C~+85°C
Mechanical load test	2400Pa
Damp heat	1000h at +85°C,85RH%
Allowable hail load	25mm diameter ice ball at 23m/s,directed at 11 impact locations
Humidity freeze,damp heat	10 cycles at -40°C~+85°C,85RH%
<i>Warranty: 90% for 10 years, 80% for 25 years,product guaranty 2 years</i>	

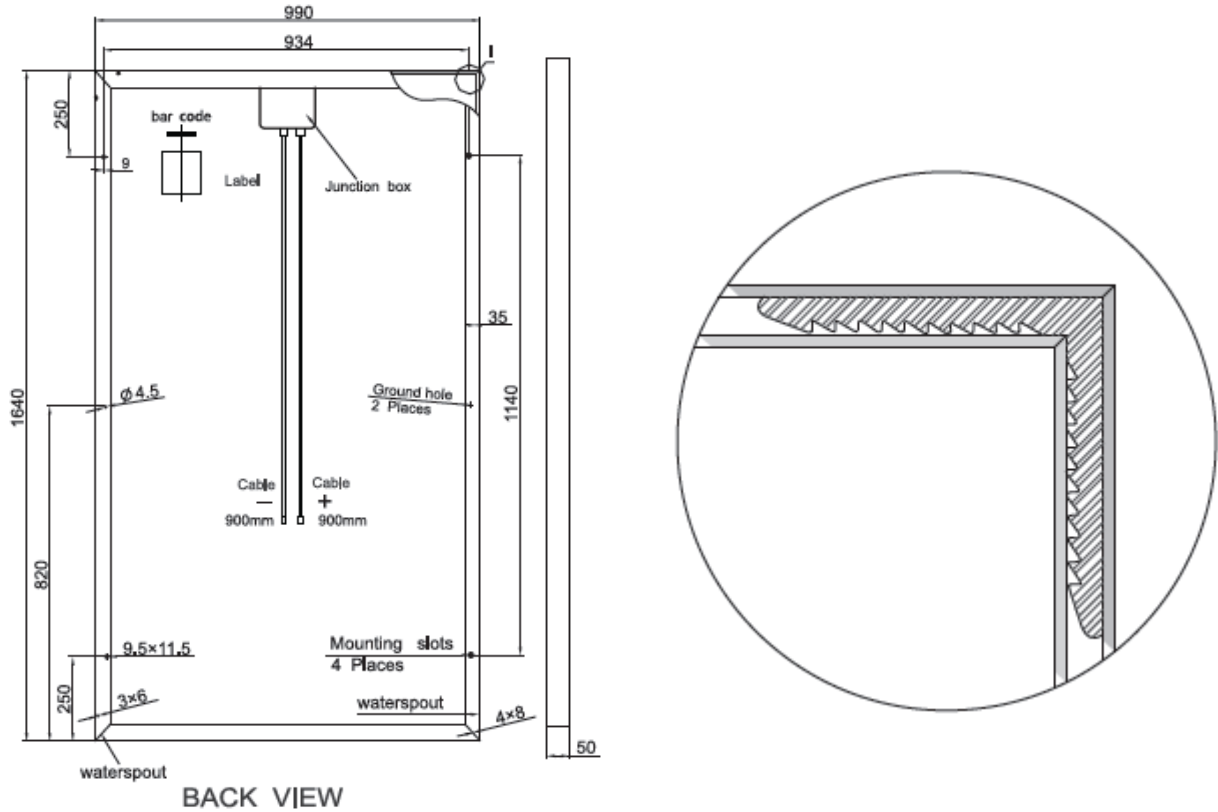


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## 4. Quality and Safety

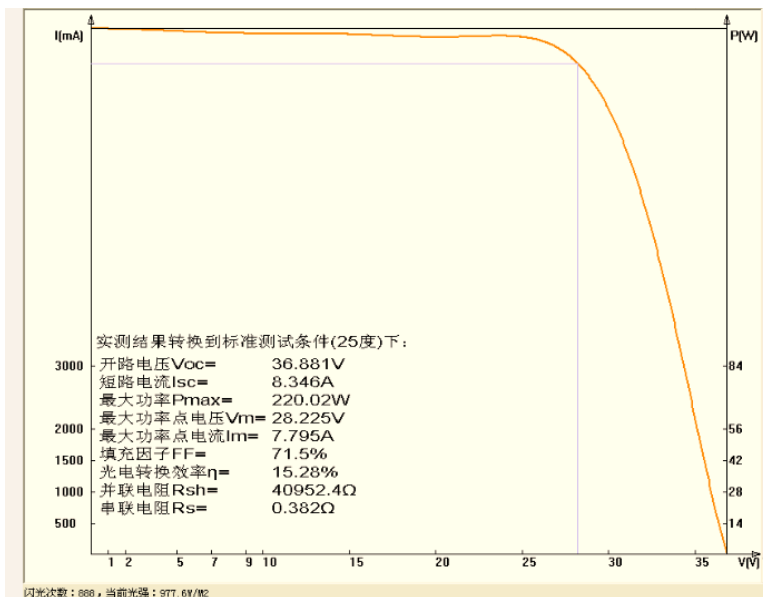
IEC61215	yes
CE	yes
ISO9001	yes

## 5. Basic Dimensions



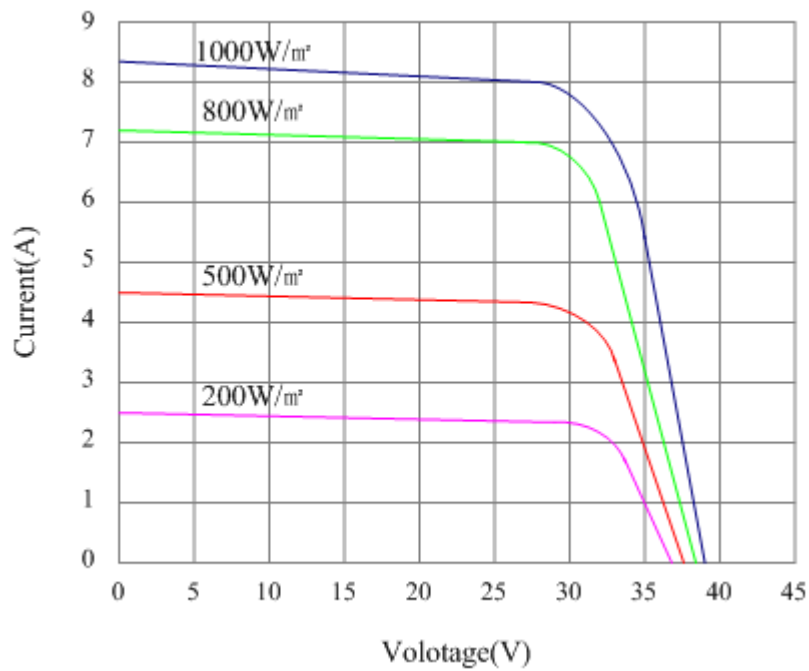
## 6. I-V characteristic curve

### 6.1 I-V characteristic curve of module at STC





## 6.2 I-V characteristic curve at various irradiance levels



## 6.3 I-V characteristic curve at various cell temperatures

