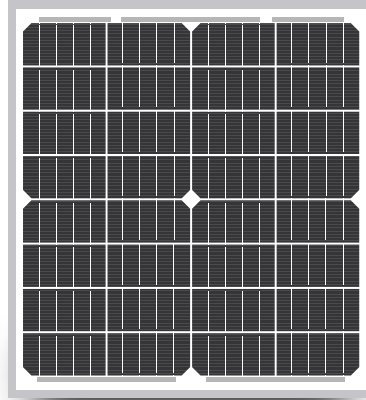




# ST-20P-12-R

## High Efficiency Monocrystalline PV Module

- Nominal 12V DC for standard output.
- Outstanding low-light performance.
- Heavy-duty anodized frames.
- High transparent low-iron, tempered glass.
- Designed to withstand high wind pressures, hail and heavy snow.
- Quality aesthetic appearance.



**32 CELL**  
MONOCRYSTALLINE MODULE

**20W**  
POWER OUTPUT

**20.00%**  
MODULE EFFICIENCY

**5%**  
POSITIVE TOLERANCE



### High Efficiency

Module Efficiency improved through advanced cell technology and manufacturing capabilities



### High PID Resistance

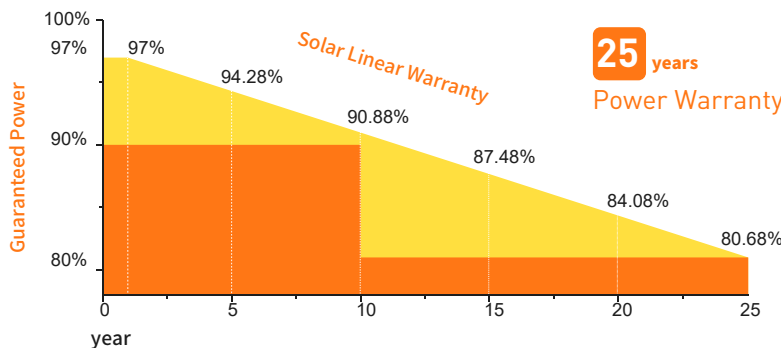
Advanced cell technology and qualified materials lead to high resistance to PID



### Withstands Harsh Environment

High PID resistance, 5400 Pa positive load, 2400 Pa negative load, Salt mist (IEC 61701)

## Performance Warranty



**2** years  
Product Warranty

**25** years  
Power Warranty

Wind Load/Snow Load:  
2400pa/5400pa

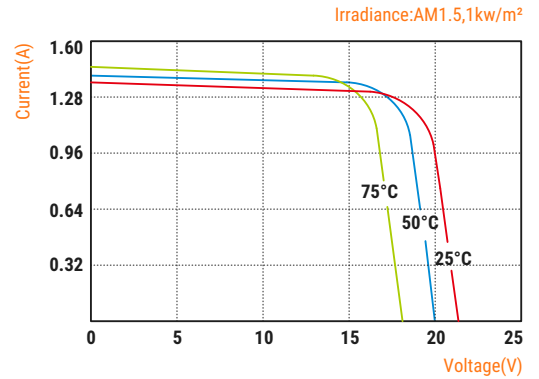
Positive Power Tolerance:  
0~+5W

Warranty Information:  
2 Year Product Workmanship

## Electrical Characteristics

|   |                   |
|---|-------------------|
| Product code                            | 020P3203A         |
| Maximum power (Pmax)                    | 20W               |
| Voltage at Pmax (Vmp)                   | 18.53V            |
| Current at Pmax (Imp)                   | 1.08A             |
| Open-circuit voltage (Voc)              | 21.37V            |
| Short-circuit current (Isc)             | 1.14A             |
| Temperature coefficient of Voc          | -(80±10)mV/°C     |
| Temperature coefficient of Isc          | (0.065±0.015)%/°C |
| Temperature coefficient of power        | -(0.5±0.05)%/°C   |
| NOCT (Air 20°C; Sun 0.8kW/m² wind 1m/s) | 47±2°C            |
| Operating temperature                   | -40°C to 85°C     |
| Maximum system voltage                  | 1000V DC          |
| Power tolerance                         | ± 5%              |

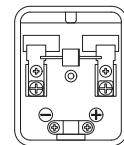
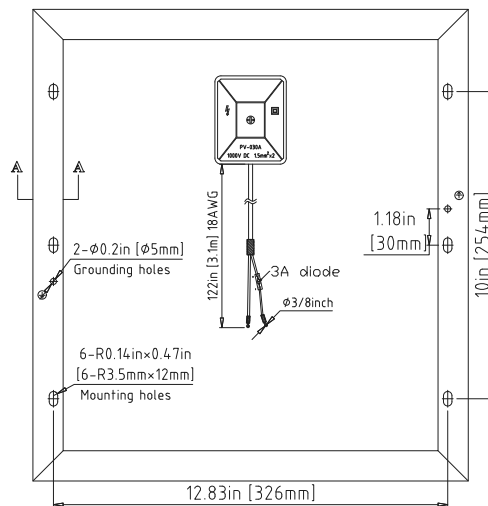
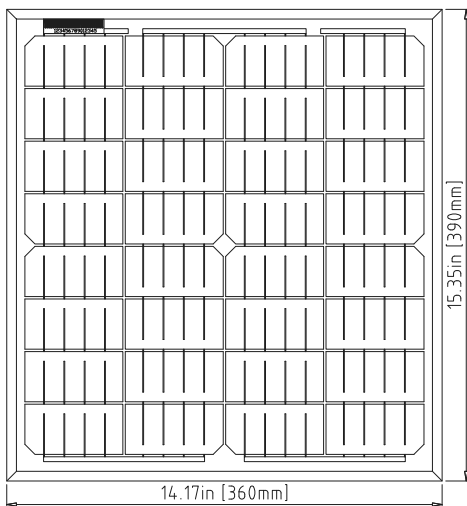
\*STC: Irradiance 1000W/m², AM1.5 spectrum, module temperature 25°C  
 \*NOCT: Nominal operating cell temperature (the data is only for reference)



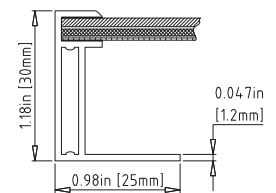
I-V Curves (STC)

## Specifications

|                              |   |
|------------------------------|---|
| Cells                        | Monocrystalline silicon solar cell                    |
| No. of cells and connections | 32(4X8)   |
| Module dimension             | 15.35in.x14.17in.x1.18in.[390mmx360mmx30mm]           |
| Weight                       | 4.00lbs[1.81kg]                                       |
| Packing information(Carton)  | 17.32in.x16.14in.x3.15in.[440mmx410mmx80mm]/(1pc/ctn) |



Junction Box  
Top View (Lid Open)



Section A-A