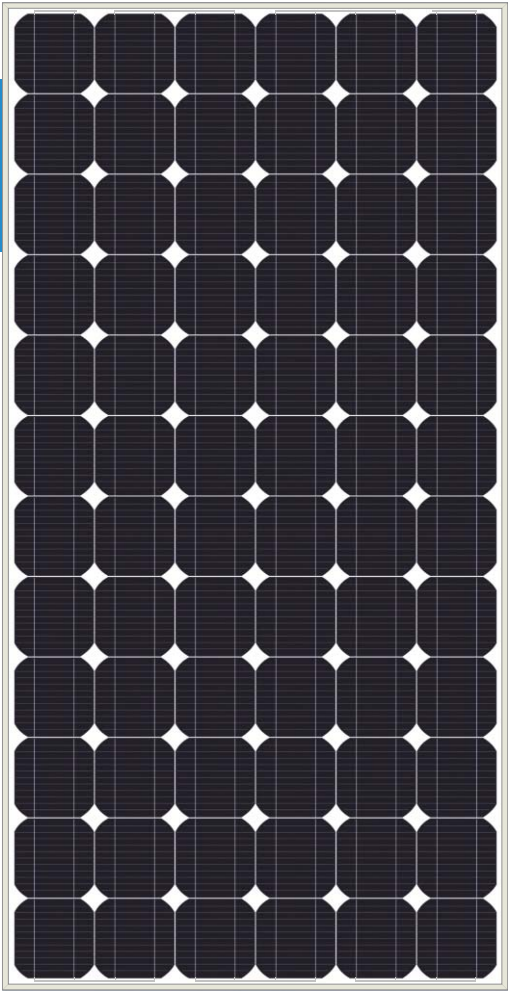
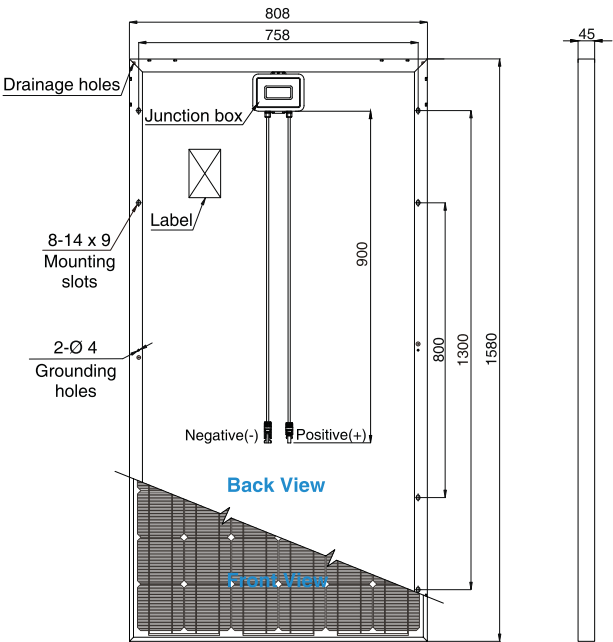


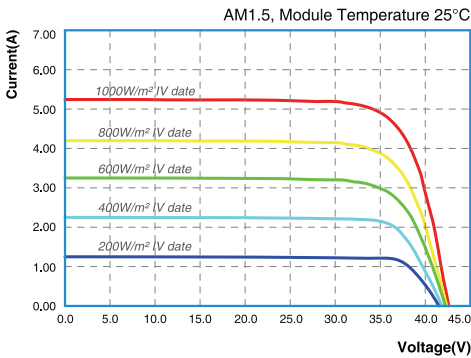
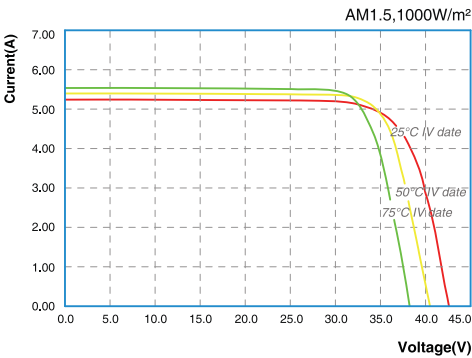
# Solar Modules

## Mono-crystalline Solar Modules Series

HR-180-24/Aa–HR-205-24/Aa



## 190W Curves



## Jiangyin Hareon Power Co., Ltd.

### ■ Performance

|          |   |
|----------|---|
| Warranty | 90% power output over 12 years                              |
|          | 80% power output over 25 years                              |
|          | Free from defects in materials and workmanship for 10 years |

### ■ Qualification Test

|                             |  |
|-----------------------------|--|
| Temperature cycling range   | - 40°C to +85°C for 200 cycles                 |
| Damp heat test              | 85°C and 85 relative humidity for 1000 h       |
| Front & rear wind load test | 2400 Pa  |
| Front snow load test        | 5400 Pa  |
| Hot spot free               | 100% EL inspection before and after lamination |

### ■ Electrical Characteristics

| Cell Type(mm)                      | 125 X 125 Mono Solar Cell                       |         |         |         |         |         |
|------------------------------------|---|---------|---------|---------|---------|---------|
| Item                               | HR-180W   | HR-185W | HR-190W | HR-195W | HR-200W | HR-205W |
| Max power (Wp)                     | 180   | 185     | 190     | 195     | 200     | 205     |
| Max power voltage (Vm)             | 36.02   | 36.42   | 36.50   | 36.94   | 37.39   | 37.83   |
| Max power current (Im)             | 5.00  | 5.08    | 5.21    | 5.28    | 5.35    | 5.42    |
| Open circuit voltage (Voc)         | 44.81   | 45.05   | 45.20   | 45.28   | 45.50   | 45.68   |
| Short circuit current (Isc)        | 5.28  | 5.41    | 5.53    | 5.58    | 5.79    | 5.90    |
| Module eff (%)                     | 14.10   | 14.49   | 14.88   | 15.27   | 15.67   | 16.06   |
| Cell eff (%)                       | 16.15   | 16.60   | 17.04   | 17.49   | 17.94   | 18.39   |
| Max series fuse                    | 15 A  |         |         |         |         |         |
| Number of diode                    | 3   |         |         |         |         |         |
| Number of cells                    | 72  |         |         |         |         |         |
| Max system voltage                 | 1000 VDC  |         |         |         |         |         |
| Temperature coefficients of Pm     | -0.41%/°C                                       |         |         |         |         |         |
| Temperature coefficients of Voc    | -0.31%/°C                                       |         |         |         |         |         |
| Temperature coefficients of Isc    | 0.047 %/°C                                      |         |         |         |         |         |
| Nominal operating cell temperature | 45 °C ± 3 °C                                    |         |         |         |         |         |
| Output tolerance                   | 0 ~5W, +/- 3%                                   |         |         |         |         |         |
| Standard test conditions           | STC: AM1.5, 1000 W/m², Module Temperature 25 °C |         |         |         |         |         |

### ■ Mechanical Characteristics

|                                |  |
|--------------------------------|--|
| Dimensions (mm)                | 1580× 808× 45  |
| Weight (kg)                    | 16   |
| Solar Cells                    | 72 cells(125 mm x 125 mm) configured geometrically for a 6 x 12 matrix connected in series |
| Output cables lengths (mm)     | 900  |
| Cable cross section size (mm²) | 4  |
| Construction                   | Front: High transmission 3.2mm tempered glass. Rear. White backsheet; Encapsulant: EVA.    |