Enduring Vitality

## Mono-crystalline Solar Modules Series



190W Curves



## Performance

| Warranty | $90 \%$ power output over 12 years |
| :--- | ---: |
|  | $80 \%$ power output over 25 years |
| Qualification Test | Free from defects in materials and workmanship for 10 years |
| Temperature cycling range | $85^{\circ} \mathrm{C} \mathrm{and} 85$ relative humidity for 1000 h |
| Damp heat test | 2400 Pa |
| Front \& rear wind load test | 5400 Pa |
| Front snow load test | $100 \% \mathrm{EL}$ inspection before and after lamination |
| Hot spot free |  |

## - Electrical Characteristics

| Cell Type(mm) | 125 X 125 Mono Solar Cell |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item | 180M | 185M | 190M | 195M | 200M | 205M |
| 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 cicuit 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 |  | $-0.41 \% /{ }^{\circ} \mathrm{C}$ |  |  |  |  |
| Temperature coefficients of Voc |  | $-0.31 \% /{ }^{\circ} \mathrm{C}$ |  |  |  |  |
| Temperature coefficients of Isc |  | $0.047 \% /{ }^{\circ} \mathrm{C}$ |  |  |  |  |
| Nominal operating cell temperature |  | $45^{\circ} \mathrm{C} \pm 3^{\circ} \mathrm{C}$ |  |  |  |  |
| Output tolerance |  | $0 \sim 5 \mathrm{~W},+/-3 \%$ |  |  |  |  |
| Standard test conditions |  | STC: AM1.5, $1000 \mathrm{~W} / \mathrm{m}^{2}$, Module Temperature $25^{\circ} \mathrm{C}$ |  |  |  |  |

■ Mechanical Characteristics

| Dimensions $(\mathrm{mm})$ |  |
| :--- | :---: |
| Weight $(\mathrm{kg})$ |  |
| Solar Cells | 72 cells $(125 \mathrm{~mm} \times 125 \mathrm{~mm})$ configured geometrically for a $6 \times 12$ matrix connected in series |
| Output cables lengths $(\mathrm{mm})$ | 900 |
| Cable cross section size $\left(\mathrm{mm}^{2}\right)$ |  |
| Construction | Front: High transmission 3.2 mm tempered glass. Rear. White backsheet; Encapsulant: EVA. |

