

MONOCRYSTALLINE MODULE 90W / 36 Cells / 5 Bus bars

SOLAR MODULE ECS-90M-36

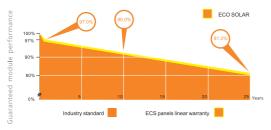






# LINEAR PERFORMANCE WARRANTY

12-Year Product Warranty · 25-Year Linear Power Warranty



Eco Solar energy's modules are only made of grade A solar cells with a very high efficiency and ensured more than 25 years lifespan.

# **KEY FEATURES**



5 bus bars cells, with efficiency up to 22.8 %



IP67 junction box for long term weather endurance



High quality aluminum frame, resisting load up to 5400 Pa and wind pressure up to 2400 Pa



High light transmission , low-iron tempered glass



High performance in low-light environment



Double EL test before and after lamination

# 25 YEARS

**OUTPUT POWER WARRANTY** 



PRODUCT WARRANTY

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#### **ELECTRICAL DATA AT STC\***

| Maximum power (Pmax)     90W       Power tolerance     0 - 3%       Voltage at Pmax (Vmp)     20.0V       Current at Pmax (Imp)     4.51A       Open-circuit voltage (Voc)     24.0V       Short-circuit current (Isc)     4.87A |                             |        |
|--|-----------------------------|--------|
| Voltage at Pmax (Vmp) 20.0V   Current at Pmax (Imp) 4.51A   Open-circuit voltage (Voc) 24.0V   | Maximum power (Pmax)        | 90W    |
| Current at Pmax (Imp) 4.51A   Open-circuit voltage (Voc) 24.0V   | Power tolerance             | 0 - 3% |
| Open-circuit voltage (Voc) 24.0V   | Voltage at Pmax (Vmp)       | 20.0V  |
|  | Current at Pmax (Imp)       | 4.51A  |
| Short-circuit current (Isc) 4.87A  | Open-circuit voltage (Voc)  | 24.0V  |
|  | Short-circuit current (Isc) | 4.87A  |

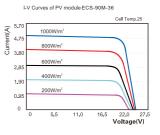
#### **TEMPERATURE CHARACTERISTICS**

| NOCT (Air 20°C; Sun 0.8kW/m <sup>2</sup> wind 1m/s) | 47±2°C              |
|---|---------------------|
| Temperature coefficient of Voc                      | -(0.40 ± 0.05)%/ °C |
| Temperature coefficient of Isc                      | (0.065 ±0.01)% /°C  |
| Temperature coefficient of power                    | -(0.5±0.05)%/ °C    |

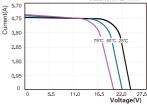
#### **MAXIUM RATINGS**

| Operating temperature      | -40°C to 85°C |
|----------------------------|---------------|
| Maximum system voltage     | 600V DC       |
| Max series fuse rating     | 10A           |
| Max front load (e.g.:snow) | 5400 Pa       |
| Max back load (e.g.:wind)  | 2400 Pa       |

### **I-V CURVES**



I-V Curves of PV module ECS-90M-36 at various cell temperatures Irradiance AM1.5, 1kW/m<sup>2</sup>



## **DIMENSIONS OF PV MODULES (mm)**

## **MECHANICAL CHARACTERISTICS**

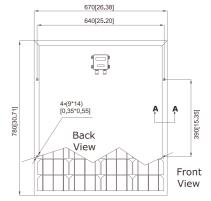
| Cell type       | Monocrystalline                       |
|-----------------|---------------------------------------|
| Number of cells | 36                                    |
| Dimensions      | 780x670x30mm                          |
| Weight          | 5.9 kg                                |
| Glass           | 3.2mm Tempered Glass                  |
| Frame           | Silver/Black Anodized Aluminium Alloy |
| Junction Box    | IP67                                  |
| Cable           | Optional                              |
| Connector       | Optional                              |

Dimensions in brackets are in inches. Un-bracketed dimensions are in millimeters. Unit:mm[in.]



Junction Box Top View (Lidopen)







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