

## 1. Specifications of Panels (Solar Module 12V, 50Wp)

### 1.1. Typical Performance Characteristics

| Description  | Unit                                 | Specification |
|--|--------------------------------------|---------------|
| Peak Power (Wp)  | Watts                                | 50            |
| Power Tolerance  |                                      | ( + / - ) 3%  |
| Maximum Power Voltage (Vmp)                                | Volts                                | 17.6          |
| Maximum Power Current (Imp)                                | Amps                                 | 3.0           |
| Open Circuit Voltage (Voc)                                 | Volts                                | 21.6          |
| Short Circuit Current (Isc)                                | Amps                                 | 3.2           |
| Cell Efficiency  | %                                    | ≥ 13.5        |
| Module Efficiency  | %                                    | ≥ 12.0        |
| I-V parameters are rated at Standard Test Conditions (STC) | 1000 W/sqm, AM 1.5, Temperature 25°C |               |

### 1.2. Characteristic Data

|                        |                             |
|------------------------|-----------------------------|
| Solar Cells per Module | 36 Nos. connected in series |
| Type of solar Cell     | Cut Pieces of 156x156mm     |

### 1.3. Physical Properties

| Description             | Specification                   |
|-------------------------|---------------------------------|
| Length                  | 825mm ( + / - 5mm )             |
| Width                   | 525mm ( + / - 5mm )             |
| Depth of Frame          | 38mm ( + / - 2mm )              |
| Depth Including J-box   | 38mm ( + / - 2mm )              |
| Weight                  | 6.5 Kgs                         |
| Mounting Hole Locations | As per Customer Specification   |
| By Pass Diode           | 1Nos., one each across 36 cells |

### 1.4. Design Properties

| Description                  | Specification  |
|------------------------------|----------------|
| Max. System Voltage          | 600 VDC        |
| Operating Module Temperature | -40°C to +90°C |