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|  BHEL-EPD | ELECTRIC & PHOTOVOLTAIC DIVISION BENGALURU – 560012, INDIA DATASHEET SPV ENGINEERING | DOC. NO: SPV-4-02-00013 |
| | | REV. 00 JOB NO.- SP1077 |
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SOLAR PHOTOVOLTAIC MODULE

1. PV MODULE TYPE : MULTI CRYSTALLINE SOLAR MODULE

2. CONFIGURATION : SINGLE GLASS LAMINATED TYPE WITH 72 NOS. OF $156.75 \text{ mm} \pm 0.5 \text{ mm}$ / $157 \text{ mm} \pm 0.5 \text{ mm}$ (Typ.) SOLAR CELLS (12*6) IN SERIES CONFIGURATION.

3. OVERALL SIZE : $1966 (\pm 3) * 986 (\pm 2) * 35 (\pm 1) \text{ mm}$

4. WEIGHT : 22.5 Kg. (Typ.)

5. MAJOR BILL OF MATERIAL

| SL NO. | BILL OF MATERIAL | DETAILS |
|--------|------------------|--|
| 1 | SOLAR CELL | MULTI CRYSTALLINE, HIGH EFFICIENCY, PID RESISTANT |
| 2 | SOLAR GLASS | ANTI REFLECTION COATED, LIGHT TRANSMISSION $\geq 93.5\%$, THICKNESS 3.2 mm |
| 3 | EVA SHEET | OPTICAL TRANSMITTANCE $> 91\%$, PID RESISTANT, UV & WEATHER STABLE |
| 4 | BACK SHEET | THREE LAYERED STRUCTURE, FLUOROPOLYMER & PET BASED, THICKNESS MIN. 300 MICRONS |
| 5 | FRAME | ANODISED ALUMINIUM FRAME (ANODIZATION THICKNESS 18 ± 3 MICRONS) |
| 6 | JUNCTION BOX | IP 67 GRADE JUNCTION BOX WITH CABLES AND CONNECTORS (TUV CERTIFIED), 1 KV |

6. CERTIFICATION ON SPV MODULE:

- IEC 61215, IS 14286: Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval
- IEC 61730-1, IS / IEC 61730-1: Photovoltaic (PV) module safety qualification – Part 1: Requirements for construction
- IEC 61730-2, IS / IEC 61730-2: Photovoltaic (PV) module safety qualification – Part 2: Requirements for testing

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7. PERFORMANCE WARRANTY:

- Product Warranty: The modules are warranted for 5 years for failures due to material defects and workmanship.
- Performance Warranty: Peak power output shall not be less than 90% at the end of 10 years and 80% at the end of 25 years from the completion of the trial run.

The warranty is subject to standard terms & conditions of sale and adherence by the customer to the installation & operation manual and instructions thereof.

8. TYPICAL ELECTRICAL CHARACTERISTICS:

| Module Model No. | Voc (V) | Isc (A) | Vmp (V) | Imp (A) | Pmax (Wp) Min. | Fill Factor (FF) Min. |
|------------------|---------|---------|---------|---------|----------------|-----------------------|
| L24300P-320W | 45.53 | 9.22 | 36.0 | 8.89 | 320 | ≥ 0.70 |

NOTE:

1. Electrical specifications mentioned above are at Standard Test Conditions of 100 mW/sq.cm solar insolation (AM 1.5) and at 25 deg. C temperature.
2. Measurement repeatability of peak power output: ± 3%.
3. Maximum System Voltage is 1000V DC.

Abbreviation:

- OPEN CIRCUIT VOLTAGE (Voc), SHORT CIRCUIT CURRENT (Isc)
- VOLTAGE AT PEAK POWER POINT (Vmp)
- CURRENT AT PEAK POWER POINT (Imp)
- PEAK POWER OUTPUT (P max).