



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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DT 12.08.20

SOLAR PHOTOVOLTAIC MODULE

1. PV MODULE TYPE : MULTI CRYSTALLINE SOLAR MODULE
2. CONFIGURATION : SINGLE GLASS LAMINATED TYPE WITH 72 NOS.
OF 156.75 mm \pm 0.5 mm / 157 mm \pm 0.5 mm (Typ.)
SOLAR CELLS (12*6) IN SERIES CONFIGURATION.
3. OVERALL SIZE : 1966 (\pm 3) * 986 (\pm 2) * 35 (\pm 1) 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 \pm 3 MICRONS) |
| 6 | JUNCTION BOX | IP 67 GRADE JUNCTION BOX WITH CABLES AND CONNECTORS (TUV CERTIFICATED), 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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|  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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| COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company. | 7. PERFORMANCE WARRANTY: <ul style="list-style-type: none"> 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. <p>The warranty is subject to standard terms & conditions of sale and adherence by the customer to the installation & operation manual and instructions thereof.</p> | | | | | | | | | | | | | | | | |
| | 8. TYPICAL ELECTRICAL CHARACTERISTICS: <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Module Model No.</th> <th>Voc (V)</th> <th>Isc (A)</th> <th>Vmp (V)</th> <th>Imp (A)</th> <th>Pmax (Wp) Min.</th> <th>Fill Factor (FF) Min.</th> </tr> </thead> <tbody> <tr> <td>L24300P-320W</td> <td>45.53</td> <td>9.22</td> <td>36.0</td> <td>8.89</td> <td>320</td> <td>≥ 0.70</td> </tr> </tbody> </table> <p>NOTE:</p> <ol style="list-style-type: none"> 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. Measurement repeatability of peak power output: ± 3%. Maximum System Voltage is 1000V DC. <p>Abbreviation:</p> <ul style="list-style-type: none"> 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). | | | | 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 |
| 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 | | | | | | | | | | | |
| ಕೆಎಂಪಿ ಸಿರ್ಕಿಲರಿ: ಬಿಎಸ್‌ಎಲ್ ಹೌಸ್ ಸಿರ್ಕಿಲರಿ, ನವದೆಹಲಿ-110049 पंजीकृत कार्यालय: बीएचएल हाउस नई दिल्ली-110049, REGD.OFFICE : BHEL HOUSE SIRIFORT, NEW DELHI- 110049 | | | | | | | | | | | | | | | | | |