

40 Watt Photovoltaic Module

BP 340

4029E-1 01/04

The BP 340 is an advanced 40W photovoltaic module, using cells with SiN coating that addresses the needs of rural electrification for remote homes that do not have access to the utility grid and remote industrial applications such as telemetry and instrumentation systems. This product offers improved efficiency through the use of advanced polycrystalline cells and a 12V nominal power output, making it ideal for battery charging applications. It has proven performance at high temperatures and its robust design makes the product durable in the field and easy to install.

Performance

| | |
|-------------------|---|
| Rated power | 40W |
| Module efficiency | 11.3% |
| Nominal voltage | 12V |
| Warranty | 90% power output over 12 years. 80% power output over 25 years. Free from defects in materials and workmanship for 5 years. |

Configuration

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|---------|---|
| BP 340U | Clear Universal frame and robust junction box |
|---------|---|

Qualification Test Parameters

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|--|--|
| Temperature cycling range | -40°C to +85°C for 200 cycles |
| Damp heat test | 85°C and 85% relative humidity for 1000h |
| Front & rear static load test (eg: wind) | 2400 Pa |
| Front load test (eg: snow) | 5400 Pa |
| Hailstone impact test | 25mm hail at 23m/s from 1m distance |

Quality and Safety

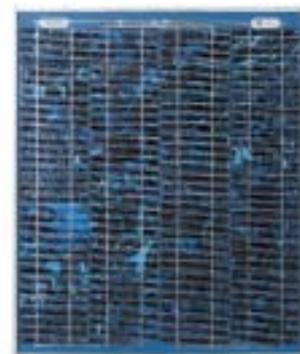
- Manufactured in ISO 9001 and ISO 14003 certified factories.
- Conforms to European Community Directive 89/33/EEC, 73/23/EEC, 93/68/EEC
- Certified to IEC 61215

Module power measurements calibrated to World Radiometric Reference through ESTI (European Solar Test Installation at Ispra, Italy)

Framed modules certified by TÜV Rheinland as Safety Class II (IEC 60364) equipment for use in systems up to 1000 VDC

Framed modules listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

Approved by Factory Mutual Research in NEC Class 1, Division 2, Groups C & D hazardous locations

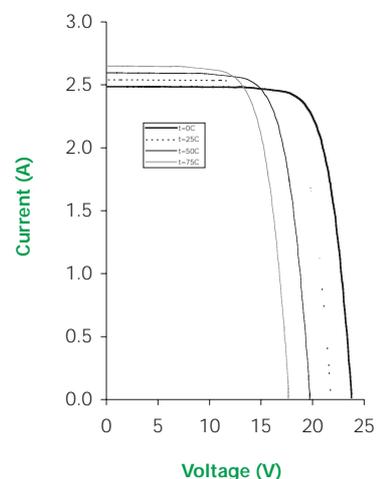


BP 340U scale 1:14

Efficiency (%)

| | | | | |
|------|-------|-------|-------|-------|
| 9-11 | 11-12 | 12-13 | 13-14 | 14-15 |
|------|-------|-------|-------|-------|

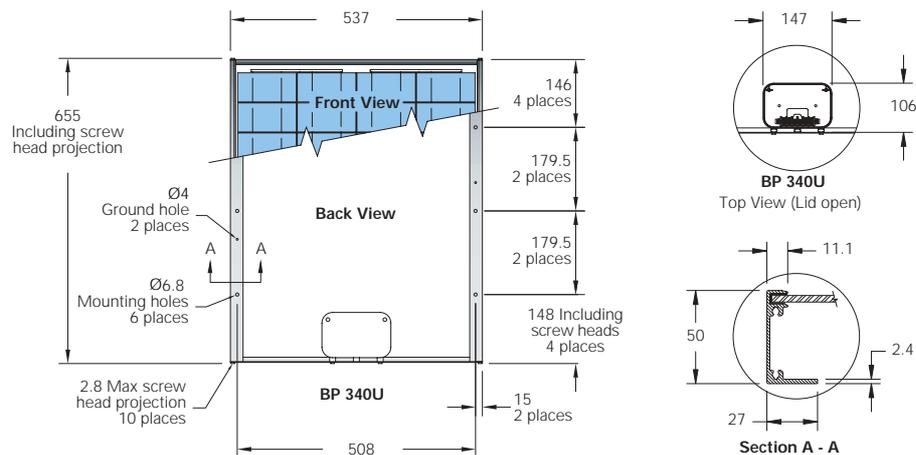
BP 340 I-V Curves



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Module Diagram



Self-tapping grounding screw, instruction sheet and warranty document included with each module.

Typical Electrical Characteristics

BP 340U

| | |
|---|---|
| Maximum Power (P_{max}) | 40W |
| Warranted minimum power | 36W |
| Voltage at P_{max} (V_{mp}) | 17.3V |
| Current at P_{max} (I_{mp}) | 2.31A |
| Short circuit current (I_{sc}) | 2.54A |
| Open circuit voltage (V_{oc}) | 21.8V |
| Temperature coefficient of I_{sc} | (0.065(0.015))%/K |
| Temperature coefficient of V_{oc} | -(80(10))mV/K |
| Temperature coefficient of P_{max} | -(0.5(0.05))%/K |
| NOCT (Air 20°C; Sun 0.8kW/m ² ; wind speed 1m/s) | 47(2°C) |
| Maximum series fuse rating | 20A |
| Maximum system voltage | 600V (IEC 61215 rating) 1000V (TÜV Rheinland rating) |

Standard test conditions - irradiance of 1000W/m² at an AM1.5G solar spectrum and a temperature of 25°C.

Mechanical Characteristics

BP 340U

| | |
|--|--|
| Dimensions (mm) (Overall tolerances +/-3mm) | 655 x 537 x 50 |
| Weight (kg) | 5.75 |
| Frame | Clear anodised aluminium alloy type 6063T6. Silver Universal frame. |
| Solar cells | 36 cells (63mm x 125mm) configured geometrically for 2 parallel strings of 36 for a 4 x 9 matrix. |
| Junction box | IP54 junction box with 6 terminal screw connection block; accepts PG 13.5, M20, 13mm conduit or cable fittings accepting 6 - 12mm diameter cable. Terminals accept 2.5 - 10mm ² (8 to 14 AWG) wire. |
| Construction | Front: high transmission 3mm tempered glass. Rear: Blue tedlar; Encapsulant: EVA. |

Your BP Solar Distributor:

