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EnergyPal

Solar Panel Guide Specification Data Sheet

Bluebird Solar Pvt. Ltd.

BBS P 40-125

BBS P50

Also available on the web at
EnergyPal.com/bluebird-solar-pvt-ltd-solar-panels/bbs-p50

Premium Quality Solar PV Modules

36
Cells

Polycrystalline Solar PV Modules 40-125 W



bluebird SOLAR
co-powering the future



Increased module power output.



Maximum system voltage of 600/1000 V DC.



Reduced BOS cost.



High area efficiency.



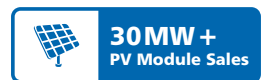
Easy installation & handling for various application.

Why Bluebird ?

- ◆ Backed by a 40 year old reputed brand name.
- ◆ Use of Tier-1 raw material.
- ◆ Intensive R&D, and stringent QC.
- ◆ Highest standards of product performance.
- ◆ Robust supply chain & logistics.

More Reliable Products

- ▮ PID Resistant 5BB cells and encapsulants.
- ▮ Salt mist & ammonia resistant.
- ▮ AR Coated tempered PV grade glass.
- ▮ Only positive power tolerance.
- ▮ Excellent low light performance.
- ▮ Certified to withstand harsh environmental conditions.
- ▮ 100% EL Inspected to ensure micro crack free modules.



Applications



On-grid Large scale utility projects



On-grid rooftop Industrial & commercial system



Off-grid rooftop systems for residential buildings



Solar water pumping systems



Off-grid systems for Filling Stations



Electric Vehicles charging station



Street lighting applications



| Module Series | POLYCRYSTALLINE | | | | |
|---|-----------------|----------|----------|-----------|-----------|
| | BBS P 40 | BBS P 50 | BBS P 80 | BBS P 100 | BBS P 125 |
| Electrical Characteristics at STC: | | | | | |
| Maximum Power Pmax (Wp) | 40.00 | 50.00 | 80.00 | 100.00 | 125.00 |
| Maximum Voltage Vmpp (V) | 18.50 | 18.50 | 18.50 | 18.50 | 18.50 |
| Maximum Current Imp (A) | 2.16 | 2.70 | 4.32 | 5.41 | 6.76 |
| Open Circuit Voltage Voc (V) | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 |
| Short Circuit Current Isc (A) | 2.56 | 3.15 | 4.80 | 5.93 | 7.31 |
| Module Efficiency (%) | 13.00 | 14.00 | 14.50 | 14.70 | 15.25 |

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5G spectrum according to EN 60904-3
Average relative efficiency reduction of <5% for every 200W/m² reduction in Irradiance, according to EN 60904-1

| | | | | | |
|--|-------|-------|-------|-------|-------|
| Electrical Characteristics at NOCT: | | | | | |
| Maximum Power Pmax (Wp) | 28.70 | 35.80 | 55.20 | 72.00 | 90.90 |
| Maximum Voltage Vmpp (V) | 16.41 | 16.41 | 16.44 | 16.41 | 16.41 |
| Maximum Current Imp (A) | 1.75 | 2.18 | 3.29 | 4.39 | 5.54 |
| Open Circuit Voltage Voc (V) | 19.93 | 19.93 | 19.93 | 19.93 | 19.93 |
| Short Circuit Current Isc (A) | 1.98 | 2.39 | 3.55 | 4.81 | 6.02 |

NOCT: 800W/m² irradiance, 20°C ambient temperature, Wind Speed 1 m/sec

Temperature coefficient (Tc) and permissible operating conditions

| | |
|---------------------------------|--|
| Tc of Open Circuit Voltage (β) | -0.310%/°K |
| Tc of Short Circuit Current (α) | 0.050%/°K |
| Tc of Power (γ) | -0.410%/°K |
| NOCT | 46 ± 2°C |
| Maximum series fuse ratings | 6A(BBSP40, BBSP50), 10A (BBSP80, BBSP100, BBSP125) |
| Temperature Range | -40°C to +85°C |
| Maximum System Voltage | 600/1000 V DC |

Mechanical Data

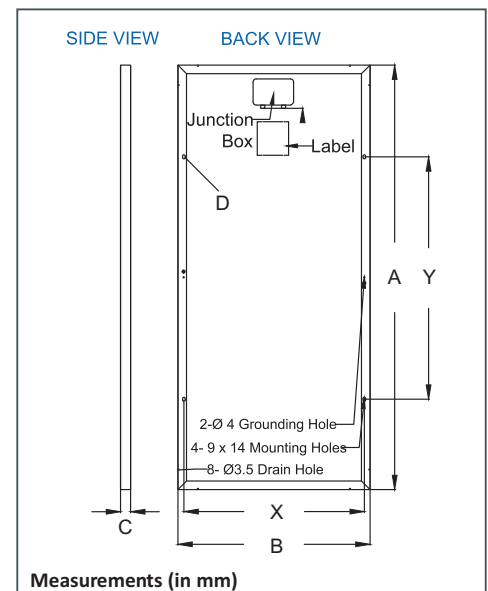
| | |
|----------------------|---|
| Solar Cells | 36 Polycrystalline Solar cells, 5BB |
| Junction Box | IP 67 rated with 2 bypass diodes |
| Superstrate | 3.2 mm high transmission low iron tempered glass (AR coated) |
| Cell Encapsulant | PID Free EVA (Ethylene Vinyl Acetate) - FC/UFC |
| Backsheet | Composite Film - White (Black & Transparent optional)** |
| Frame | Silver Anodized Aluminum frame with twin wall profile |
| Application Class | Class A (safety class II) |
| Mechanical Load Test | Sustain heavy static load (2400 Pa & 5400 Pa or 550 kg/m ²) |

**Refer to Bluebird Solar's warranty documents for terms and conditions

**Black and transparent backsheet without ICE certification

Specification and electrical data included in this datasheet are subject to change without notice. Please confirm your requirements with the company representative while placing your order.

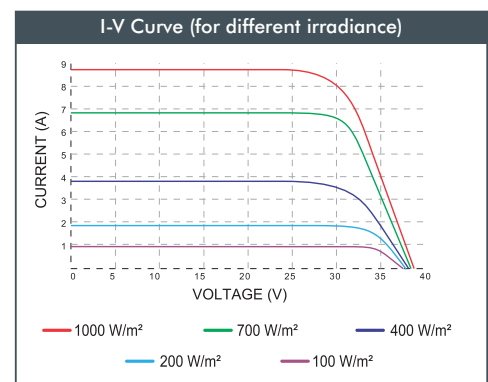
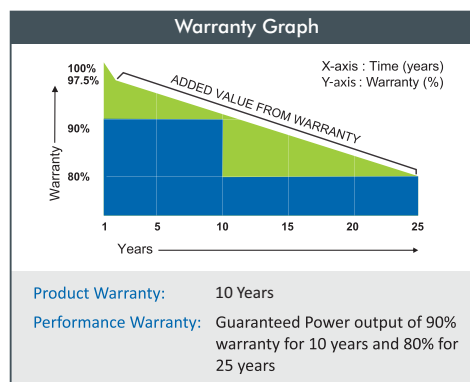
Note: It is mandatory to make negative grounding of modules in all installation to avoid PID Issue.



Measurements (in mm)

| | 40 W | 50 W | 80 W | 100 W | 125 W |
|-------------------|-----------|--------|--------|--------|-------|
| Length (A) | 475 | 550 | 780 | 1015 | 1245 |
| Width (B) | 670 | 670 | 670 | 670 | 670 |
| Height (C) | 22 | 22 | 35 | 35 | 35 |
| Mounting Hole (D) | 8*12/9*14 | | | | |
| Y-Pitch | 290 | 365 | 400 | 700 | 845 |
| X-Pitch | 640 | 640 | 640 | 640 | 640 |
| Weight | 4.5 Kg | 5.5 Kg | 6.8 Kg | 8.5 Kg | 12 Kg |

| Approvals and certifications | |
|------------------------------|--|
| Products: | IEC 61215 Ed 2, ROHS, IEC 61730, IEC 61701, CE, UL 1703, CEC, CE |
| Manufacturing: | ISO 9001:2015, ISO 14001: 2015 ISO 45001:2018 |



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WORKS

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