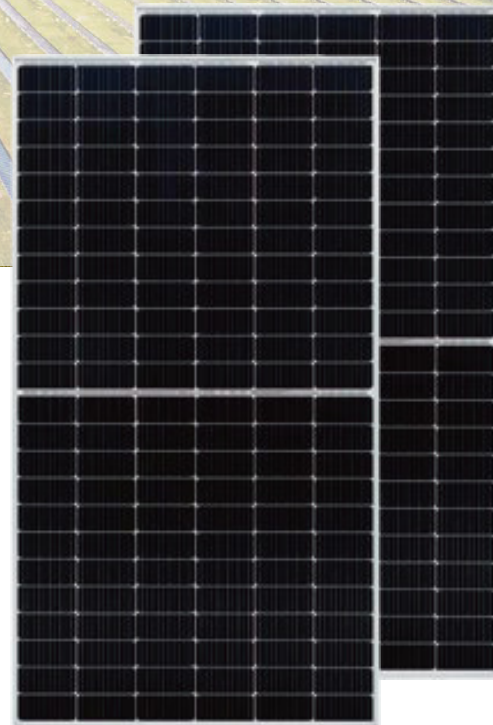




# HEX<sub>5</sub>

## BSM550M10-72HBD



182

Bifacial Dual Glass 530W-550W  
Leading 5%-25% more yield  
Efficiency up to 21.2%

## Made In Thailand

Long Beach, CA Stock

Best Solar Plant Selling (2.16GW Shipped)

Same Day Shipping

- Dimensions: 2285\*1134\*35mm
- Weight: 32.2kg
- Max. System Voltage: 1500 V/DC(IEC)

### PERFORMANCE WARRANTY

12  
Years

Enhanced Product Warranty on Materials  
and Workmanship

30  
Years

Linear Power Performance Warranty  
According to the applicable Bluesun  
Solar Limited Warranty Statement.

### GREAT PERFORMANCE AND RELIABILITY

- ★ Bi-facial Perc Half Cut Technology
- ★ Better Energy Yield
- ★ Power Degradation -0.45%/30 Years Linear Warranty
- ★ TUV SUD Anti PID Certificated
- ★ IP68 Junction Box/High Water Proof Level
- ★ Reduced Hot Spot Risk

### MANAGEMENT SYSTEM CERTIFICATES

- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

### PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / IEC 61701 / IEC TS 62804
- UL 1703 / UL61730



### BLUESUN SOLAR CO.,LTD

Add: 1499 Zhenxing Road, Shushan District, 230031 Hefei, China

Tel: +86 (158) 5821 3997  
E-mail: info@bluesunpv.com

Fax: +86 (551) 6565 2651  
Http: www.bluesunpv.com

US Warehouse Location: Long Beach, CA

\*Release BSM550M10-72HBD(530-550W)\_V\_22\_07

# BLUESUN

## LIMITED WARRANTY FOR PV MODULES

Effective May, 2022

You have made the right choice by purchasing BLUESUN products with a long life time.

Bluesun standard photovoltaic modules are covered by our 12 years workmanship and 25 years performance warranty as described in detail below.

**Bluesun double glass photovoltaic modules are covered by our 12 years workmanship and 30 years performance warranty as described in detail below.**

Bluesun Singled photovoltaic modules are covered by our 15 years workmanship and 30 years performance warranty as described in detail below.

Bluesun Standard PV Module Products covered under this warranty include:

Standard Modules:

BSMxxxP-60[XXX=270-300]; BSMxxxP-72[XXX=330-350]  
BSMxxxM-60HPH[XXX=345-380]; BSMxxxM-72HPH[XXX=425-460]  
BSMxxxG12-54HPH[XXX=405-425]; BSMxxxM10-72HPH[XXX=530-560]  
BSMxxxG12-72HPH[XXX=650-670];

Bifacial Modules:

BSMxxxM-72HBD[XXX=435-460]; BSMxxxM10-72HBD[XXX=530-560];

Shingled Modules:

BSMxxxPM5-60SB[XXX=395-415]; BSMxxxPM5-78SA[XXX=470-490]  
BSMxxxPM5-72SB[XXX=480-500]; BSMxxxPM5-78SA[XXX=470-490]  
BSMxxxPMB6-69SDC[XXX=650-670]; BSMxxxPMB6-70SDC[XXX=675-700]

xxx is a module power ratings listed on IEC certificate.

For the standard solar module types listed above, Bluesun Solar Co., Ltd. (hereinafter referred to as "BLUESUN") warrants its Photovoltaic Solar Modules (MODULES) starting from the date of sale with an Original Copy of Bluesun certifiable invoice (SALES DATE) to the first customer installing (for their own use) the MODULES (CUSTOMER), or starting at the latest 12 months after MODULES dispatch from BLUESUN factory, whichever occurs earlier ("WARRANTY START DATE").

### **1. Limited Product Warranty – Twelve/Fifteen Years Repair, Replacement or Refund Remedy**

BLUESUN warrants its MODULES, including factory-assembled DC connectors and cables, if any, to be free from defect in materials and workmanship, as per the mechanical and electrical characteristics of the product's datasheet, under normal application, proper installation as per Bluesun installation guide, use and service conditions. If MODULES fail to conform to this warranty, during the period of One Hundred Forty Four (144)/One Hundred Eighty (180) months from the WARRANTY START DATE, BLUESUN will, at its option, either repair or replace the product, or refund the current list price at the time of warranty claim resolution of comparable BLUESUN MODULES. The repair or replacement or refund remedy shall be the sole and exclusive remedy provided under the "Limited Product Warranty" and shall not be extended beyond the period set forth herein. The replacement will be Grade A and above modules. This "Limited Product Warranty" does not warrant a specific power output, which shall be exclusively covered under clause 2 hereinafter ("Limited Peak Power Warranty").

### **2. Limited Peak Power Warranty - Limited Remedy**

Bluesun warrants that for a period of twenty-five years the module will maintain a level of performance as set forth below:

• For Mono PERC Module, the actual average power output of the modules will be no less than 98% of the labelled power output in the first year; thereafter, 0.55% maximum decrease per ending with 84.8% in the 25th year after the WARRANTY START DATE.

• For Mono PERC bifacial double-glass module, Mono PERC Shingled module the actual average power output of the modules will be no less than 98% of the labelled power output in the first year; thereafter, 0.45% maximum decrease per year, ending with 84.95% in the 30th year after the WARRANTY START DATE.

BLUESUN warrants each module against defects in materials and workmanship that result in the failure of the MODULES to produce the warranted percentage specified above of the nominal power output for the module set forth in BLUESUN product datasheet. If BLUESUN determines in its discretion that any module is not providing the warranted percentage of the nominal power output because of defects in materials and workmanship, BLUESUN will at its option either (1) replace such loss in power by either, (a) providing additional MODULES to the CUSTOMER to make up for such loss in power, or (b) replacing the defective module(s) or part by a functional equivalent; or (2) refund the percentage of the module(s) price, representing the percentage of the power that is less than the warranted percentage of the nominal power according to the current list price, at the time of warranty claim resolution, of comparable BLUESUN MODULES.

The remedies set forth in this clause 2 shall be the sole and exclusive remedies provided under the "Limited Peak Power Warranty". Nominal Power Output in product datasheet is the power in Watt peak that a Photovoltaic Solar Modules generates in its Maximum Power Point under Standard Testing Conditions (STC). STC are as follows: (a) light spectrum of AM 1.5, (b) an irradiation of 1000 W per m<sup>2</sup> and (c) a cell temperature of 25 degrees centigrade at right angle irradiation. The measurements are carried out in accordance with IEC 61215 as tested at the connectors or junction box terminals – as applicable – per calibration and testing standards of BLUESUN valid at the date of manufacture of the PV Modules.

### **3. Exclusions and Limitations**

(1) In any event, all warranty claims must be received within the applicable warranty period for this warranty to be effective.

(2) The "Limited Product Warranty" and the "Limited Peak Power Warranty" do not apply to any MODULES which have been subjected to:

- Misuse, abuse, vandalism, neglect or accident;
- Alteration, improper installation or application;
- Extreme thermal or environmental conditions, high density dust environment, or rapid changes in such conditions, not authorized by Bluesun
- Contamination by chemical products in the environment
- Non-observance of BLUESUN installation manual or maintenance instructions detailed within the document named <Installation Guide for Bluesun Solar Shingled Double-Glass PV Module>, <Installation Guide for Bluesun Solar Shingled Single-Glass PV Module>, & <Installation Guide for Bluesun Solar Standard PV Module> download address: [www.powerbluesun.com](http://www.powerbluesun.com);
- Repair or modifications by someone other than an approved service technician of BLUESUN;
- Power failure surges, lightning, flood, fire, accidental breakage, improper connections resulting in hazardous reverse current or other events outside BLUESUN control.
- Modules which have been installed and energized on a permanent structure and later removed and re-installed on a different structure for energy harvest.

(3) Both "Limited Product Warranty" and "Limited Peak Power Warranty" do not cover any costs associated with installation, removal or re-installation of the MODULES and customs clearance or any other costs for return of the MODULES, except as explicitly set forth in the final paragraph of Section 5.

(4) Warranty claims will not be honored if the type or serial number of the MODULES have been altered, removed or made illegible.

(5) Both "Limited Product Warranty" and "Limited Peak Power Warranty" do not apply to MODULES marked as "Grade A" or substandard modules. BLUESUN explicitly refers to its "Limited Warranty for PV Modules marked Grade A".

#### 4. Limitation of Warranty Scope

This "limited warranty for PV Modules" As set forth herein is expressly in lieu of and excludes all other express or implied warranties, including but not limited to warranties of merchantability and of fitness for particular purpose, use, or Application, and all other obligations or liabilities on the part of Bluesun, unless such other obligations or liabilities are expressly agreed to in writing signed and approved by Bluesun. Bluesun shall have no responsibility or liability whatsoever for damage or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or related to the modules, including, without limitation, any defects in the modules, or from use or installation. Under no circumstances shall Bluesun be liable for incidental, consequential or special damages, howsoever caused. Loss of use, loss of profits, loss of production, and loss of revenues are specifically and without limitation excluded. Bluesun aggregate liability, if any, in damages or otherwise, shall not exceed the invoice value as paid by the customer, for the single unit of module.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This limited warranty does not affect any additional rights you have under laws in your jurisdiction governing the sale of consumer goods, including, without limitation, national laws implementing ec directive 99/44. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions in this limited warranty statement may not apply to you.

The following statement applies to customers that are 'consumers' within the meaning of the Australian consumer LAW: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure."

#### 5. Obtaining Warranty Performance

If the CUSTOMER has a justified claim covered by this "Limited Warranty for PV Modules", an immediate notification shall be filed directly to (a) the installer company, or (b) BLUESUN authorized distribution partner, who supplied affected modules, or (c) BLUESUN directly by mailing a registered letter in writing, or sending an email letter to the email account of BLUESUN listed hereunder. Together with the notification, should enclose (a) party making claim; (b) detailed description; (c) evidence, including photographs and data; (d) relevant serial numbers; (e) Warranty Start Date; (f) Module type; (g) physical address; (h) any additional evidence reasonably requested by Bluesun. A related invoice document with stamp or signature of BLUESUN or its authorized distributor should cover those requirements and should be part of the evidence. Regional addresses of BLUESUN offices are listed in the end of this document.

The return of any MODULES will not be accepted unless prior written authorization has been given by BLUESUN. In connection with both the "Limited Product Warranty" and "Limited Peak Power Warranty", BLUESUN shall reimburse CUSTOMER for reasonable, customary and documented transportation charges by sea freight for both the return of the MODULES and reshipment of any repaired or replaced MODULES, only if this cost is authorized by BLUESUN customer service department.

#### 6. Severability

If a part, provision or clause of this "Limited Warranty for PV Modules", or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such holding shall not affect and shall leave all other parts, provisions, clauses or applications of this "Limited Warranty for PV Modules", and to this end such other parts, provisions, clauses or applications of this "Limited Warranty for PV Modules" shall be treated as severable.

#### 7. Disputes

In case of any discrepancy in a warranty-claim, a first-class international test-institute such as Fraunhofer ISE in Freiburg/ Germany, TÜ V Rheinland in Cologne/ Germany or ASU Arizona State University shall be involved to judge the claim finally. All fees and expenses shall be borne by the losing party, unless otherwise awarded. And the final explanation right shall be borne by Bluesun.

#### 8. Various

The repair or replacement of the MODULES or the supply of additional MODULES, does not cause the beginning of new warranty terms, nor shall the original terms of this "Limited Warranty for PV Modules" be extended. Any replaced MODULES shall become the property of BLUESUN for disposal. BLUESUN has the right to deliver another type (different in size, color, shape and/or power) in case BLUESUN has discontinued producing the replaced MODULES at the time of warranty claim resolution.

#### 9. Warranty Transfer

This "Limited Warranty for PV Modules" is transferable when the module products remain installed in their original installation location.

#### 10. Force Majeure

BLUESUN shall not be responsible or liable in any way to the customer or any third-party arising from any non-performance or delay in performance of any terms and conditions of sale, including this "Limited Warranty for PV Modules", due to a force majeure event, including, without limitation, acts of God, war, riots, strikes, warlike conditions, perils of the seas, plague or other epidemics, fire, flood, or any other similar cause or circumstance beyond the reasonable control of BLUESUN. In such cases, performance by BLUESUN of this Limited Warranty shall be suspended without liability for the period of delay reasonably attributable to such causes.

#### 11. Update

BLUESUN is entitled to update this "Limited Warranty", the updated version is superior to this "Limited Warranty for PV Modules". And this version shall continue to be valid till the updated version is issued officially.

This "Limited Warranty for PV Modules" will become null and void if the module is transferred from the original continent of destination (e.g. North America, Europe, Asia, Australia, Africa or South America) or from China to Japan, without written permission from BLUESUN. All customers, direct and indirect, are hereby notified of such potential nullification.

In case of questions regarding our products' quality and performance, please contact authorized BLUESUN distribution partners or your nearest BLUESUN office which can be found at [www.bluesunpv.com](http://www.bluesunpv.com). Global service mailbox: [service@bluesunpv.com](mailto:service@bluesunpv.com).

Bluesun Solar Co., Ltd.

Tel: +86 (158) 5821 3997

Fax: +86 (551) 6565 2651

Email: [info@bluesunpv.com](mailto:info@bluesunpv.com)

Service: [Service@bluesunpv.com](mailto:Service@bluesunpv.com)

Add: 1499 Zhenxing Road, Shushan District, 230031 Hefei, China

## ELECTRICAL PARAMETERS

### Performance at STC (Power Tolerance 0 ~ +3%)

Maximum Power (Pmax/W)	530	535	540	545	550
Operating Voltage (Vmpp/V)	41.32	41.48	41.64	41.80	41.96
Operating Current (Impp/A)	12.83	12.90	12.97	13.04	13.11
Open-Circuit Voltage (Voc/V)	49.32	49.46	49.60	49.76	49.92
Short-Circuit Current (Isc/A)	13.72	13.79	13.86	13.93	14.00
Module Efficiency $\eta_m(\%)$	20.5	20.6	20.8	21.0	21.2

### Performance at NMOT

Maximum Power (Pmax/W)	395	398	402	406	410
Operating Voltage (Vmpp/V)	38.6	38.7	38.8	39.0	39.1
Operating Current (Impp/A)	10.24	10.30	10.36	10.41	10.47
Open-Circuit Voltage (Voc/V)	46.4	46.5	46.7	46.8	47.0
Short-Circuit Current (Isc/A)	11.06	11.12	11.17	11.23	11.28

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

### Electrical characteristics with different rear side power gain (refer to 530W front)

Pmax gain	Pmax/W	Vmpp/V	Impp/A	Voc/V	Isc/A
5%	557	41.32	13.47	49.32	14.41
10%	583	41.32	14.11	49.32	15.09
15%	610	41.32	14.75	49.32	15.78
20%	636	41.32	15.40	49.32	16.46
25%	663	41.32	16.04	49.32	17.15

## MECHANICAL SPECIFICATION

Cell Type	Monocrystalline
Cell Dimensions	182*182mm
Cell Arrangement	144 (6*24)
Weight	32.2kg
Module Dimensions	2285*1134*35mm
Cable Length	Portrait 300mm/Landscape 1200mm/Customized
Cable Cross Section Size	TUV: 4mm <sup>2</sup> (0.006inches <sup>2</sup> )/UL: 12AWG
Front Glass	2.0mm (0.08 inches) AR Coating Semi-tempered Glass
Back Glass	2.0mm (0.08 inches) Glazed Semi-tempered Glass
No. of Bypass Diodes	3
Packing Configuration (1)	31pcs/carton, 620pcs/40hq
Packing Configuration (for USA)	31pcs/carton, 558pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP68

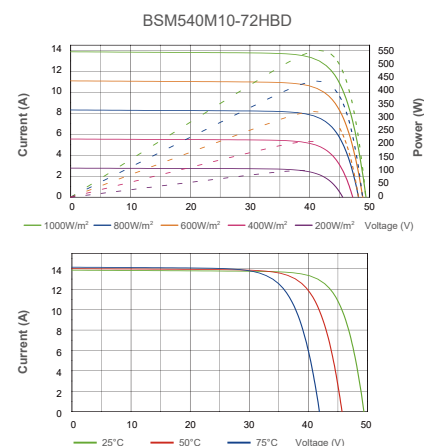
## OPERATING CONDITIONS

Maximun System Voltage	1500V/DC(IEC)
Operating Temperature	-40°C ~ +85°C
Maximun Series Fuse	30A
Static Loading	Snow Loading: 5400Pa/ Wind Loading: 2400Pa
Conductivity at Ground	≤0.1Ω
Safety Class	II
Resistance	≥100MΩ
Connector	T01/LJQ-3-CSY/MC4/MC4-EVO2
Backside Output Ratio*	70%±5%
*Under STC: Backside Output Ratio = $P_{\max(\text{rear})} / P_{\max(\text{front})}$	

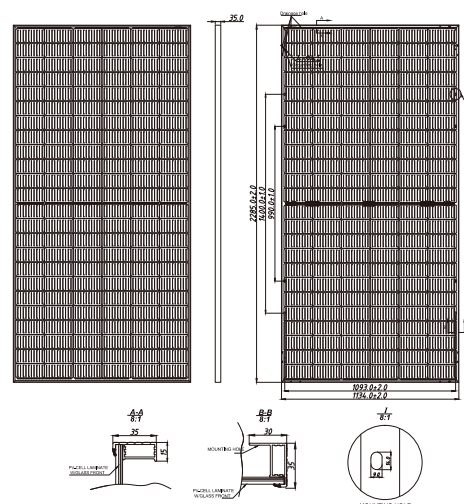
## TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.35%/°C
Temperature Coefficient Voc	-0.26%/°C
Temperature Coefficient Isc	+0.048%/°C
NMOT	43±2°C

## I-V CURVE



## TECHNICAL DRAWINGS



## BLUESUN SOLAR CO.,LTD

Add:1499 Zhenxing Road, Shushan District,230031 Hefei,China

Tel:+86 (158) 5821 3997  
E-mail:info@bluesunpv.com

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Http://www.bluesunpv.com

US Warehouse Location: Long Beach, CA

\*Release BSM550M10-72HBD(530-550W)\_V\_22\_07