



Grand Sunergy

**GLOBAL LIMITED WARRANTY
FOR GRAND SUNERGY BRAND
CRYSTALLINE SOLAR
PHOTOVOLTAIC MODULES**



Crystal silicon solar energy module warranty letter

Guosheng Energy Co.,Ltd.(hereinafter referred to as"Guosheng Energy")provides limited warranty for customers who purchase the company's crystal silicon products,specific content is as follows:

1. Limited warranty for repair or replacement within 2 years

The crystalline photovoltaic modules (hereinafter referred to as modules) sold by Guosheng Energy include the DC connectors and cables assembled at the factory. If the product has material, workmanship or manufacturing problems (not in accordance with the contract requirements) or failure caused by material, workmanship or manufacturing problems under normal use and maintenance conditions within 144 months from the starting date of the warranty, Guosheng Energy will provide the warranty free of charge (except for the costs listed in paragraph C of Article 3 of this warranty).

Guosheng Energy will, at its sole option, either repair, or replace the product. The remedy of repair or replacement shall be the sole measure provided under the limited warranty and shall not extend the foregoing 12-year warranty period. This warranty does not cover warranty specific power output, see clause 2 (Peak Limited Warranty) below for power warranties.

Note:

Normal use and maintenance conditions means that the product is installed, used, maintained, stored, and transported in accordance with the instructions for use.

Warranty Start Date: is three months after delivery of the product to the buyer (referred to as the customer), or the date the installation of the product begins, whichever comes first.

2. Peak Limited Warranty

If, under standard test conditions, any solar module is found to have a power output that is less than the percentage of the minimum peak power shown in the table below from the time it is sold to the customer, this minimum peak power is the minimum peak power specified in the product information book of Guosheng Energy on the date of delivery.

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Table 1. Mono-Glass Monocrystalline Module

Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Minimum peak power %	98	97.45	96.90	96.35	95.80	96.25	94.70	94.15	93.6	93.05	92.5	91.95	91.4
Year	14	15	16	17	18	19	20	21	22	23	24	25	
Minimum peak power %	90.85	90.30	89.75	89.20	88.65	88.10	87.55	87.00	86.45	85.90	85.35	84.80	

Table 2. Dual-Glass Monocrystalline Module

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Minimum peak power %	98.00	97.55	97.10	96.66	96.21	95.76	95.31	94.86	94.42	93.97	93.52	93.07	92.62	92.18	91.73
Year	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Minimum peak power %	91.28	90.83	90.38	89.94	89.49	89.04	88.59	88.14	87.70	87.25	86.80	86.35	85.90	85.46	85.01

Table 3. Ultra High Efficiency HJT Dual-Glass Module

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Minimum peak power %	99.00	98.63	98.26	97.89	97.52	97.15	96.78	96.41	96.04	95.67	95.30	94.93	94.56	94.19	93.82
Year	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Minimum peak power %	93.45	93.08	92.71	92.34	91.97	91.60	91.23	90.86	90.49	90.12	89.75	89.38	89.01	88.64	88.27

If Guosheng Energy confirms that this power loss (Guosheng Energy reserves the right to make its own determination and Guosheng Energy's determination shall prevail) is caused by defects in materials or workmanship, Guosheng New Energy will compensate for the missing power by providing additional PV modules to the customer or replacing the defective PV modules, or repairing or replacing the modules. The above methods are chosen by Guosheng Energy.

The compensation method in clause 2 above is the only compensation method provided under the limited peak warranty.

Note:

A. The factory peak power of mono glass monocrystalline modules under standard test conditions and nominal operating temperature test conditions satisfies the following

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correspondence.

model test condition	GSM-MP3/132-M650	GSM-MP3/132-M655	GSM-MP3/132-M660	GSM-MP3/132-M665	GSM-MP3/132-M670
STC	650	655	660	665	670
NMOT	483	485	490	494	497
model test condition	GSM-MP3/120-M590	GSM-MP3/120-M595	GSM-MP3/120-M600	GSM-MP3/120-M605	GSM-MP3/120-M610
STC	590	595	600	605	610
NMOT	438	442	445	449	453
model test condition	GSM-MP3/110-M535	GSM-MP3/110-M540	GSM-MP3/110-M545	GSM-MP3/110-M550	GSM-MP3/110-M555
STC	535	540	545	550	555
NMOT	397	401	405	407	412
model test condition	GSM-MP3/100-M485	GSM-MP3/100-M490	GSM-MP3/100-M495	GSM-MP3/100-M500	GSM-MP3/100-M505
STC	485	490	495	500	505
NMOT	360	363	367	371	374

model test condition	GSM-MP4/156-M580	GSM-MP4/156-M585	GSM-MP4/156-M590	GSM-MP4/156-M595	GSM-MP4/156-M600
STC	580	585	590	595	600
NMOT	431	434	437	442	446
model test condition	GSM-MP4/144-M530	GSM-MP4/144-M535	GSM-MP4/144-M540	GSM-MP4/144-M545	GSM-MP4/144-M550
STC	530	535	540	545	550
NMOT	394	397	401	404	408
model test condition	GSM-MP4/132-M485	GSM-MP4/132-M490	GSM-MP4/132-M495	GSM-MP4/132-M500	GSM-MP4/132-M505
STC	485	490	495	500	505
NMOT	361	364	367	371	375
model test condition	GSM-MP4/120-M440	GSM-MP4/120-M445	GSM-MP4/120-M450	GSM-MP4/120-M455	GSM-MP4/120-M460
STC	440	445	450	455	460
NMOT	327	330	334	338	341
model test condition	GSM-MP4/108-M395	GSM-MP4/108-M400	GSM-MP4/108-M405	GSM-MP4/108-M410	GSM-MP4/108-M415
STC	395	400	405	410	415
NMOT	294	297	300	304	308

model test condition	GSM-MP5/144-M445	GSM-MP5/144-M450	GSM-MP5/144-M455	GSM-MP5/144-M460	GSM-MP5/144-M465
STC	445	450	455	460	465
NMOT	330	334	337	341	345

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test condition \ model	GSM-MP5/132-M405	GSM-MP5/132-M410	GSM-MP5/132-M415	GSM-MP5/132-M420	GSM-MP5/132-M425
STC	405	410	415	420	425
NMOT	300	304	308	311	315
test condition \ model	GSM-MP5/120-M365	GSM-MP5/120-M370	GSM-MP5/120-M375	GSM-MP5/120-M380	GSM-MP5/120-M385
STC	365	370	375	380	385
NMOT	272	275	278	282	286

test condition \ model	GSM-MP6/144-M390	GSM-MP6/144-M395	GSM-MP6/144-M400	GSM-MP6/144-M405	GSM-MP6/144-M410
STC	390	395	400	405	410
NMOT	290	293	296	301	305
test condition \ model	GSM-MP6/132-M355	GSM-MP6/132-M360	GSM-MP6/132-M365	GSM-MP6/132-M370	GSM-MP6/132-M375
STC	355	360	365	370	375
NMOT	263	267	271	274	278
test condition \ model	GSM-MP6/120-M320	GSM-MP6/120-M325	GSM-MP6/120-M330	GSM-MP6/120-M335	GSM-MP6/120-M340
STC	320	325	330	335	340
NMOT	237	241	245	248	252

Peak power: is the peak power generation watt of the PV module at the highest power generation point.

Standard Test Conditions (STC): (a) spectrum of AM1.5, (b) exposure of 1000W/ m², (c) cell temperature of 25°C and at the correct light angle.

Nominal Operating Temperature Test Conditions (NOMT): (a) spectrum of AM1.5, (b) 800W/ m² irradiation, (c) 20°C cell temperature and at the correct light angle.

B. The factory peak power of the duo-glass monocrystalline module under standard test conditions and nominal operating temperature test conditions satisfies the following correspondence.

test condition \ model	GSM-MP3/132-BMDG650	GSM-MP3/132-BMDG655	GSM-MP3/132-BMDG660	GSM-MP3/132-BMDG665	GSM-MP3/132-BMDG670
STC	650	655	660	665	670
NMOT	483	485	490	494	497
test condition \ model	GSM-MP3/120-BMDG590	GSM-MP3/120-BMDG595	GSM-MP3/120-BMDG600	GSM-MP3/120-BMDG605	GSM-MP3/120-BMDG610
STC	590	595	600	605	610
NMOT	438	442	445	449	453
test condition \ model	GSM-MP3/110-BMDG535	GSM-MP3/110-BMDG540	GSM-MP3/110-BMDG545	GSM-MP3/110-BMDG550	GSM-MP3/110-BMDG555
STC	535	540	545	550	555
NMOT	397	401	405	407	412

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model test condition	GSM-MP3/100- BMDG485	GSM-MP3/100- BMDG490	GSM-MP3/100- BMDG495	GSM-MP3/100- BMDG500	GSM-MP3/100- BMDG505
STC	485	490	495	500	505
NMOT	360	363	367	371	374

model test condition	GSM-MP4/144- BMDG530	GSM-MP4/144- BMDG535	GSM-MP4/144- BMDG540	GSM-MP4/144- BMDG545	GSM-MP4/144- BMDG550
STC	530	535	540	545	550
NMOT	394	397	401	404	408
model test condition	GSM-MP4/132- BMDG485	GSM-MP4/132- BMDG490	GSM-MP4/132- BMDG495	GSM-MP4/132- BMDG500	GSM-MP4/132- BMDG505
STC	485	490	495	500	505
NMOT	361	364	367	371	375
model test condition	GSM-MP4/120- BMDG440	GSM-MP4/120- BMDG445	GSM-MP4/120- BMDG450	GSM-MP4/120- BMDG455	GSM-MP4/120- BMDG460
STC	440	445	450	455	460
NMOT	327	330	334	338	341
model test condition	GSM-MP4/108- BMDG395	GSM-MP4/108- BMDG400	GSM-MP4/108- BMDG405	GSM-MP4/108- BMDG410	GSM-MP4/108- BMDG415
STC	395	400	405	410	415
NMOT	294	297	300	304	308

model test condition	GSM- MP5/144- BMDG445	GSM- MP5/144- BMDG450	GSM- MP5/144- BMDG455	GSM- MP5/144- BMDG460	GSM-MP5/144- BMDG465
STC	445	450	455	460	465
NMOT	330	334	337	341	345
model test condition	GSM- MP5/132- BMDG405	GSM- MP5/132- BMDG410	GSM- MP5/132- BMDG415	GSM- MP5/132- BMDG420	GSM-MP5/132- BMDG425
STC	405	410	415	420	425
NMOT	300	304	308	311	315
model test condition	GSM- MP5/120- BMDG365	GSM- MP5/120- BMDG370	GSM- MP5/120- BMDG375	GSM- MP5/120- BMDG380	GSM-MP5/120- BMDG385
STC	365	370	375	380	385
NMOT	272	275	278	282	286

model test condition	GSM-MP6/144- BMDG390	GSM-MP6/144- BMDG395	GSM-MP6/144- BMDG400	GSM-MP6/144- BMDG405	GSM-MP6/144- BMDG410
STC	390	395	400	405	410
NMOT	290	293	296	301	305
model test condition	GSM-MP6/132- BMDG355	GSM-MP6/132- BMDG360	GSM-MP6/132- BMDG365	GSM-MP6/132- BMDG370	GSM-MP6/132- BMDG375

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STC	355	360	365	370	375
NMOT	263	267	271	274	278
test condition \ model	GSM-MP6/120-BMDG320	GSM-MP6/120-BMDG325	GSM-MP6/120-BMDG330	GSM-MP6/120-BMDG335	GSM-MP6/120-BMDG340
STC	320	325	330	335	340
NMOT	237	241	245	248	252

Peak power: is the peak power generation watt of the PV module at the highest power generation point.

Standard Test Conditions (STC): (a) spectrum of AM1.5, (b) exposure of 1000W/ m², (c) cell temperature of 25° C and at the correct light angle.

Nominal operating temperature test conditions (NMOT): (a) spectrum of AM1.5, (b) 800W/ m² irradiation, (c) 20° C cell temperature and at the correct light angle.

C. The factory peak power of the ultra-high efficiency heterojunction monocrystalline module under standard test conditions and bifacial standard test conditions satisfies the following correspondence.

test condition \ model	GSM-MH3/132-BHDG680	GSM-MH3/132-BHDG685	GSM-MH3/132-BHDG690	GSM-MH3/132-BHDG695	GSM-MH3/132-BHDG700
STC	680	685	690	695	700
BSTC	752	757	762	767	772
test condition \ model	GSM-MH3/120-BHDG615	GSM-MH3/120-BHDG620	GSM-MH3/120-BHDG625	GSM-MH3/120-BHDG630	GSM-MH3/120-BHDG635
STC	615	620	625	630	635
BSTC	680	685	690	695	700
test condition \ model	GSM-MH3/110-BHDG560	GSM-MH3/110-BHDG565	GSM-MH3/110-BHDG570	GSM-MH3/110-BHDG575	GSM-MH3/110-BHDG580
STC	560	565	570	575	580
BSTC	619	624	629	634	640
test condition \ model	GSM-MP3/100-BMDG510	GSM-MP3/100-BMDG515	GSM-MP3/100-BMDG520	GSM-MP3/100-BMDG525	GSM-MH3/100-BHDG530
STC	510	515	520	525	530
BSTC	564	568	574	579	585

test condition \ model	GSM-MH5/156-BHDG500	GSM-MH5/156-BHDG505	GSM-MH5/156-BHDG510	GSM-MH5/156-BHDG515	GSM-MH5/156-BHDG520
STC	500	505	510	515	520
BSTC	553	558	563	568	573
test condition \ model	GSM-MH5/144-BHDG460	GSM-MH5/144-BHDG465	GSM-MH5/144-BHDG470	GSM-MH5/144-BHDG475	GSM-MH5/144-BHDG480
STC	460	465	470	475	480

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BSTC	509	514	519	524	529
model test condition	GSM-MH5/132-BHDG420	GSM-MH5/132-BHDG425	GSM-MH5/132-BHDG430	GSM-MH5/132-BHDG435	GSM-MH5/132-BHDG440
STC	420	425	430	435	440
BSTC	464	470	475	480	485
model test condition	GSM-MH5/120-BHDG380	GSM-MH5/120-BHDG385	GSM-MH5/120-BHDG390	GSM-MH5/120-BHDG395	GSM-MH5/120-BHDG400
STC	380	385	390	395	400
BSTC	420	425	431	437	442

model test condition	GSM-MH6/144-BHDG420	GSM-MH6/144-BHDG425	GSM-MH6/144-BHDG430	GSM-MH6/144-BHDG435	GSM-MH6/144-BHDG440
STC	420	425	430	435	440
BSTC	464	470	475	480	485
model test condition	GSM-MH6/132-BHDG380	GSM-MH6/132-BHDG385	GSM-MH6/132-BHDG390	GSM-MH6/132-BHDG395	GSM-MH6/132-BHDG400
STC	380	385	390	395	400
BSTC	420	425	431	436	441
model test condition	GSM-MH6/120-BHDG345	GSM-MH6/120-BHDG350	GSM-MH6/120-BHDG355	GSM-MH6/120-BHDG360	GSM-MH6/120-BHDG365
STC	345	350	355	360	365
BSTC	382	387	392	398	403

Peak power: is the peak power generation watt of the PV module at the highest power generation point.

Standard Test Conditions (STC): (a) spectrum of AM1.5, (b) exposure of 1000W/ m², (c) cell temperature of 25° C and at the correct light angle.

Bifacial Standard Test Conditions (BSTC): (a) spectrum of AM1.5, (b) (1+0.135BIFI) 1000W/ m² irradiation, (c) cell temperature at 25° C and at the correct light angle.

3. Exclusivity and Limitations

A. In accordance with the module warranty description outlined in Section 4 of this Limited Warranty, claims must be within the applicable warranty period in all cases.

B. The Limited Warranty does not apply to PV modules that Guosheng Energy determines to be

- Misuse, abuse, negligence or accidental circumstances.
- Alteration, improper installation or use.
- Non-compliance with Guosheng Energy's user installation and maintenance guidelines.

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- Maintenance or modification by service technicians not approved or authorized by Guosheng Energy.
- Failure caused by equipment surrounding the component.
- Installation and use in special conditions or environments, not in accordance with the product specifications and installation manuals.
- Use for purposes other than power generation.
- Connection with PV modules of other manufacturers or connection with modules of different types or different output power specifications of Guosheng Energy.
- Damage caused by transportation and storage after delivery to the user.
- Scratches, discoloration, mechanical wear and tear, rust, degradation, fading that Guosheng Energy considers to be naturally present and that have no effect on the power generation performance or the mechanical strength of the module, and that occur after shipment.
- Damage caused by overpressure, lightning, flooding, fire, accidental damage or other irresistible and unforeseen natural disasters and other effects beyond the control of Guosheng Energy.

C. The limited warranty does not cover the cost of shipping any returned PV modules and does not cover the cost of re-shipment of repaired or replaced PV modules, or costs associated with the installation, removal or reinstallation of PV modules.

D. The limited warranty will not be redeemed if the type or serial number of the PV module has been replaced, removed, or is illegible.

E. Guosheng Energy shall not be responsible or liable for

Any liability or legal responsibility arising from injury to persons or damage to property, or other loss or injury, including any cause whatsoever, in connection with the modules, including but not limited to defects in the modules, causes of use or installation.

In no event shall Guosheng Energy be liable for incidental, indirect liability for loss of use, profit, revenue, production or special; and Guosheng Energy's cumulative damages or other reimbursement shall not exceed the invoice amount paid by the customer for the affected modules.

4. Warranty fulfillment

A. Warranty claims shall be made in writing, and written requests for warranty claims shall be delivered to (a) the seller, or (b) an authorized component distributor of Guosheng Energy, or (c) directly to Guosheng Energy within twenty (20) days of the date of the

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warranty matter.

B. The written request for warranty claim must be sent by registered mail or courier. The request must include the module's serial number, be accompanied by a copy of the product invoice and purchase contract, and must state "I hereby accept and agree to the limited warranty rights of the crystalline PV module as set forth in clause 6 for assertion through legal, expert appraisal and arbitration channels." The notification shall be accompanied by proof of the date of sale, i.e., the date of purchase of the solar product. Claims that do not meet the deadlines in Article 4, Section C and are incomplete will not be accepted.

C. The right to claim will be forfeited if: a, the customer fails to notify Guosheng Energy or the distributor in writing in accordance with the deadlines in Article 4 A or if the customer discovers or should have discovered the defect within the warranty period and still uses it in violation; b, the customer does not proceed with court or arbitration proceedings within six months after being notified of the claim by Guosheng Energy.

D. If, at the time of receipt of a warranty claim, that type of component is no longer in production, Guosheng Energy reserves the right to provide another type of component (different in size, specification, color, or power) in its place.

E. Repairs, replacements, or additional modules are delivered without replacement or extension of the warranty period.

F. Any component declared or replaced by Guosheng Energy to be defective shall become the property of Guosheng Energy. Defective products shall be returned or disposed of at the customer's expense as instructed by Guosheng Energy. If appropriate, the customer's dealer or distributor will provide advice on handling the claim. If further assistance is required, the customer is required to make the request to Guosheng Energy in writing. Any request for return of PV modules will not be accepted unless approved by Guosheng Energy in advance.

5. Severability

If a provision or clause of this Limited Warranty is invalid, useless or unenforceable for human or environmental applications, such a situation shall not affect the application of all other provisions or clauses of the Limited Warranty, and the application of other provisions or clauses of the Limited Warranty shall be deemed to be severable.

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6. Disputes

Any complaint action by the user in connection with the Limited Warranty, regardless of form, is valid only for a period of six months.

In the event of a warranty claim dispute, Guosheng Energy appoints a first-class international testing agency, Fraunhofer ISE or TÜV, to participate in the determination of the claim. All costs and expenses shall be borne by the losing party (responsible party) unless otherwise stated.

The final right of interpretation of this warranty belongs to Guosheng Energy Co., Ltd
