

PRODUCT AND

PERFORMANCE WARRANTY

APPLIED TO MODULES MANUFACTURED BY MUNDRA SOLAR PV LIMITED (MSPVL) AT MUNDRA, GUJARAT.

1. WARRANTED PRODUCTS

MSPVL PV modules are supplied with limited product and linear performance warranty. Module model numbers covered under this warranty are mentioned in the table below

Sr. No.	Model Name	Sr. No.	Model Name
1	ASP-7-AAA	7	ASP-14-AAA
2	ASP-6-AAA	8	ASM-14-PERC-AAA
3	ASM-7-PERC-AAA	9	ASB-7-AAA
4	ASM-6-PERC-AAA	10	ASB-6-AAA
5	ASM-6-B-PERC-AAA	11	ASB-14-AAA
6	ASM-6-AB-PERC-AAA		

2. LIMITED PRODUCT WARRANTY

Repair, Replacement or Refund

MSPVL PV modules made with 60, 72, or 144 cells have 12 yrs product warranty starting from warranty start date (refer "validity section 13"). If any modules fail to fulfill warranty in this section 2. MSPVL will at its sole discretion either will

- a) Repair the module or replace it; or,
- b) As compensation, will refund the depreciated price of the solar module paid by the customer.

Any type of deterioration in appearance of the product (including any aesthetic defects , strain , rust , spot , scratches, mechanical wear) or any other changes in the product occurs after delivery to the customer do not constitute defects under this limited warranty. These types of changes in solar module do not lead to any deterioration in the operational capabilities of the modules.

In case of glass breakage, claim shall only be enforceable to extent that there was no external cause (natural or manmade) for the breakage. The foregoing remedies shall be MSPVL's sole and exclusive obligation, and the customer's sole and exclusive remedy, for any module's failure to conform to the Limited Warranty in this Section 2, and any repair or replacement shall not extend the warranty period set forth herein. Section 2 of warranty section does not warrant specific power output, it is exclusively covered in section 3 of the linear power warranty.

3. LINEAR POWER/PERFORMANCE WARRANTY-25 YEARS

From the start of defined warranty date, the first year power performance of Poly crystalline PV module is 97.5%, after that from year two (2) till year twenty five (25), the maximum degradation is 0.68 % per year decrease from the nominal power output of the solar module and in the ending of 25th year with the 81.18% of the nominal power tested under STC of 25 °C, 1.5 AM, 1000 W/m2 as mentioned in the PV Module product datasheet. Solar module performance warranty table is attached in "Section 14" of this document.

The first year Power performance of mono crystalline PV module is 97.00% after that from year two (2) till year twenty five (25) the maximum degradation is 0.68% per year from the nominal power output of the solar module, in 25th year ending with the 80.68% nominal power tested under STC of 25 °C, 1.5 AM, 1000 W/m2 as mentioned in the PV Module product datasheet.

The first year Power performance of Bifacial PV module(front side only) is 99.2%, after that from year two (2) till year thirty (30) the degradation is 0.40% per year maximum from the nominal power output of the solar module, in 30th year ending with the 87.6% nominal power tested under STC of 25 °C, 1.5 AM, 1000 W/m2 as mentioned in MSPVL does not give warranty on the power generated from rear side the PV Module product datasheet.

The degradation Rate is $DR = 1.00 - [(PO_{act}) / (PO_n)]$; PO_{act} Actual Power at STC Conditions as mentioned in section 4. PO_n = Nominal Power.

Solar module performance warranty table is attached in "Section 14" of this document for all Poly Crystalline (ASP Series), Mono Crystalline (ASM Series) & Bifacial (ASB Series) PV Modules.

4. LIMITED REMEDY

Above and after the warranty start date as mentioned in section 13 of this document, MSPVL further warrants if within the defined period in Section 3. above any Solar Module power output goes less than the nominal power performance as printed on the on the original product label and the output power warranted in Section 14 Warranted Power (WP) and if such reduction in output power noticed below the WP due to any defect in materials or workmanship under normal application, use and service conditions, MSPVL will remedy such decrease in power, at it's reasonable option by

- a) Repair the defective module or replace the module, or,
- b) Post taking corrective actions , to overcome the reduction in output power, MSPVL to only provide additional module to the customer so that degraded power is compensated by additional modules. It shall be liability of the customer to mount additional PV module at his own cost and expenses

For determining the output power of the solar module, measurements must be based on the STC (Standard Test Conditions) of 1000W/m2 irradiance with cell temperature of 25 °C and Air mass of 1.5AM light spectrum and the measurement shall be in accordance to the IEC 60904 standard and shall account for measurement system error based on the EN 50380 standard. The forgoing remedies shall be MSPVL's sole obligation and the customer's remedy, for any module failure to confirm to the warranty in Section 3 and repair or replacement shall not extend the Warranty period set forth herein.

5. EXCLUSIONS AND LIMITATIONS

In addition to any other exclusion, limitations or conditions set forth in this Limited Warranty, the following exclusions and limitations, inclusive but not limited to, apply hereto:

- a) All warranty claims must be received within the applicable warranty period for this warranty to effective.
- b) This Limited Warranty does not apply to any module which, in MSPVL's sole judgment, has been subjected to
 - Misuse, neglect or accident, tampering, abuse, misuse.
 - Improper handling, transportation or storage.
 - Improper installation or application, alteration.
 - Non-compliance with instructions in the installation manual.
 - Any type of repair or modifications by someone other than authorized service technicians of MSPVL.
 - Installation of solar module in direct contact with the salt water, that is offshore (e.g. platforms) and marine (e.g. boats, piers) applications, or contamination resulting from exceptional exposure to salt water or other chemicals.
 - Fire, Power failure, surges, installation failure, lightning, floods, natural disaster, vandalism, accidental breakage, load of heavy snow, damage or any other cause which are outside control of MSPVL.

Willful misconduct or negligence or other improper acts or omissions of the customer, its employees or agents, or other third parties.

- c) It is responsibility of customer (and / or its forwarding company) to inspect and accept the solar modules supplied by MSPVL. Any claim linked or related to damages in the packaging, like impact on pallets MSPVL will only accept if this occurs during delivery at site itself and if transportation under MSPVL scope. In all other cases, damages should be claimed from the forwarding company or insurance company. The customer has to log such complains within 48 hours of module received at site.
- e) If any solar module serial number has been altered, removed or made illegible, in that case warranty claim will be not be approved by MSPVL.
- f) All modules will be sold only as per data sheet and any criteria outside data sheet will not be covered under limited product or linear power warranty

For warranty to be honored to customer, this serial number of solar module should remain intact and untampered.

Example of Serial Number



6. LIMITATION OF WARRANTY SCOPE

a) Disclaimer

This limited warranty is expressly in place of and ignores all the other direct and indirect warranties including but not limited to warranties of merchantability, title, non-infringement and fitness for particular purpose, use or application, and all other obligations or liabilities on the part of MSPVL, unless such other obligations or liabilities are expressly agreed to in writing, and signed and approved by MSPVL.

b) Limitation of Liability

To the maximum level permitted by the law applicable, MSPVL shall have no responsibility or liability at all for damage or injury to person or property for any other type of loss or injury, results from any cause whatsoever arising out of related to any module including any type of defect in solar module, including without laminations, during using or installation of Solar module. To the maximum extent permitted by applicable law, under no circumstances shall MSPVL be liable for incidental, consequential or special damages, howsoever caused, even if MSPVL has been advised of or reasonably could have foreseen such damages. Loss of use, loss of profits, loss of production and loss of revenues are hereby specifically, and without limitation, excluded to the maximum extent permitted by applicable law. Notwithstanding anything contained elsewhere in this document, MSPVL's aggregate liability, if any, for damages or otherwise shall not exceed the amount paid by the customer for the module that gave rise to the warranty claim.

7. WARRANTY CLAIM SUBMISSION AND VERIFICATION

Report of a warranty case

The report shall include the following information: Name and address of the CUSTOMER/End customer, INSTALLER resp. SELLER. A copy of the invoice with reference to the claimed module serial numbers / module type or purchase agreement and installation agreement. A copy of the installation test report following minimum requirements of IEC 62446 / IEC 60364-6. A copy of the periodical maintenance reports as recommended or required by regional regulations or legal requirements and acceptance protocol of handover after the installation was finished and the system connected to the grid with all relevant measured system data. A copy of the MODULE TYPE and Serial number(s), Quantity of the respective PV-module(s). A copy of the Address of the place of installation of the respective PV-module, in as far as this address differs from the address of CUSTOMER / End customer. A short but clear description of the problem at hand and what is claimed, as well as a short description of the tests which may have already been performed and with which tools, as well as their results.

- a) In particular, regarding a material defect: High quality pictures of the defective PV-module which show the defect including pictures of the system and surrounding environment.
- b) In the case of a low power output: information regarding the PV-generator, the inverter, the circuitry / layout (please see the installation documentation for this which you should have received from your INSTALLER) as well as the pictures of shadowing situation at the location.
- c) The requested warranty performance and reason of claim, etc.

The report of a warranty case is to be addressed to one of the Contact-Addresses of MSPVL, listed as mentioned in section 15 of this document.

Deadline for claim submission: A warranty case is to be reported within 1 weeks after becoming aware of the circumstances which constitute a warranty case. The timely receipt of the report by MSPVL shall be decisive. The deadline is met, if the report is received by MSPVL via fax or email in advance.

8. SEVERABILITY

If a part, provision or clause of this Limited & Linear Warranty, or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such holding shall not affect the validity or enforceability of any other part, provision or clause of this Limited Warranty or its applicability to any other person or circumstance, and to this end such other parts, provisions, clauses or applications of this Limited Warranty shall be treated as severable.

9. TECHNICAL DISPUTES

If any dispute occurs between MSPVL and Customer related to the validity of any claim under the warranty clauses, In this case an ISO 17025 accredited test laboratory which is recognized by MSPVL shall be called upon to judge the claim of customer. Any measurement of solar module will be done under STC (Standard Test Condition) and according to the IEC 60904 standards. All the expenses and fees associated in calling agencies like ISO 17025 accredited laboratories for the judgment of claim will be borne by losing party only. In this section 9 there is nothing contained which can stop one party from bringing any legal suit, action or proceeding against the other party before the courts of India.

10. MISCELLANEOUS

Outside this warranty, customer may have specific legal rights and also have rights which vary from jurisdiction to jurisdiction. This Warranty document does not affect any additional rights the customer may have under mandatory rules of law in its jurisdiction. However, the overall liability of MSPVL under this shall not be more than 100% of the total price paid for any individual module. For incidental or consequential damages some of the jurisdiction does not allow exclusion or limitation of it, as a result of which the limitations or exclusions in this Limited Warranty may not apply to the customer. The replaced module shall become the property of MSPVL. If MSPVL discontinued manufacturing of that size module, MSPVL will replace with similar size and of same Pmax module within the 50 days from registered date of complaint.

11. WARRANTY TRANSFER

This limited warranty is transferable to any other owner of the module in only condition when the modules installed remains at its original location. Any transferee is subject to all the exclusions, limitations and conditions set forth herein.

12. FORCE MAJEURE

This limited or linear warranty is not applicable and MSPVL be not responsible or liable in any way to the customer or any third party for any delay in performance or non-performance and conditions of sale, including but not limited to cases of any acts of god like, volcanic events, Tsunami.

Earthquakes, strikes, war, riots, vandalism, war like conditions, plague or other epidemics, flood, fire and other type situations which are beyond the control of MSPVL. In the event of occurrence of Force Majeure situation, the limited warranty shall be not applicable and will be null and void.

13. VALIDITY

This Limited & Linear warranty applies to modules which are manufactured by MSPVL with production date 01 November, 2016 onward. The warranty start date under this warranty shall be defined as earlier of either:

1. The sales invoice date from when the customer purchased the module or,
2. One year after the date of dispatch from the MSPVL storage facility.

This limited & linear warranty is valid until the revised version issued by the MSPVL. MSPVL reserves the right to revise the warranty conditions without giving any prior notification to the customer.

14. LINEAR POWER PERFORMANCE WARRANTY TABLE

Linear Power/ Performance Warranty-MSPVL					
Year	Warranted Power Performance values of Multi Crystalline Modules (%)	Warranted Power Performance values of Mono Crystalline Modules (%)	Year	Warranted Power Performance values of Multi Crystalline Modules (%)v	Warranty of Mono Crystalline Modules (%)
1	97.50	97.00	14	88.66	88.16
2	96.82	96.32	15	87.98	87.48
3	96.14	95.64	16	87.30	86.80
4	95.46	94.96	17	86.62	86.12
5	94.78	94.28	18	85.94	85.44
6	94.10	93.60	19	85.26	84.76
7	93.42	92.92	20	84.58	84.08
8	92.74	92.24	21	83.90	83.40
9	92.06	91.56	22	83.22	82.72
10	91.38	90.88	23	82.54	82.04
11	90.70	90.20	24	81.86	81.36
12	90.02	89.52	25	81.18	80.68
13	89.34	88.84			

Bifacial Warranty			
Year	Warranty of Bifacial Modules (%)	Year	Warranty of Bifacial Modules (%)
1	99.20	16	93.20
2	98.80	17	92.80
3	98.40	18	92.40
4	98.00	19	92.00
5	97.60	20	91.60
6	97.20	21	91.20
7	96.80	22	90.80
8	96.40	23	90.40
9	96.00	24	90.00
10	95.60	25	89.60
11	95.20	26	89.20
12	94.80	27	88.80
13	94.40	28	88.40
14	94.00	29	88.00
15	93.60	30	87.60