

PV Power Technologies Private Limited

Warranty Policy For Solar Photovoltaic Modules



Introduction:

PV Power Technologies Private Limited is committed to excel in its Assembly of Solar Photovoltaic Modules with high quality of products and its delivery.

We are committed to protect the Environment by prevention of Environmental Pollution around the work space, appropriate to the context of organization and complying with applicable legal regulation and other requirements.

PVPT is a trusted manufacturer of high efficiency Mono crystalline & Polycrystalline 1000VDC & 1500 VDC solar photovoltaic panels in India with a distribution network stretching across the globe. We strongly believe in promoting the application of photovoltaic technology to ensure a sustainable future and bring the benefits of solar power to the world.

Incorporated in January 2008 and having capacity of manufacturing 200MW a year, PVPT has gone strength to strength. Over the years we have supplied more than 500+ MW modules worldwide including countries such as Germany, Italy, Portugal, Belgium, Hungary, Africa and India. Our reputation for high quality, performance and safety has made us the preferred choice for a variety of solar installations and projects globally.

Identifying the different benefits and end user requirements of solar power, PVPT Tech has also ventured into the manufacturing and deployment of solar roof top systems and solar water pumping systems across the country. These have been well received by consumers benefiting from savings in their electricity bills.

Leading our many successes is a dedicated team of environmentally conscious entrepreneurs who wish to ensure a sustainable future. The team consists of experts with diverse backgrounds and rich experience in large-scale manufacturing, research and customer service. Together our mission is to make PVPT one of the largest manufacturers of Solar PV Panels in the world.

PV Power Technologies modules are supplied with limited product and linear performance warranty for the customers installing any of the specified brand models listed below:

Polycrystalline Module -1500VDC:

1. PIL xxxHP (xxx = 315 - 335 in steps of 1, with 72 cells)
2. PIL xxxHP (xxx = 255 - 280 in steps of 1, with 60 cells)
3. PIL xxxHP (xxx = 225 - 250 in steps of 1, with 54 cells)
4. PIL xxxHP (xxx = 200 - 220 in steps of 1, with 48 cells)
5. PIL xxxHP (xxx = 150 - 165 in steps of 1, with 36 cells)

Polycrystalline Module -1000VDC:

1. PIL xxxP (xxx = 300 - 330 in steps of 1, with 72 cells)
2. PIL xxxP (xxx = 250 - 275 in steps of 1, with 60 cells)
3. PIL xxxP (xxx = 225 - 245 in steps of 1, with 54 cells)
4. PIL xxxP (xxx = 200 - 215 in steps of 1, with 48 cells)
5. PIL xxxP (xxx = 150 - 160 in steps of 1, with 36 cells)

Monocrystalline Module -1500VDC:

1. PIL xxxHM (xxx = 380 - 400 in steps of 1, with 72 cells)
2. PIL xxxHM (xxx = 335 - 365 in steps of 1, with 66 cells)
3. PIL xxxHM (xxx = 305 - 330 in steps of 1, with 60 cells)
4. PIL xxxHM (xxx = 270 - 300 in steps of 1, with 54 cells)
4. PIL xxxHM (xxx = 240 - 265 in steps of 1, with 48 cells)
5. PIL xxxHM (xxx = 180 - 200 in steps of 1, with 36 cells)

Monocrystalline Module -1000VDC:

1. PIL xxxM (xxx = 335 - 370 in steps of 1, with 72 cells)
2. PIL xxxM (xxx = 280 - 305 in steps of 1, with 60 cells)
3. PIL xxxM (xxx = 245 - 275 in steps of 1, with 54 cells)
4. PIL xxxM (xxx = 225 - 240 in steps of 1, with 48 cells)
5. PIL xxxM (xxx = 170 - 185 in steps of 1, with 36 cells)

xxx represents output power in Wp

Warranty Start Date

The Warranty Start Date is the date of installation of the Products or one month after the delivery of the Products to the Buyer, whichever date is earlier. PV Power Technologies Pvt. Ltd. ("PVPT") provides the following Limited Warranty to the first purchaser/user of its Photovoltaic Products ("Module"). Warranty is applicable from the date of first sale to the original purchased / user.

1. LIMITED PRODUCT WARRANTY:

The product warranty is to cover defective materials or workmanship impairing the functionality of the modules under standard application, installation and use and service conditions. It is provided by the PVPT. The product guarantee does not cover ordinary wear and tear, scratches, spots, rust, discoloring, or any other natural degradation not impairing the mechanical stability of the module.

PVPT product (modules) have 10 years product warranty starting from the date of sale (invoice date). If during the term of this warranty the module(s) is/are found to be having Manufacturing Defects, then PVPT will, at its sole option (i) repair (ii) replace such module(s) which is /are found to be having Manufacturing Defects with an equivalent Module(s), or (iii) refund the purchase price of the module as measured by the then prevailing price of similar modules or) whichever is lower, provided that the then prevailing price does not exceed the Original Sale Price at which the First purchaser has purchased the Product

PV Power Technologies Private Limited

Warranty Policy For Solar Photovoltaic 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 PVPT'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 and any repair or replacement shall not extend the warranty period set forth herein.

This limited warranty is only for the Product and does not warrant the level of power output. This warranty is subject to Warranty Exclusions and Limitations.

2. LIMITED PERFORMANCE/POWER WARRANTY

PVPT gives the following power output warranty for those of its standard photovoltaic modules that are not explicitly prototypes. If a module performs at less than 90% of the original minimum rated power as shown in the specification sheet within a period of ten (10) years as from the date of sale by PVPT or

PV Power Technologies Degradation Rate			
Year	Year 1	Year 2- 10	Year 11-25
Degradation %	3 %	0.80%	0.8%
Linear %	3%	10%	20%

If a module performs at less than 80% of the original minimum rated power as shown in the specification sheet within a period of twenty five (25) years as from the date of sale (invoice date) by PVPT and provided PVPT . PVPT will sole discretion, use its own equipment under Standard Testing Conditions or use a neutral third party for testing performance of Module(s), whichever agreed by First Purchaser / First User, for which claim has been raised. If the results of such test prove beyond doubt that the Module(s) is/are not providing the warranted percentage of its specified minimum power output during the Term of Warranty, then PVPT shall, at its sole option either (i) repair, (ii) supply similar Module(s) for replacement, or (iii) Post taking corrective actions, to overcome the reduction in output power, PVPT 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. This is subject to Warranty Exclusions and Limitations. Repair or supply of Module(s) shall be performed free of charge only if the Module(s) is / are found to have Manufacturing Defect or short in output proved through the aforesaid test. Since the test(s) is / are performed by consent of First Purchaser / First User, PVPT / Selected Third Party's inspections and tests shall be final and decisive for the existence or non-existence of the defect, non-conformity and/or output shortage. In case the First Purchaser / First User, decides to engage a neutral Third Party to conduct the tests, the cost of conducting such tests shall be paid by the First Purchaser / First User and in case the Manufacturing Defect is proved in such tests, PVPT shall reimburse the cost for the tests paid by the First Purchaser / First User subject to minimum amount which is generally charged for such tests.

3. Exclusions and Limitations :

This limited Warranty does not apply to any Products which have been subject to:

- i) Failure to pay the purchase price towards PVPT Solar or its subsidiaries which have put the module on the market even though (a) the payment was due and (b) the direct customer who has obtained the module from

PV Power Technologies Private Limited

Warranty Policy For Solar Photovoltaic Modules



PVPT or its subsidiary ("Direct Customer") is not entitled to withhold the purchase price or parts of the purchase price. In case that PVPT can reject the claims under this limited Warranty based on this provision, the Buyer can deposit the amount not paid in order to trigger the limited Warranty claims;

- ii) Failure to provide proof of purchase or product information;
- iii) Failure to comply with the requirements of PVPT user manual or rules of use and application for the Products
- iv) Failure to carry out proper operation and maintenance (including but not limited to operation and maintenance requirements requested by PVPT applicable user manual or other applicable local laws and regulations of the place of installation);
- v) Service by service technicians who are not qualified under the relevant law and/or applicable regulations at the place of installation.
- vi) Change, erasure or illegible-made of the Product's type, nameplate or serial number
- vii) Exposure to voltage in excess to the maximum system voltage or power surges
- viii) Defective components in the construction on which the module is mounted
- ix) Exposure to mould discoloration or similar external effects
- x) unauthorized modifications:
 - Operation/maintenance by use of unauthorized spare parts, Application under extreme environmental conditions or rapid changes in such environments resulting in corrosion, oxidation, or affected by chemical products, Other acts beyond PVPT reasonable control (including direct or indirect damage by war, fire, flood, hurricane, volcanic eruption, surface collapse, debris flow, lightning, earthquake, heavy snowfall, hailstone, strong breeze etc.)
 - Defects and/or failures caused by devices and/or parts other than the PV Module(s) or by mounting methods of such devices and/or parts.
- xi) Defects and/or failures caused by defective wiring, installation, or handling
- xii) Defects and/or failures caused by installations not in conformance with PV Module(s) specifications, installation manuals, operation manuals, or labels attached to the PV Module(s)
- xiii) Defects and/or failures caused by unauthorized maintenance, operation or modification
- xiv) Defects and/or failures caused by removal from the original place of instalment
- xv) Defects and/or failures caused by inappropriate handling during transportation or storage
- xvi) Defects and/or failures caused by use on a mobile unit including, but not limited to, vehicles, vessels, etc.
- xvii) Defects and/or failures caused by external accidents such as fire, explosion, and civil disorder
- xviii) Defects and/or failures caused by Moisturization affected junction box(s) terminal(s) due to open junction box cap
- xix) Defects and/or failures caused by Wet junction box/cable/connector(s) due to external water sources.
- xx) Defects and/or failures caused by smoke and/or other pollution, acid rain, etc.
- xxi) Use of the Products in such a manner as to infringe PVPT or any third party's intellectual property rights including but not limited to patents, trademarks
- xxii) Defects and/or failures caused by natural forces, acts of God or force majeure events and other unforeseen circumstances or causes beyond PVPT's reasonable

4. Procedure to Claim Warranty:

Please contact PVPT immediately in writing or by Email to info@pvpowertech.com or to an authorized PVPT sales representative or your nearest PVPT Branch office. For address and other details, please logon to <https://www.pvpowertech.com> . The Warranty could be claimed only by First User or First Purchaser, at one time for one cause, as the case may be and not by both, or, twice. The Warranty Claim Application should be made immediately supported with the corresponding:

- (i) High Resolution images of suspected modules specify area.
- (ii) Photographs of the Module(s) front & rear and installation site surrounding area,
- (iii) Inverter, DCBD, ACDB, Lightening arrestors photograph(s),
- (iv) Serial numbers including barcode photograph(s),
- (v) Date on which the Module(s) have been purchased, original invoice, place of purchase, name of dealer / distributor and details of previous claims made.
- (vi) End user details
- (vii) Site address
- (viii) Contact details of service engineer.

PVPT will not accept any returned panels without a prior lodged complaint. Any false information in the Warranty.

N.B. : If the PV Power Tech support team needs some samples of the suspected panels to come to a final conclusion in a claim, the first user will be responsible for sending the samples to the PV Power Tech Laboratory by their own expenses.

5. Repair, Replacement or Refund Remedy

PV Power post examination of claim will plan repair or replacement or refund or reject the claim depending on claim module status.

- (i) Determine a maintenance plan and repair the defective Products; or
- (ii) Refund the difference value between the actual STC power and the warranty power of the defective products (Difference value = The market price at the moment of raising limited Warranty claims (per watt) * (sum of the remaining theoretical warranty power)
- (iii) Provide free Products to make up for the difference between the actual STC power of defective Products and the warranty power (Difference power = sum of the remaining theoretical warranty power)
- (IV) Replace the defective Products or part thereof by new or remanufactured Products at no charge. The total nominal power of the replaced Products shall not be less than the total remaining theoretical warranty power of the defective Products. PVPT reserves the right to provide similar Products in replacement of the defective Products if the defective Products are discontinued or otherwise unavailable.
- (v) PVPT shall bear all reasonable insurance and transportation charges (except air freight), customs clearance and any other reasonable costs for shipping the replaced Products to the Buyer. The costs and other related expenses for the removal, repack, installation or reinstallation shall remain with the Buyer. Defect Products or end of lifetime Products shall be disposed if legally permissible by the Buyer in accordance with local applicable laws or regulations
- (Vi) All other claims under this limited Warranty against PVPT shall be excluded. Under this limited Warranty, PVPT is not responsible for any special, incidental or consequential damages (including loss of profits, business interruption, loss of power generation, harm to goodwill or business reputation, or delay damages) whether such claims are based in contract, warranty, negligence or strict tort. This exclusion applies to the extent permissible by law, and even if the remedies set forth below herein are deemed to have failed of their essential purpose.
- (vii) PVPT shall not be responsible or liable in any way to the Buyer for any non-performance or delay in PVPT performance under this limited Warranty due to occurrences of force majeure such as war, riots, strikes, unavailability of suitable and sufficient labour, material, or capacity or technical or yield failures

5. MANDATORY REQUIREMENTS OF PV MODULE INSTALLATION AND COMMISSIONING:

Commissioning of power plant to be done by professional developers only and not by any local electrician/technician.

Good cleaning practices regularly with lint free cloth & water, avoiding accumulation of any kind of dusts/dirt on modules. Also ensure that the water on the glass surface is dried properly by the cloth only, and not by atmosphere, otherwise the same will leave unnecessary water stains/impressions on glass, which will be hard to eradicate later.

Avoid any kind of soiling on PV modules. Soiling is divided into two categories, soft soiling which occurs due to air pollution and hard soiling which results from hard dusts on PV modules.

Prevent any sort of vegetative growth obstructing sunlight to reach solar cells.

Provide necessary clearance distance between two modules in a string as well as between the ground surface and the module.

Uniform string lengths in arrays to be maintained to avoid Voc mismatch greater than 3%. If the lengths of parallel connected strings varies and results in Voc mismatch beyond 3%, a concern may arise for generation of additional reverse current due to the disparity in potential. Installation of Imp (Maximum Power Current) binned modules in a particular string before series connection should be a mandatory practice. Don't install modules from different Imp bins in same string to avoid reverse current flow from the module with higher Imp to a module with lower Imp. This may damage junction box and bypass diodes.

Use of Blocking Diodes in Series with individual strings is a good practice to avoid back flow of current to a weaker (shaded) network as well as to prevent fully charged batteries from discharging or draining back through the array at night.

Use of DCDB for controls the DC power from Solar Panels and with having necessary surge protection device (SPD) and fuses to protect the solar panels strings and solar inverter from any type of damage. All components used are in accordance with per IEC 61643, IEC 60947.

Use of exact nuts, bolts and washers as per mounting hole dimensions. Use M6 hardware for 6.5 mm X 10 mm mounting hole (PV Power Tech standard). Don't drill additional mounting holes on modules without consent from supplier/manufacturer.

Ensure tight connections of junction box connectors to avoid sparks and fire. Do not disconnect connectors under load. Ensure proper grounding of inverters to avoid any stray currents on frames.

Use adequate quantity of Lightning arrestors in site to protect modules and components from sudden lightning/thunder. Use of Surge Protections wherever needed.

Limit the number of parallel connected strings as per inverter capacity.

The installation site should be restricted.

A big caution board showing "DO NOT THROW SOLID PARTICLES IN THIS AREA" should be displayed in the surrounding of the site (in local languages).

6. GOVERNING LAWS:

PV POWER TECHNOLOGIES PVT.LTD.

PV Power Technologies Private Limited

Warranty Policy For Solar Photovoltaic Modules



Any claim or dispute arising under or in connection with this warranty certificate must be brought excluding in the court of Mumbai, India and warranty herein shall be governed by Indian Law, unless otherwise agreed between the parties and specifically mentioned in the purchase order or the Supply Agreement.

If any part, provision or clause of this Limited warranty is held to be invalid, void, or unenforceable due to any particular national or international legislation, all other parts, clause or applications shall remain in effect and valid.

The limited warranty set forth herein is expressly in lieu of and excludes all other express or implied warranties including, but not limited to, the warranties of merchantability and fitness for a particular purpose and all other obligations or liabilities on the part of PVPT, unless such other warranties, obligations or liabilities are expressly agreed to in writing by PVPT.

PVPT shall have no responsibility or liability whatsoever for damages or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or relating to the PV module(s) including, without limitation, any defects and/or failures in the PV module(s) or from use or installation.

PVPT shall not be liable under any circumstances for any incidental, indirect, consequential or special damages, howsoever caused. In no event shall PVPT's aggregate liability exceed the value of the PV module(s) which is the subject of a claim or dispute. Some jurisdictions do not allow limitations on warranties or exclusions or limitation of damages.

Thank you
PV Power Technologies Private Limited