

File No. 313-12/5/2025-S AND QC
Ministry of New & Renewable Energy
(Standards & Quality Control Division)

Dated: 13th August 2025

Frequently Asked Questions (FAQs) on Guidelines for series approval of SPV Modules for conducting testing in Test Labs for implementation of Solar Systems, Devices and Components Goods Order, 2025

Question 1: What sequence/method of testing is to follow for multiple bins of power classes?

Answer: For qualification of multiple bins of power classes within the boundaries given in IEC TS 62915 at least 2 modules each, from the lower end, median and higher end power class shall be used for testing. If median power class does not exist the next higher class shall be used. If qualification of a single power class shall be extended to further bins of power classes within the boundaries given in IEC TS 62915 (then at least 2 modules each, from the lower end and higher end power class shall be used for label verification (Gate No.1). If a power class is extended only towards higher (or lower) bins, then modules only from the higher (or lower) bins, respectively, shall be used for verification of rated label values.

bins of power classes: power (typically maximum power) sorting criteria from the PV module manufacturer

Question 2: Which standard/test to follow for measurement of hysteresis loss for high capacitance PV module?

Answer: For IV measurement of high capacitance PV module hysteresis loss need to minimize, as per IEC 60904-1:2020 hysteresis shall less than 0.5%. Or the following results shall be reported for an investigation of the high capacitance of PV module as per IEC 60904-1:2020

- dI/dt and dV/dt for I_{Pmax} and V_{Pmax} , errcap, etc.

Question 3: What is the number of samples required for testing as per Indian Standards IS 14286: 2023?

Answer: A total twelve modules shall be taken at random from a production batch or batches, in accordance with the procedure given in IS 14286. The modules shall have been manufactured from specified materials and components in accordance with the relevant drawings and process sheets and have been subjected to the manufacturer's normal quality control and production acceptance procedures. The modules shall be complete in every detail and shall be accompanied by the manufacturer's handling, mounting and connection instructions, including the maximum permissible system voltage. The modules should contain the bypass diode wherever applicable. In case of the modules with sealed junction box the client should provide one extra module having access to the diode for conducting the bypass diode test.

Question 4: What is the number of samples required for testing as per Indian Standards IS/IEC 61730-2: 2023?

Answer: The selection of sample should be as per clause 6 of IS/IEC 61730-2: 2023. All these modules should fulfil the requirement as stated above for IS 14286. A minimum of 10 PV modules and two unframed PV modules are used for safety testing (plus spares as desired). In order to prove reduction of Pollution Degree to PD 1, one additional PV module is required. If tests of Sequence F are performed in parallel, between one and three additional modules are required.

Question 5: What is the number of samples required for testing as per Indian Standards IS/IEC 61730-1: 2023?

Answer: No additional sample is required to submit for the testing of this standard since this refers to Requirements for Construction, which can be done by samples submitted for testing of IS/IEC 61730-2: 2023.

Question 6: Which will be the lead model in family of modules?

Highest capacity Module will be lead modal in the family of modules intended to be covered and which is being tested also.