

SEMI PV86-1018

SPECIFICATION FOR CRYSTALLINE SILICON PHOTOVOLTAIC MODULE DIMENSIONS

This Standard was technically approved by the Photovoltaic Global Technical Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on July 6, 2018. Available at www.semiviews.org and www.semi.org in October 2018.

1 Purpose

1.1 The purpose of this Standard is to standardize dimensions of crystalline silicon photovoltaic (PV) modules and specifications of mounting holes.

2 Scope

2.1 This Specification defines size of crystalline silicon PV modules, location of mounting holes and their sizes.

2.2 This Specification applies to crystalline silicon PV modules with 60 and 72 solar cells (system voltage ≤ 1500 V, recommend solar cell size with $156.75 \text{ mm} \pm 0.25 \text{ mm}$). The creepage distances of these modules meet the requirement of pollution level 1 or pollution level 2 material items in IEC 61730-1.

2.3 The direction of cell string is parallel to the long side of modules, the schematic diagram of cell strings in the crystalline silicon PV modules is as below in Appendix 1.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Limitations

3.1 This Specification is not applicable to bifacial PV modules and double glass PV modules.

4 Referenced Standards and Documents

4.1 IEC Standard¹

IEC 61730-1 — Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction

4.2 ISO Standard²

ISO 2768-1 — General Tolerances – Part 1: Tolerances for Linear and Angular Dimensions without Individual Tolerance Indications

NOTICE: Unless otherwise indicated, all documents cited shall be the latest published versions.

5 Terminology

5.1 Refer to the SEMI Standards Compilation of Terms (COTs) for a list of the current Abbreviations, Acronyms, Definitions, and Symbols.

5.2 Definitions

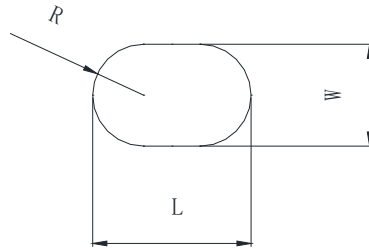
5.2.1 *module dimension* — module dimension refers to the length and the width of the photovoltaic modules.

5.2.2 *mounting hole* — mounting hole is used to fix photovoltaic modules to the bracket holes.

5.2.3 *size of mounting holes* — the dimensions of mounting holes are the length, width and radius of the arc. The schematic diagram is in Figure 1 below.

¹ International Electrotechnical Commission, 3 rue de Varembe, Case Postale 131, CH-1211 Geneva 20, Switzerland; Telephone: +41.22.919.02.11, Fax: +41.22.919.03.00, <http://www.iec.ch>

² International Organization for Standardization, ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland; Telephone: +41.22.749.01.11, <http://www.iso.org>



- #1 L-the length of mounting holes.
- #2 W-the width of mounting holes.
- #3 R-the radius of arc.

Figure 1
The Schematic Diagram of the Mounting Holes Dimensions

5.2.4 *position of mounting holes* — positions of mounting holes are indicated by the distances along the longer side and shorter side of the PV modules, which are shown in Figure 2 below.

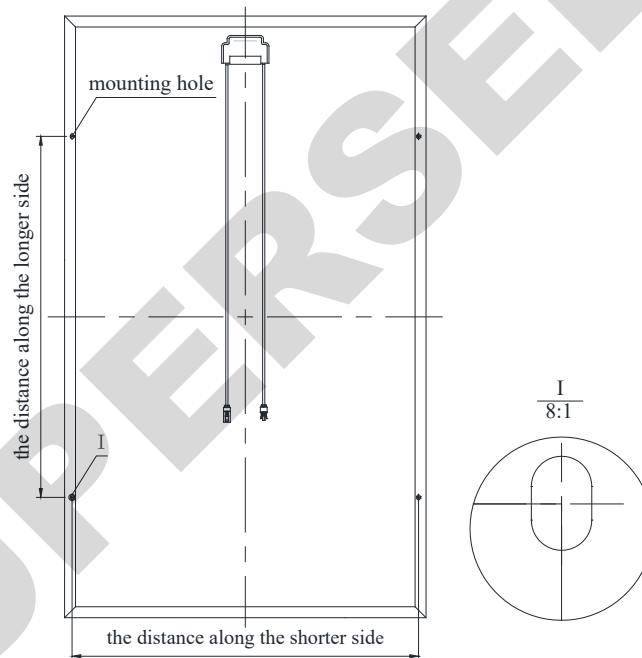


Figure 2
The Schematic Diagram of the Mounting Hole Positions

6 Test Methods

6.1 None.

7 Ordering Information

7.1 The following order information should be included: type, certification, power, specification.