



Certificate of Compliance

Certificate: 80009210

Master Contract: 600356

Project: 80009210

Date Issued: 2019-07-05

Issued to: Hyundai Energy Solutions Co., LTD.
55, Bundang-ro, Bundang-gu
Seongnam-si, Gyeonggi-do, 13591
KOREA
Attention: Kuyujin Sim

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by: Daphane Flemings

PRODUCTS

CLASS 5311 10 POWER SUPPLIES - Photovoltaic Modules and Panels

CLASS 5311 90 POWER SUPPLIES - Photovoltaic Modules and Panels (Certified to U.S. Standards)

Photovoltaic Modules with maximum system voltage of 1000 V dc or 1500 V and with Fire Performance of Type 1, Model Series:

HiD-SxxxRG- Series

“HiD-SxxxRG”, where ‘xxx’ is the output power in W, from 290 to 310, may be followed by "BK" for Black.

Electrical Ratings -

HiD-SxxxRG-Mono-crystalline Versions

Model	Open Circuit Voltage at STC, (V dc)	Rated Voltage at STC, (V dc)	Rated Current at STC, (A dc)	Short Circuit Current at STC, (A dc)	Rated Maximum Power at STC, (Watts)
HiD-S310RG-Mono	40.3	33.1	9.45	9.94	310



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HiD-S305RG-Mono	40.1	32.8	9.38	9.90	305
HiD-S300RG-Mono	40.0	32.6	9.31	9.83	300
HiD-S295RG-Mono	39.8	32.3	9.25	9.78	295
HiD-S290RG-Mono	39.6	31.9	9.20	9.75	290

Notes:

1. Rated electrical characteristics are within +/-10% of measured values at Standard Test Conditions of 100 mW/cm² irradiance, AM 1.5 spectrum, and cell temperature of 25°C.
2. Hyundai Fire Performance Type 1.

APPLICABLE REQUIREMENTS

ULC/ORD- C1703-01 - Flat-Plate Photovoltaic Modules and Panels
UL 1703-3rd Edition - Flat-Plate Photovoltaic Modules and Panels

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Nameplate adhesive label material approval information:

Pressure-sensitive labels of the permanent type that are secured by adhesive shall be CSA/UL approved labels that complies with CSA C22.2 No. 0.15 or UL 969 and suitable for the mounting surface, temperature, and environment.

The following markings appear on the enclosure by silk-screening, permanent ink stamping, on adhesive labels that appear on the CSA List of Accepted Adhesive Nameplates, or by other permanent method:



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1. Listee's name and/or CSA Master Contract number "600356";
2. Model designation;
3. Complete electrical ratings (as per product description above);
4. Date code or date-traceable serial number;
5. The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US, or with adjacent indicator 'US' for US only, or without either indicator for Canada only;
6. The output power wiring leads, connector, or other connection means of a module or panel are identified with one of the following marking statements: "+" and "-" or "POS" and "NEG" or "POSITIVE" and "NEGATIVE";
7. The following marking is provided near the points where field connections will be made, and located so that it will be readily visible during installation: "For field connections, use No. 14 AWG wires insulated for a minimum of 90°C";
8. The module is marked, at or adjacent to the output terminals, with the statement "Use copper wire only", "CU only", or the equivalent;
9. The panel is marked relative to the maximum electrical rating of an acceptable series fuse (for protection against back feed): 25 A; voltage rating matching the maximum installed system voltage determined by system design (max. 1500 V dc);
10. Module Fire Performance: Type 1;
11. System Fire Class A Rating: See Installation Instructions for Installation Requirements to Achieve a Specified System Fire Class Rating with this Product.
12. Installation and Assembly Instructions: The panel is supplied with installation instructions describing the methods of electrical and mechanical installation and the electrical ratings of the panel. When the fire rating is dependent upon a specific mounting structure, specific spacings, or specific means of attachment to the roof or structure, details of the specific parameter or parameters are included in the instructions.
 - (a) The electrical installation instructions include a detailed description of the wiring method to be used in accordance with the National Electrical Code. This description includes:
 - (i) The size, type, and temperature rating of the conductors to be used;
 - (ii) The type of overcurrent protection to be used;
 - (iii) The minimum and maximum cable diameters when the wiring method is cable.
 - (b) The mechanical installation instructions for roof mounting include:
 - (i) A statement indicating the minimum mechanical means to be used for securement of the module or panel to the roof;



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- (ii) The System Fire Class Rating of the module or panel in a mounting system in combination with a roof covering complete with requirements to achieve the specified System Fire Class Rating;
 - (iii) Indication of any module mounting system limitations on inclination required to maintain a specific System Fire Class Rating, Steep Slope 5/12 & Low Slope 1/2 /12.
- (c) The electrical ratings include following statement or the equivalent: "The electrical characteristics are within ± 10 percent of the indicated values of ISC, VOC, and Pmax under standard test conditions (irradiance of 100 mW/cm², AM 1.5 spectrum, and a cell temperature of 25°C (77°F))."
- Exception: The tolerance may be either smaller than ± 10 percent or omitted, provided the values measured during the production line tests are:
- (i) Within a tolerance indicated in the instructions when a smaller tolerance is indicated, or
 - (ii) The same as the values indicated in the instructions when the tolerance is omitted.
- (d) The installation instructions include a statement advising that artificially concentrated sunlight shall not be directed on the module or panel.
- (e) "Under normal conditions, a photovoltaic module is likely to experience conditions that produce more current and/or voltage than reported at standard test conditions. Accordingly, the values of ISC and VOC marked on this module should be multiplied by a factor of 1.25 when determining component voltage ratings, conductor ampacities, fuse sizes, and size of controls connected to the PV output. Refer to Section 690-8 of the National Electrical Code for an additional multiplying factor of 125 percent (80 percent de-rating) which may be applicable."



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80009210	2019-07-05	Original Multiple Listing Certificate.

MODEL COMPARISON

Submittor/SunPower Corporation

SPT-xxx-Mono(BK)

Listee/Hyundai Energy Solutions Co., Ltd.

HiD-SxxxRG-Mono(BK)