



Certificate of Compliance

Certificate: 80012441

Master Contract: 272401

Project: 80032329

Date Issued: 2020-08-31

Issued to: Hansol Technics Co., Ltd.
140 Gwahaksaneop 1-ro
Oksan-myeon Heungdeok-gu
Cheongju-si, Chungchongbuk-do 363-911
SOUTH KOREA
Attention: Yeong-Jin NA

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: Victor Wu
Victor Wu

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 Fire class (Canada): Class C, Fire Performance (USA) Type 1, maximum system voltage of 1500 V dc, model series: HSxxxUB-JH2 (xxx=315-335, in steps of 5), Fuse rating 20A.

Photovoltaic modules with Fire class (Canada): Class C, Fire Performance (USA) Type 1, maximum system voltage of 1500 V dc, model series: HSxxxUD-JH2 (xxx=375-405, in steps of 5), Fuse rating 20A.

Photovoltaic modules with Fire class (Canada): Class C, Fire Performance (USA) Type 1, maximum system voltage of 1500 V dc, model series: HSxxxUE-JH2 (xxx=405-430, in steps of 5), Fuse rating 20A.

Photovoltaic modules with Fire class (Canada): Class C, Fire Performance (USA) Type 1, maximum system voltage of 1500 V dc, model series: HSxxxUB-HH2 (xxx=315-335, in steps of 5), Fuse rating 20A.

Photovoltaic modules with Fire class (Canada): Class C, Fire Performance (USA) Type 1, maximum system voltage of 1500 V dc, model series: HSxxxUD-HH2 (xxx=375-405, in steps of 5), Fuse rating 20A.

Photovoltaic modules with Fire class (Canada): Class C, Fire Performance (USA) Type 1, maximum system voltage of 1500 V dc, model series: HSxxxUE-HH2 (xxx=405-430, in steps of 5), Fuse rating 20A.

Notes:



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- 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, NOCT: 46+/-2°C.
- The operating ambient temperature of these devices may exceed 40C at full load for all wire sizes if it is determined suitable in the field use application.

Model	Open Circuit Voltage at STC (V dc)	Short Circuit Current at STC (A dc)	Rated Voltage at STC (V dc)	Rated Current at STC (A dc)	Rated Maximum Power at STC (Watts)
HSxxxUB-JH2 (xxx=315-335, in steps of 5)					
HS315UB-JH2	40.4±3%	9.82±3%	34.3	9.19	315±3%
HS320UB-JH2	40.6±3%	9.91±3%	34.5	9.28	320±3%
HS325UB-JH2	40.8±3%	10.00 ±3%	34.7	9.37	325±3%
HS330UB-JH2	41.0±3%	10.09 ±3%	34.9	9.46	330±3%
HS335UB-JH2	41.2±3%	10.18±3%	35.1	9.55	335±3%
HSxxxUD-JH2 (xxx=375-405, in steps of 5)					
HS375UD-JH2	47.7±3%	9.91±3%	40.1	9.36	375±3%
HS380UD-JH2	47.9±3%	9.98±3%	40.3	9.43	380±3%
HS385UD-JH2	48.1±3%	10.05±3%	40.5	9.50	385±3%
HS390UD-JH2	48.3±3%	10.13±3%	40.7	9.58	390±3%
HS395UD-JH2	48.5±3%	10.21±3%	40.9	9.66	395±3%
HS400UD-JH2	48.7±3%	10.29±3%	41.1	9.74	400±3%
HS405UD-JH2	48.9±3%	10.36±3%	41.3	9.81	405±3%
HSxxxUE-JH2 (xxx=405-430, in steps of 5)					
HS405UE-JH2	52.4±3%	9.90±3%	45.3	8.95	405±3%
HS410UE-JH2	52.6±3%	9.97±3%	45.5	9.02	410±3%
HS415UE-JH2	52.8±3%	10.04±3%	45.7	9.09	415±3%
HS420UE-JH2	53.0±3%	10.11±3%	45.9	9.16	420±3%
HS425UE-JH2	53.2±3%	10.17±3%	46.1	9.22	425±3%
HS430UE-JH2	53.4±3%	10.24±3%	46.3	9.29	430±3%
HSxxxUB-HH2 (xxx=315-335, in steps of 5)					
HS315UB-HH2	40.8±3%	9.68±3%	34.7	9.08	315±3%
HS320UB-HH2	41.0±3%	9.77±3%	34.9	9.17	320±3%
HS325UB-HH2	41.2±3%	9.86±3%	35.1	9.26	325±3%
HS330UB-HH2	41.4±3%	9.95±3%	35.3	9.35	330±3%
HS335UB-HH2	41.6±3%	10.04±3%	35.5	9.44	335±3%
HSxxxUD-HH2 (xxx=375-405, in steps of 5)					
HS375UD-HH2	48.1±3%	9.78±3%	40.5	9.26	375±3%
HS380UD-HH2	48.3±3%	9.85±3%	40.7	9.33	380±3%
HS385UD-HH2	48.5±3%	9.93±3%	40.9	9.41	385±3%
HS390UD-HH2	48.7±3%	10.01±3%	41.1	9.49	390±3%
HS395UD-HH2	48.9±3%	10.09±3%	41.3	9.57	395±3%
HS400UD-HH2	49.1±3%	10.16±3%	41.5	9.64	400±3%



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Model	Open Circuit Voltage at STC (V dc)	Short Circuit Current at STC (A dc)	Rated Voltage at STC (V dc)	Rated Current at STC (A dc)	Rated Maximum Power at STC (Watts)
HS405UD-HH2	49.3±3%	10.24±3%	41.7	9.72	405±3%
HSxxxUE-HH2 (xxx=405-430, in steps of 5)					
HS405UE-HH2	52.8±3%	9.79±3%	45.7	8.87	405±3%
HS410UE-HH2	53.0±3%	9.86±3%	45.9	8.94	410±3%
HS415UE-HH2	53.2±3%	9.93±3%	46.1	9.01	415±3%
HS420UE-HH2	53.4±3%	10.00±3%	46.3	9.08	420±3%
HS425UE-HH2	53.6±3%	10.07±3%	46.5	9.15	425±3%
HS430UE-HH2	53.8±3%	10.14±3%	46.7	9.22	430±3%

APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No. 61730-1:11 Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction
- CAN/CSA-C22.2 No. 61730-2:11 Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing
- UL 61730-1:2017 Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction
- UL 61730-2:2017 Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing



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
80032329	2020-08-31	Update to report 80012441 to: (1) Add alternative cell, manufactured by Shinsung E&G Co., Ltd., type SH-S5P; (2) Add alternative encapsulation combination, manufactured by Hanwha Advanced materials, type HEP-02T above cells and type HEP-02 below cells; (3) Add alternative junction box, manufactured by QC Solar (Suzhou) Corporation, type 161621; (4) Add alternative cell interconnector manufacturer, Shanghai SunBy Solar Technology Co., Ltd.; (5) Add alternative inter-string connector manufacturer, Shanghai SunBy Solar Technology Co., Ltd.; (6) Add alternative frame manufacturer, ALUKO; (7) Correct the overall dimension numbers of series HSxxxUD-HH2; (8) Add extension models HS335UB-JH2, HS400UD-JH2, HS405UD-JH2, HS335UB-HH2, HS400UD-HH2 and HS405UD-HH2; (9) Correct the electrical rated parameters of HH2 series models.
80032330	2020-02-24	Update to report 80012441 to correct overall dimension numbers of series HSxxxUB-HH2, HSxxxUD-HH2 and HSxxxUE-HH2.
80027899	2019-12-13	Update to report 80012441 to include model series HSxxxUB-HH2, HSxxxUD-HH2 and HSxxxUE-HH2.
80012441	2019-08-02	Original certificate, full investigation for model series HSxxxUB-JH2, HSxxxUD-JH2 and HSxxxUE-JH2.