

Certificate of Compliance

Certificate: 2454077

Master Contract: 253773

Project: 2454077

Date Issued: September 6, 2011

Issued to: GermanSolar AG
Am Seegraben 9-10
D-03051 Cottbus
GERMANY

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: Jocelyn Jens
Product Group Coordinator

Authorized by: Lindsay Clark
Operations Manager

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 600 V dc and Class C fire class rating, Model Series GSP6-XXX and GSM6-XXX, where 'XXX' is the power output from 245 W to 295 W (72 cell series) and 200 W to 240 W (60 cell series); in 5 W increments, with the following electrical ratings respectively, typical at 270/220 W @ Standard Test Condition (STC):

<u>Models:</u>	<u>GSP6-XXX</u>	<u>GSM6-XXX</u>
Open Circuit Voltage (Voc):	43.99/36.72 V	43.99/36.10 V
Short Circuit Current (Isc):	8.42/7.87 A	8.42/8.00 A
Operating Voltage (Vpmax):	34.27/29.82 V	34.27/29.57 V
Current at Operating Voltage (Ipmax):	7.88/7.38 A	7.88/7.44 A

Notes: Rated electrical characteristics are within +/-10% of measured values at Standard Test Conditions of 100 mW/cm² irradiance, AM 1.5 spectrum, and 25°C.



APPLICABLE REQUIREMENTS

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

MARKINGS

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:

1. Submitter's name and/or CSA Master Contract number "253773";
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. 12AWG 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): 15 A, voltage rating matching the maximum installed system voltage determined by system design (100-600 V dc);
10. The fire rating: Class C;
11. 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;
 - ii) A statement that the assembly is to be mounted over a fire resistant roof covering rated for the application, and
 - (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))."



CSA INTERNATIONAL

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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 derating) 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
2454077	September 6, 2011	Multiple Listing for Jumao Photonics (Xiamen) Co., Ltd. / GermanSolar AG, Model Series JMP-XXXW-M6-G and JMP-XXXW-S6-G / GSP6-XXX and GSM6-XXX (Alt. File No. 253773, Form B)

Multiple Listing Project No	Listee Models	Submittor Models	Submittor Project No
2454077	GSP6-XXX and GSM6-XXX	JMP-XXXW-M6-G and JMP-XXXW-S6-G	2178483 (2422065)