

## **Certificate of Compliance**

Certificate: 2284121 Master Contract: 249143

**Project:** 2725910 **Date Issued:** May 15, 2014

**Issued to:** Canadian Solar Inc

545 Speedvale Ave West Guelph, ON N1K 1E6

Canada

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.



Brý Aggarwal

**Issued by:** Brij Aggarwal, P.Eng.

## **PRODUCTS**

**CLASS 5311 10** - POWER SUPPLIES - Photovoltaic Modules and Panels

CLASS 5311 90 - POWER SUPPLIES - Photovoltaic Modules and Panels - Certified to US

Standards

Photovoltaic Modules with maximum system voltage of 600 V dc or 1000 V dc and Type 1 module fire performance, Model Series CS6X-XXXP, where 'XXX' is the power output from 250 W to 330 W with the following electrical ratings typical at 305 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	44.8 V
Short Circuit Current (Isc):	8.97 A
Operating Voltage (Vpmax):	36.3 V
Current at Operating Voltage (Ipmax):	8.41 A

Photovoltaic Modules with maximum system voltage of 600 V dc or 1000 V dc and Type 1 module fire performance, Model Series CS6X-XXXM, where 'XXX' is the power output from 260 W to 330 W with the following electrical ratings typical at 330 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	45.3 V
Short Circuit Current (Isc):	8.95 A
Operating Voltage (Vpmax):	36.7 V
Current at Operating Voltage (Ipmax):	8.44 A



**Project:** 2725910 **Date Issued:** May 15, 2014

Photovoltaic Modules with maximum system voltage of 600 V dc or 1000 V dc and Type 1 module fire performance, Model Series CS6P-XXXP, CS6P-XXXM, CS6P-XXXPX and CS6P-XXXMX where 'XXX' is the power output from 200 W to 275 W with the following electrical ratings typical at 260 W for CS6P-XXXP/CS6P-XXXMX series respectively @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	37.5/37.8 V
Short Circuit Current (Isc):	9.12/8.99 A
Operating Voltage (Vpmax):	30.4/30.7 V
Current at Operating Voltage (Ipmax):	8.56/8.48 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6P-XXXPT where 'XXX' is the power output from 200 W to 260 W with the following electrical ratings typical at 260 W for CS6P-XXXPT series respectively @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	37.5 V
Short Circuit Current (Isc):	9.12 A
Operating Voltage (Vpmax):	30.4 V
Current at Operating Voltage (Ipmax):	8.56 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5P-XXXP; where 'XXX' is the power output from 215 W to 260 W with the following electrical ratings typical at 245 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	59.0 V
Short Circuit Current (Isc):	5.47 A
Operating Voltage (Vpmax):	47.9 V
Current at Operating Voltage (Ipmax):	5.11 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5A-XXXM, CS5A-XXXM-L and CS5A-XXXMX, where 'XXX' is the power output from 170 W to 210 W and L denotes the laminate (without the frame) with the following electrical ratings typical at 210 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	45.6 V
Short Circuit Current (Isc):	5.90 A
Operating Voltage (Vpmax):	38.1 V
Current at Operating Voltage (Ipmax):	5.51 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5A-XXXP, where 'XXX' is the power output from 165 W to 195 W with the following electrical ratings typical at 180 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc): 44.2 V
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**Project:** 2725910 **Date Issued:** May 15, 2014

Short Circuit Current (Isc):	5.41 A
Operating Voltage (Vpmax):	35.7 V
Current at Operating Voltage (Ipmax):	5.04 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5T-XXXM, where 'XXX' is the power output from 130 W to 150 W with the following electrical ratings typical at 150 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	37.1 V
Short Circuit Current (Isc):	5.40 A
Operating Voltage (Vpmax):	30.1 V
Current at Operating Voltage (Ipmax):	4.99 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6A-XXXP and CS6A-XXXPX, where 'XXX' is the power output from 160 W to 210 W with the following electrical ratings typical at 210 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	30.0 V
Short Circuit Current (Isc):	9.19 A
Operating Voltage (Vpmax):	24.4 V
Current at Operating Voltage (Ipmax):	8.63 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5E-XXXM, where 'XXX' is the power output from 20 W to 25 W with the following electrical ratings typical at 25 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.6 V
Short Circuit Current (Isc):	1.43 A
Operating Voltage (Vpmax):	18.7 V
Current at Operating Voltage (Ipmax):	1.34 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5E-XXXP, where 'XXX' is the power output from 20 W to 24 W with the following electrical ratings typical at 24 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.2 V
Short Circuit Current (Isc):	1.43 A
Operating Voltage (Vpmax):	18.2 V
Current at Operating Voltage (Ipmax):	1.32 A



**Project:** 2725910 **Date Issued:** May 15, 2014

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5H-XXXM, where 'XXX' is the power output from 43W to 50W with the following electrical ratings typical at 50W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.6 V
Short Circuit Current (Isc):	2.86A
Operating Voltage (Vpmax):	18.7 V
Current at Operating Voltage (Ipmax):	2.68 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5H-XXXP, where 'XXX' is the power output from 43W to 50W with the following electrical ratings typical at 50W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.5 V
Short Circuit Current (Isc):	2.90A
Operating Voltage (Vpmax):	18.5V
Current at Operating Voltage (Ipmax):	2.70 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5C-XXXM, where 'XXX' is the power output from 85W to 100 W with the following electrical ratings typical at 100 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.5V
Short Circuit Current (Isc):	5.74 A
Operating Voltage (Vpmax):	18.5 V
Current at Operating Voltage (Ipmax):	5.39 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5C-XXXP, where 'XXX' is the power output from 80 W to 95 W with the following electrical ratings typical at 95 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.2V
Short Circuit Current (Isc):	5.61 A
Operating Voltage (Vpmax):	18.1 V
Current at Operating Voltage (Ipmax):	5.25 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6F-XXXM, where 'XXX' is the power output from 30W to 40W with the following electrical ratings typical at 40W @ Standard Test Condition (STC):

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ĺ	Open Circuit V	oltage (Voc):		22.8 V
ĺ	Short Circuit C	urrent (Isc):		2.28 A



**Project:** 2725910 **Date Issued:** May 15, 2014

Operating Voltage (Vpmax):	18.6 V
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Current at Operating Voltage (Ipmax):	2.13 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6F-XXXP, where 'XXX' is the power output from 30W to 40W with the following electrical ratings typical at 40W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.6 V
Short Circuit Current (Isc):	2.32 A
Operating Voltage (Vpmax):	18.4 V
Current at Operating Voltage (Ipmax):	2.17 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6H-XXXM, where 'XXX' is the power output from 20W to 26W with the following electrical ratings typical at 26W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.7 V
Short Circuit Current (Isc):	1.5 A
Operating Voltage (Vpmax):	18.4 V
Current at Operating Voltage (Ipmax):	1.41 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6H-XXXP, where 'XXX' is the power output from 20 W to 26 W with the following electrical ratings typical at 26 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.5 V
Short Circuit Current (Isc):	1.52 A
Operating Voltage (Vpmax):	18.2 V
Current at Operating Voltage (Ipmax):	1.43A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6E-XXXM, where 'XXX' is the power output from 45 W to 60 W with the following electrical ratings typical at 60 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.8 V
Short Circuit Current (Isc):	3.42 A
Operating Voltage (Vpmax):	18.6 V
Current at Operating Voltage (Ipmax):	3.23 A



**Project:** 2725910 **Date Issued:** May 15, 2014

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6E-XXXP, where 'XXX' is the power output from 45 W to 60 W with the following electrical ratings typical at 60 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.6 V
Short Circuit Current (Isc):	3.47 A
Operating Voltage (Vpmax):	18.4 V
Current at Operating Voltage (Ipmax):	3.26 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6D-XXXM, where 'XXX' is the power output from 60 W to 75 W with the following electrical ratings typical at 75 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.5 V
Short Circuit Current (Isc):	4.37 A
Operating Voltage (Vpmax):	18.3 V
Current at Operating Voltage (Ipmax):	4.11 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6D-XXXP, where 'XXX' is the power output from 60 W to 75 W with the following electrical ratings typical at 75 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.3 V
Short Circuit Current (Isc):	4.43 A
Operating Voltage (Vpmax):	18.1 V
Current at Operating Voltage (Ipmax):	4.15 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6C-XXXM, where 'XXX' is the power output from 120 W to 150 W with the following electrical ratings typical at 145 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.4 V
Short Circuit Current (Isc):	8.52 A
Operating Voltage (Vpmax):	18.1 V
Current at Operating Voltage (Ipmax):	8.01 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6C-XXXP, where 'XXX' is the power output from 120 W to 150 W with the following electrical ratings typical at 150 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	22.3 V
	8.87 A



**Project:** 2725910 **Date Issued:** May 15, 2014

Operating Voltage (Vpmax):	18.1 V
Current at Operating Voltage (Ipmax):	8.30 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6X-XXXPM, where 'XXX' is the power output from 290 W to 335 W with the following electrical ratings typical at 335 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	45.8 V
Short Circuit Current (Isc):	9.54 A
Operating Voltage (Vpmax):	37.4 V
Current at Operating Voltage (Ipmax):	8.96 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6P-XXXPM, where 'XXX' is the power output from 225 W to 275 W with the following electrical ratings typical at 270 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	37.9 V
Short Circuit Current (Isc):	9.32 A
Operating Voltage (Vpmax):	30.8 V
Current at Operating Voltage (Ipmax):	8.75 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6P-XXXMM, where 'XXX' is the power output from 225 W to 275 W with the following electrical ratings typical at 275 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	38.3 V
Short Circuit Current (Isc):	9.31 A
Operating Voltage (Vpmax):	31.3V
Current at Operating Voltage (Ipmax):	8.80 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6A-XXXPM, where 'XXX' is the power output from 175 W to 220 W with the following electrical ratings typical at 220 W @ Standard Test Condition (STC):

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Open Circuit Voltage (Voc):	30.4 V
Short Circuit Current (Isc):	9.45 A
Operating Voltage (Vpmax):	24.6 V
Current at Operating Voltage (Ipmax):	8.95 A



**Project:** 2725910 **Date Issued:** May 15, 2014

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6A-XXXMM, where 'XXX' is the power output from 180 W to 220 W with the following electrical ratings typical at 220 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	30.6 V
Short Circuit Current (Isc):	9.31 A
Operating Voltage (Vpmax):	24.8 V
Current at Operating Voltage (Ipmax):	8.87 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS5P-XXXM; where 'XXX' is the power output from 215 W to 270 W with the following electrical ratings typical at 270 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	60.3 V
Short Circuit Current (Isc):	5.72 A
Operating Voltage (Vpmax):	49.9 V
Current at Operating Voltage (Ipmax):	5.41 A

Photovoltaic Modules with maximum system voltage of 600 V dc or 1000 V dc and Type 1 module fire performance, Model Series CS6K-XXXP, where 'XXX' is the power output from 220 W to 275 W with the following electrical ratings typical at 275 W for CS6K-XXXP series @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	38.0 V
Short Circuit Current (Isc):	9.45 A
Operating Voltage (Vpmax):	31.0 V
Current at Operating Voltage (Ipmax):	8.88 A

Photovoltaic Modules with maximum system voltage of 600 V dc and Type 1 module fire performance, Model Series CS6A-XXXM, where 'XXX' is the power output from 160 W to 205 W with the following electrical ratings typical at 205 W @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	30.2 V
Short Circuit Current (Isc):	8.90 A
Operating Voltage (Vpmax):	24.5 V
Current at Operating Voltage (Ipmax):	8.38 A

Photovoltaic Modules with maximum system voltage of 600 V dc or 1000 V dc and Type 1 module fire performance, Model Series CS6K-XXXM and CS6K-XXXMM, where 'XXX' is the power output from 240 W to 275 W with the following electrical ratings typical at 275 W for CS6K-XXXM/CS6K-XXXMM series @ Standard Test Condition (STC):

Open Circuit Voltage (Voc):	38.3 V



**Project:** 2725910 **Date Issued:** May 15, 2014

Short Circuit Current (Isc):	9.31 A
Operating Voltage (Vpmax):	31.3 V
Current at Operating Voltage (Ipmax):	8.80 A

## Notes:

Rated electrical characteristics are within  $\pm 10\%$  of measured values at Standard Test Conditions of 100 mW/cm2 irradiance, AM 1.5 spectrum, and cell temperature of 25°C.

## **APPLICABLE REQUIREMENTS**

ULC/ORD- C1703-01 - Flat-Plate Photovoltaic Modules and Panels

UL 1703-3rd Edition - Flat-Plate Photovoltaic Modules and Panels