Preliminary Technical Information Sheet





# **HiKu** SUPER HIGH POWER MONO PERC MODULE **425 W ~ 450 W** CS3W-425 | 430 | 435 | 440 | 445 | 450MS

# **MORE POWER**



26 % more power than conventional modules

Up to 4.5 % lower LCOE Up to 2.7 % lower system cost

Low NMOT: 42 ± 3 °C Low temperature coefficient (Pmax): -0.36 % / °C



Better shading tolerance

## **MORE RELIABLE**



Lower internal current, lower hot spot temperature

Cell crack risk limited in small region, enhance the module reliability

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linear power output warranty\*



enhanced product warranty on materials and workmanship\*

\*According to the applicable Canadian Solar Limited Warranty Statement.

## **MANAGEMENT SYSTEM CERTIFICATES\***

ISO 9001:2015 / Quality management system ISO 14001:2015 / Standards for environmental management system OHSAS 18001:2007 / International standards for occupational health & safety

## **PRODUCT CERTIFICATES\***

IEC 61215 / IEC 61730: VDE / CE (Expected in December, 2019)

\* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

**CANADIAN SOLAR INC.** is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 36 GW deployed around the world since 2001.

\* For detail information, please refer to Installation Manual.

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## **ENGINEERING DRAWING (mm)**







# **ELECTRICAL DATA | STC\***

425MS	430MS	435MS	440MS	445MS	450MS
425 W	430 W	435 W	440 W	445 W	450 W
39.5 V	39.7 V	39.9 V	40.1 V	40.3 V	40.5 V
10.76 A	10.84 A	10.91 A	10.98 A	11.05 A	11.12 A
47.7 V	47.9 V	48.1 V	48.3 V	48.5 V	48.7 V
11.37 A	11.42 A	11.47 A	11.53 A	11.59 A	11.65 A
19.24%	19.46%	<mark>19.69%</mark>	19.92%	20.14%	20.37%
-40°C ~	+85°C				
1500V (	IEC/UL)	or 1000	V (IEC/U	L)	
TYPE 1 (UL 1703) or					
CLASS C (IEC 61730)					
20 A					
Class A					
<mark>0 ~ + 5 \</mark>	W				
	425MS 425 W 39.5 V 10.76 A 47.7 V 11.37 A 19.24% -40°C ~ 1500V ( TYPE 1 CLASS C 20 A Class A 0 ~ + 5 V	425MS         430MS           39.5 V         39.7 V           10.76 A         10.84 A           47.7 V         47.9 V           11.37 A         11.42 A           19.24%         19.46%           -40°C ~ +85°C         1500V (IEC/UL)           TYPE 1 (UL 1703)         CLASS C (IEC 61)           20 A         Class A           0 ~ + 5 W	425MS       430MS       435MS         425W       430W       435W         39.5V       39.7V       39.9V         10.76A       10.84A       10.91A         47.7V       47.9V       48.1V         11.37A       11.42A       11.47A         19.24%       19.46%       19.69%         -40°C ~ +85°C       1500V (IEC/UL) or 1000°         TYPE 1 (UL 1703) or       CLASS C (IEC 61730)         20 A       Class A         0 ~ + 5 W       1000 × 1000°	425MS       430MS       435MS       440MS $425W$ $39.7V$ $39.9V$ $40.1V$ $39.5V$ $39.7V$ $39.9V$ $40.1V$ $10.76 \land 10.84 \land 10.91 \land 10.98 \land$ $47.7V$ $47.9V$ $48.1V$ $48.3V$ $47.7V$ $47.9V$ $48.1V$ $48.3V$ $11.37 \land 11.42 \land 11.47 \land 11.53 \land$ $19.24\%$ $19.46\%$ $19.69\%$ $19.92\%$ $-40^{\circ}C \sim +85^{\circ}C$ $1500V$ (IEC/UL) or $1000V$ (IEC/U) $TYPE 1$ (UL $1703$ ) or $CLASS C$ (IEC $61730$ ) $20 \land$ $Class \land$ $Class \land$ $V$	425MS       430MS       435MS       440MS       445MS         425W       430W       435W       440W       445W         39.5V       39.7V       39.9V       40.1V       40.3V         10.76A       10.84A       10.91A       10.98A       11.05A         47.7V       47.9V       48.1V       48.3V       48.5V         11.37A       11.42A       11.47A       11.53A       11.59A         19.24%       19.46%       19.69%       19.92%       20.14%         -40°C ~ +85°C         1500V (IEC/UL) or 1000V (IEC/UL)         TYPE 1 (UL 1703) or             20 A              Class A               0 ~ + 5 W               40 ~ + 5 W

 $\star$  Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

#### **ELECTRICAL DATA | NMOT\***

CS3W	425MS	430MS	435MS	440MS	445MS	450MS
Nominal Max. Power (Pmax)	316 W	320 W	324 W	328 W	331 W	335 W
Opt. Operating Voltage (Vmp)	36.8 V	36.9 V	37.1 V	37.3 V	37.5 V	37.7 V
Opt. Operating Current (Imp)	8.60 A	8.67 A	8.73 A	8.79 A	8.84 A	8.89 A
Open Circuit Voltage (Voc)	44.7 V	44.9 V	45.1 V	45.3 V	45.5 V	45.6 V
Short Circuit Current (Isc)	9.17 A	9.21 A	9.25 A	9.30 A	9.35 A	9.40 A
* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m <sup>2</sup> spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.						

CS3W-435MS / I-V CURVES



## **MECHANICAL DATA**

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	144 [2 X (12 X 6) ]
Dimensions	2108 X 1048 X 40 mm
	(83.0 X 41.3 X 1.57 in)
Weight	24.9 kg (54.9 lbs)
Front Cover	3.2 mm tempered glass
<b>F</b>	Anodized aluminium alloy,
	crossbar enhanced
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	Portrait: 500 mm (19.7 in) (+) / 350 mm (13.8 in) (-); landscape: 1400 mm (55.1 in); leap-frog connection: 1670 mm (65.7 in)*
Connector	T4 series or H4 UTX or MC4-EVO2
Per Pallet	27 pieces
Per Container (40' HQ)	594 pieces

\* For detailed information, please contact your local Canadian Solar sales and technical representatives.

## **TEMPERATURE CHARACTERISTICS**

Specification	Data
Temperature Coefficient (Pmax)	<mark>-0.36 % / °C</mark>
Temperature Coefficient (Voc)	<mark>-0.29 % / °C</mark>
Temperature Coefficient (Isc)	<mark>0.05 % / °C</mark>
Nominal Module Operating Temperature	42 ± 3°C

#### **PARTNER SECTION**

\* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice.

Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

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