

# Se CanadianSolar





Enhanced Product Warranty on Materials and Workmanship\*



Linear Power Performance Warranty\*

1<sup>st</sup> year power degradation no more than 2% Subsequent annual power degradation no more than 0.55%

\*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 ISO 45001: 2018 / International standards for occupational health & safety

### **PRODUCT CERTIFICATES\***

IEC 61215 / IEC 61730 / CE / MCS / INMETRO CEC listed (US California) / FSEC (US Florida) UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68 UNI 9177 Reaction to Fire: Class 1 / Take-e-way



\* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

**CSI Solar Co., Ltd.** is committed to providing high quality solar products, solar system solutions and services to customers around the world. Canadian Solar was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey, and is a leading PV project developer and manufacturer of solar modules, with over 50 GW deployed around the world since 2001.

HiKu5 Poly PERC 435 W ~ 460 W CS3Y-435 440 445 450 455 460P

Module power up to 460 W

Up to 4.0 % lower LCOE

Module efficiency up to 19.5 %

Up to 4.2 % lower system cost

Comprehensive LID / LeTID mitigation

Compatible with mainstream trackers,

cost effective product for utility power plant

technology, up to 50% lower degradation

### **MORE POWER**



Better shading tolerance

### **MORE RELIABLE**



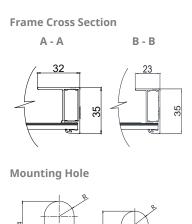
Carbon footprint reduced up to 25%

Minimizes micro-crack impacts

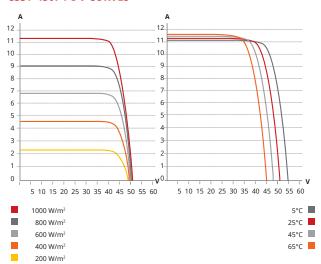
Heavy snow load up to 5400 Pa, enhanced wind load up to 2400 Pa\*

### **ENGINEERING DRAWING (mm)**

# Rear View



### CS3Y-450P / I-V CURVES



## **ELECTRICAL DATA | STC\***

CS3Y	435P	440P	445P	450P	455P	460P
Nominal Max. Power (Pmax)	435 W	440 W	445 W	450 W	455 W	460 W
Opt. Operating Voltage (Vmp)	41.8 V	42.0 V	42.2 V	42.4 V	42.6 V	42.8 V
Opt. Operating Current (Imp)	10.41 A	10.48 A	10.55 A	10.62 A	10.69 A	10.75 A
Open Circuit Voltage (Voc)	51.0 V	51.2 V	51.4 V	51.6 V	51.8 V	52.0 V
Short Circuit Current (Isc)	11.13 A	11.18 A	11.23 A	11.28 A	11.33 A	11.38 A
Module Efficiency	18.4%	18.6%	18.9%	19.1%	19.3%	19.5%
Operating Temperature	-40°C ~	+85°C				
Max. System Voltage	1500V (	IEC/UL)	or 1000\	/ (IEC/UI	_)	
Module Fire Performance			30 1500\ S C (IEC	/) or TYP 61730)	E 2 (UL (	51730
Max. Series Fuse Rating	20 A					
Application Classification	Class A					
Power Tolerance	0~+10	W				
* Under Standard Test Conditions (STC)	of irradian	ce of 1000	W/m <sup>2</sup> , spe	ctrum AM	1.5 and cel	l tempe-

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell tempe rature of 25°C.

### **MECHANICAL DATA**

Specification	Data
Cell Type	Poly-crystalline
Cell Arrangement	156 [2 X (13 X 6) ]
Dimensions	2252 X 1048 X 35 mm
	(88.7 X 41.3 X 1.38 in)
Weight	25.7 kg (56.7 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm <sup>2</sup> (IEC), 12 AWG (UL)
Cable Length (Including Connector)	410 mm (16.1 in) (+) / 290 mm (11.4 in) (-) or customized length*
Connector	T4 series or H4 UTX or MC4-EVO2
Per Pallet	30 pieces
Por Containor (40' HO)	600 pieces

Per Container (40' HQ) 600 pieces

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

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

CS3Y	435P	440P	445P	450P	455P	460P
Nominal Max. Power (Pmax)	324 W	328 W	331 W	335 W	339 W	342 W
Opt. Operating Voltage (Vmp	) 38.9 V	39.1 V	39.3 V	39.5 V	39.6 V	39.8 V
Opt. Operating Current (Imp)	8.33 A	8.39 A	8.43 A	8.49 A	8.57 A	8.60 A
Open Circuit Voltage (Voc)	47.9 V	48.1 V	48.3 V	48.5 V	48.7 V	48.8 V
Short Circuit Current (Isc)	8.98 A	9.02 A	9.06 A	9.10 A	9.14 A	9.18 A
* Under Nominal Module Operating Te	mperature	(NMOT), ii	rradiance o	f 800 W/m	<sup>2,</sup> spectrum	AM 1.5.

ambient temperature 20°C, wind speed 1 m/s.

# **TEMPERATURE CHARACTERISTICS**

Specification	Data
Temperature Coefficient (Pmax)	-0.36 % / °C
Temperature Coefficient (Voc)	-0.28 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
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. CSI Solar Co., Ltd. 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.