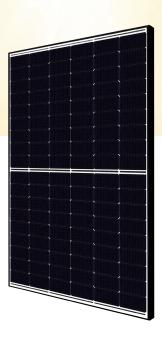






N-type TOPCon Technology 445 W ~ 470 W CS6.1-54TD-445 | 450 | 455 | 460 | 465 | 470



#### **MORE POWER**



Module power up to 470 W Module efficiency up to 23.0 %



Excellent anti-LeTID & anti-PID performance. Low power degradation, high energy yield



Lower temperature coefficient (Pmax): -0.29%/°C, increases energy yield in hot climate



Lower LCOE & system cost

# **MORE RELIABLE**



Minimizes micro-crack impacts



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



Industry Leading Product Warranty on Materials and Workmanship\*



**Linear Power Performance Warranty\*** 

# 1st year power degradation no more than 1% Subsequent annual power degradation no more than 0.4%

\*Subject to the terms and conditions contained in the applicable Canadian Solar Limited Warranty Statement. Also this 25-year limited product warranty is available only for products installed and operating on rooftops in certain regions.

## **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
IEC62941: 2019 / Photovoltaic module manufacturing quality system

# **PRODUCT CERTIFICATES\***

**CSI Solar Co., Ltd.** is committed to providing high quality solar photovoltaic modules, solar energy and battery storage solutions to customers. The company was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey. Over the past 22 years, it has successfully delivered over 100 GW of premium-quality solar modules across the world.

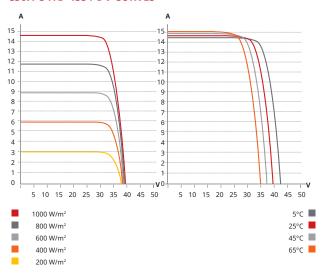
<sup>\*</sup> The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific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

<sup>\*</sup> For detailed information, please refer to the Installation Manual.

## **ENGINEERING DRAWING (mm)**

# **Rear View Frame Cross Section** A - A / B-B 4-14x9 100 **Mounting Hole**

#### CS6.1-54TD-455 / I-V CURVES



# **ELECTRICAL DATA | STC\***

445	450	455	460	465	470
445 W	450 W	455 W	460 W	465 W	470 W
)32.8 V	33.0 V	33.2 V	33.4 V	33.6 V	33.8 V
13.59 A	13.66 A	13.72 A	13.78 A	13.85 A	13.91 A
38.7 V	38.9 V	39.1 V	39.3 V	39.5 V	39.7 V
14.48 A	14.55 A	14.61 A	14.69 A	14.77 A	14.86 A
21.8%	22.0%	22.3%	22.5%	22.8%	23.0%
-40°C ~	+85°C				
1500V (	IEC/UL)	or 1000	√ (IEC/U	L)	
TYPE 38	3 (UL 617	730) or (	CLASS C	(IEC 617	730)
25 A					
Class A					
0 ~ + 10	) W				
	445 W )32.8 V )13.59 A 38.7 V 14.48 A 21.8% -40°C ~ 1500V ( TYPE 38 25 A Class A	445 W 450 W )32.8 V 33.0 V )13.59 A 13.66 A 38.7 V 38.9 V 14.48 A 14.55 A 21.8% 22.0% -40°C ~ +85°C 1500V (IEC/UL) TYPE 38 (UL 617	445 W 450 W 455 W )32.8 V 33.0 V 33.2 V ) 13.59 A 13.66 A 13.72 A 38.7 V 38.9 V 39.1 V 14.48 A 14.55 A 14.61 A 21.8% 22.0% 22.3% -40°C ~ +85°C 1500V (IEC/UL) or 1000 TYPE 38 (UL 61730) or 0 25 A Class A	445 W 450 W 455 W 460 W )32.8 V 33.0 V 33.2 V 33.4 V )13.59 A 13.66 A 13.72 A 13.78 A 38.7 V 38.9 V 39.1 V 39.3 V 14.48 A 14.55 A 14.61 A 14.69 A 21.8% 22.0% 22.3% 22.5% -40°C ~ +85°C 1500V (IEC/UL) or 1000V (IEC/U TYPE 38 (UL 61730) or CLASS C 25 A Class A	445 W 450 W 455 W 460 W 465 W 32.8 V 33.0 V 33.2 V 33.4 V 33.6 V 13.59 A 13.66 A 13.72 A 13.78 A 13.85 A 38.7 V 38.9 V 39.1 V 39.3 V 39.5 V 14.48 A 14.55 A 14.61 A 14.69 A 14.77 A 21.8% 22.0% 22.3% 22.5% 22.8% -40°C ~ +85°C 1500V (IEC/UL) or 1000V (IEC/UL) TYPE 38 (UL 61730) or CLASS C (IEC 61725 A Class A

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

#### **MECHANICAL DATA**

Specification	Data
Cell Type	TOPCon cells
Cell Arrangement	108 [2 X (9 X 6) ]
Dimensions	1800 × 1134 × 30 mm
	(70.9 × 44.6 × 1.18 in)
Weight	23.4 kg (51.6 lbs)
Front Glass	1.6 mm heat strengthened glass with anti-reflective coating
Back Glass	1.6 mm heat strengthened glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm <sup>2</sup> (IEC), 12 AWG (UL)
Connector	T6 or MC4 or MC4-EVO2 or MC4-EVO2A
Cable Length (Including Connector)	Portrait: 350 mm (13.8 in) (+) / 250 mm (9.8 in) (-); landscape: 1150 mm (45.3 in)*
Per Pallet	36 pieces
Per Container (40' HQ)	864 pieces

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

# **ELECTRICAL DATA | NMOT\***

445	450	455	460	465	470
337 W	340 W	344 W	348 W	352 W	355 W
)31.0 V	31.2 V	31.4 V	31.6 V	31.8 V	32.0 V
10.85 A	10.91 A	10.96 A	11.02 A	11.07 A	11.12 A
36.6 V	36.8 V	37.0 V	37.2 V	37.4 V	37.6 V
11.68 A	11.73 A	11.78 A	11.85 A	11.91 A	11.98 A
	337 W )31.0 V )10.85 A 36.6 V	337 W 340 W )31.0 V 31.2 V )10.85 A 10.91 A 36.6 V 36.8 V	337 W 340 W 344 W )31.0 V 31.2 V 31.4 V )10.85 A 10.91 A 10.96 A 36.6 V 36.8 V 37.0 V	337 W 340 W 344 W 348 W )31.0 V 31.2 V 31.4 V 31.6 V )10.85 A 10.91 A 10.96 A 11.02 A 36.6 V 36.8 V 37.0 V 37.2 V	445     450     455     460     465       337 W     340 W     344 W     348 W     352 W       )31.0 V     31.2 V     31.4 V     31.6 V     31.8 V       10.85 A     10.91 A     10.96 A     11.02 A     11.07 A       36.6 V     36.8 V     37.0 V     37.2 V     37.4 V       11.68 A     11.73 A     11.78 A     11.85 A     11.91 A

<sup>\*</sup> Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m² spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

## **TEMPERATURE CHARACTERISTICS**

Specification	Data
Temperature Coefficient (Pmax)	-0.29 % / °C
Temperature Coefficient (Voc)	-0.25 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	41 ± 3°C

# **PARTNER SECTION**

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.

<sup>\*</sup> 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.