

# N-type Module

## TOPHiKu6 (All-Black)

CS6.2-48TM-435 | 440 | 445 | 450 | 455 | 460 | 465H

### MORE POWER



Module power up to 465 W  
Module efficiency up to 23.3 %



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



Lower temperature coefficient (Pmax):  $-0.29\%/^{\circ}\text{C}$ ,  
increases energy yield in hot climate



Lower LCOE & system cost

### MORE RELIABLE



Tested up to ice ball of 45 mm diameter  
according to IEC 61215 standard



Minimizes micro-crack impacts



Heavy snow load up to 8100 Pa,  
wind load up to 5600 Pa\*



**Industry Leading Product Warranty on Materials and Workmanship\***



**Linear Power Performance Warranty\***

**1<sup>st</sup> 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  
IEC 62941: 2019 / Photovoltaic module manufacturing quality system

### PRODUCT CERTIFICATES\*

IEC 61215 / IEC 61730 / CE  
CEC listed (US California) / FSEC (US Florida)  
UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68



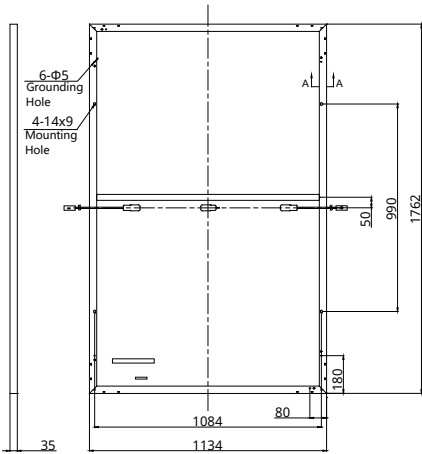
\* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates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

**CSI Solar Co., Ltd.**, a BNEF Tier 1 and S&P Global Tier 1 module manufacturer, is a leading provider of integrated solar and energy storage solutions. With over 24 years of expertise, the company has delivered more than 165 GW of premium-quality solar modules worldwide.

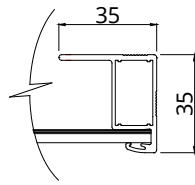
\* For detailed information, please refer to the Installation Manual.

## ENGINEERING DRAWING (mm)

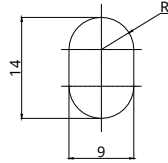
### Rear View



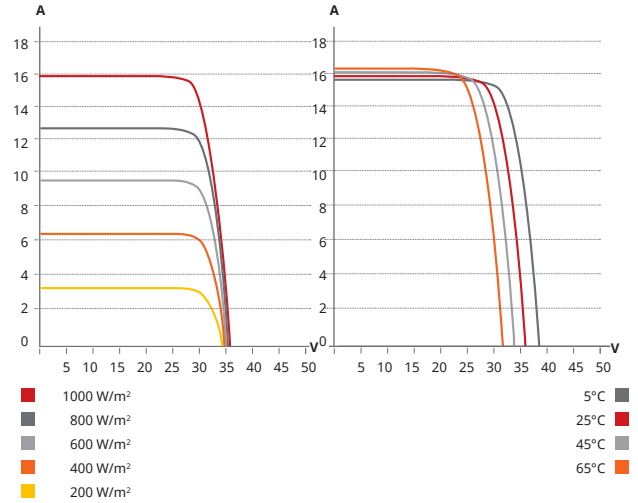
### Frame Cross Section A-A



### Mounting Hole



## CS6.2-48TM-455H / I-V CURVES



## ELECTRICAL DATA | STC\*

CS6.2-48TM	435H	440H	445H	450H	455H	460H	465H
Nominal Max. Power (Pmax)	435 W	440 W	445 W	450 W	455 W	460 W	465 W
Opt. Operating Voltage (Vmp)	30.0 V	30.2 V	30.4 V	30.6 V	30.8 V	31.0 V	31.2 V
Opt. Operating Current (Imp)	14.51 A	14.58 A	14.64 A	14.71 A	14.78 A	14.84 A	14.91 A
Open Circuit Voltage (Voc)	35.2 V	35.4 V	35.6 V	35.8 V	36.0 V	36.2 V	36.4 V
Short Circuit Current (Isc)	15.61 A	15.68 A	15.75 A	15.82 A	15.89 A	15.96 A	16.03 A
Module Efficiency	21.8%	22.0%	22.3%	22.5%	22.8%	23.0%	23.3%
Operating Temperature	-40°C ~ +85°C						
Max. System Voltage	1500V (IEC/UL)						
Module Fire Performance	TYPE 1 (UL 61730 1500V) or TYPE 2 (UL 61730 1000V) or CLASS C (IEC 61730)						
Max. Series Fuse Rating	30 A						
Protection Class	Class II						
Power Tolerance	0 ~ + 10 W						

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

## ELECTRICAL DATA | NMOT\*

CS6.2-48TM	435H	440H	445H	450H	455H	460H	465H
Nominal Max. Power (Pmax)	328 W	332 W	336 W	339 W	343 W	347 W	351 W
Opt. Operating Voltage (Vmp)	28.3 V	28.5 V	28.7 V	28.8 V	29.0 V	29.2 V	29.4 V
Opt. Operating Current (Imp)	11.60 A	11.66 A	11.71 A	11.77 A	11.82 A	11.87 A	11.93 A
Open Circuit Voltage (Voc)	33.2 V	33.4 V	33.6 V	33.8 V	34.0 V	34.2 V	34.4 V
Short Circuit Current (Isc)	12.58 A	12.64 A	12.70 A	12.75 A	12.81 A	12.86 A	12.92 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.

## MECHANICAL DATA

Specification	Data
Cell Type	TOPCon cells
Cell Arrangement	96 [2 x (8 x 6)]
Dimensions	1762 × 1134 × 35 mm (69.4 × 44.6 × 1.38 in)
Weight	21.8 kg (48.1 lbs)
Front Glass	3.2 mm tempered glass with anti-reflective coating
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm <sup>2</sup> (IEC), 12 AWG (UL)
Cable Length (Including Connector)	1550 mm (61.0 in) (+) / 1100 mm (43.3 in) (-)*
Connector	T6 or MC4-EVO2A
Per Pallet	31 pieces

Per Container (40' HQ) 806 pieces

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

## TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.29 % / °C
Temperature Coefficient (Voc)	-0.25 % / °C
Temperature Coefficient (Isc)	0.045 % / °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.