



# TOPBiHiKu7

**N-type Bifacial TOPCon Technology** 655 W ~ 670 W CS7N-655 | 660 | 665 | 670TB-AG



#### **MORE POWER**



Up to 85% Power Bifaciality, more power from the back side



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\*



**Enhanced 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%

\*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 IEC 62941: 2019 / Photovoltaic module manufacturing quality system

#### **PRODUCT CERTIFICATES\***

IEC 61215 / IEC 61730 / CE / INMETRO / MCS / UKCA / CGC FSEC (US Florida) / UL 61730 / IEC 61701 / IEC 62716 IEC 60068-2-68 / Take-e-way















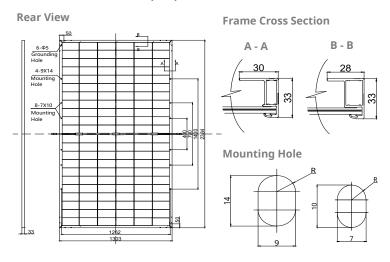


\* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions  $\frac{1}{2} \left( \frac{1}{2} \right) = \frac{1}{2} \left( \frac{1}{2} \right) \left( \frac{1}{2} \right)$ in which the products will be used.

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 88 GW of premium-quality solar modules across the world.

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

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



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

		Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)			Short Circuit Current (Isc)	Module Efficiency
CS7N-655TB-AG		655 W	38.2 V	17.15 A	46.1 V	18.04 A	21.1%
Bifacial Gain**	5%	688 W	38.2 V	18.01 A	46.1 V	18.94 A	22.1%
	10%	721 W	38.2 V	19.81 A	46.1 V	19.84 A	23.2%
	20%	786 W	38.2 V	20.58 A	46.1 V	21.65 A	25.3%
CS7N-660TB-AG		660 W	38.4 V	17.19 A	46.3 V	18.09 A	21.2%
Bifacial Gain**	5%	693 W	38.4 V	18.05 A	46.3 V	18.99 A	22.3%
	10%	726 W	38.4 V	19.85 A	46.3 V	19.90 A	23.4%
	20%	792 W	38.4 V	20.63 A	46.3 V	21.71 A	25.5%
CS7N-665TB-AG		665 W	38.6 V	17.23 A	46.5 V	18.14 A	21.4%
Bifacial Gain**	5%	698 W	38.6 V	18.09 A	46.5 V	19.05 A	22.5%
	10%	732 W	38.6 V	18.97 A	46.5 V	19.95 A	23.6%
	20%	798 W	38.6 V	20.68 A	46.5 V	21.77 A	25.7%
CS7N-670TB-AG		670 W	38.8 V	17.27 A	46.7 V	18.19 A	21.6%
Bifacial Gain**	5%	704 W	38.8 V	18.15 A	46.7 V	19.10 A	22.7%
	10%	737 W	38.8 V	19.00 A	46.7 V	20.01 A	23.7%
	20%		38.8 V	20.72 A	46.7 V	21.83 A	25.9%

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

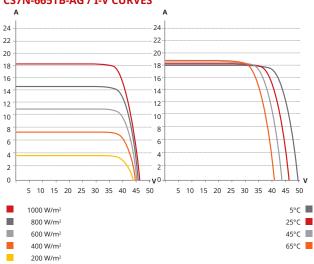
\*\* Bifacial Gain: The additional gain from the back side compared to the power of the front side at

#### **ELECTRICAL DATA**

Operating Temperature	-40°C ~ +85°C
Max. System Voltage	1500 V (IEC/UL) or 1000 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC61730)
Max. Series Fuse Rating	35 A
Application Classification	Class A
Power Tolerance	0 ~ + 10 W
Power Bifaciality*	80 %

<sup>\*</sup> Power Bifaciality =  $Pmax_{rear}$  /  $Pmax_{front}$  both  $Pmax_{rear}$  and  $Pmax_{front}$  are tested under STC, Bifaciality Tolerance: ± 5 %

### CS7N-665TB-AG / I-V CURVES



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

	Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)	Opt. Ope- rating Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)
CS7N-655TB-AG	495 W	36.1 V	13.72 A	43.6 V	14.55 A
CS7N-660TB-AG	499 W	36.3 V	13.75 A	43.8 V	14.59 A
CS7N-665TB-AG	503 W	36.5 V	13.78 A	44.0 V	14.63 A
CS7N-670TB-AG	507 W	36.7 V	13.81 A	44.2 V	14.67 A
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<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.

#### **MECHANICAL DATA**

Specification	Data
Cell Type	TOPCon cells
Cell Arrangement	132 [2 x (11 x 6)]
Dimensions	2384 × 1303 × 33 mm (93.9 × 51.3 × 1.30 in)
Weight	37.8 kg (83.3 lbs)
Front Glass	2.0 mm heat strengthened glass with anti- reflective coating
Back Glass	2.0 mm heat strengthened glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4.0 mm <sup>2</sup> (IEC), 12 AWG (UL)
Cable Length (Including Connector)	410 mm (16.1 in) (+) / 250 mm (9.8 in) (-) or 2000 mm (78.7 in) (+) / 1400 mm (55.1 in) (-)
Connector	T6 or MC4 series
Per Pallet	33 pieces
Per Container (40' HQ)	594 pieces or 495 pieces (only for US & Canada)

#### **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

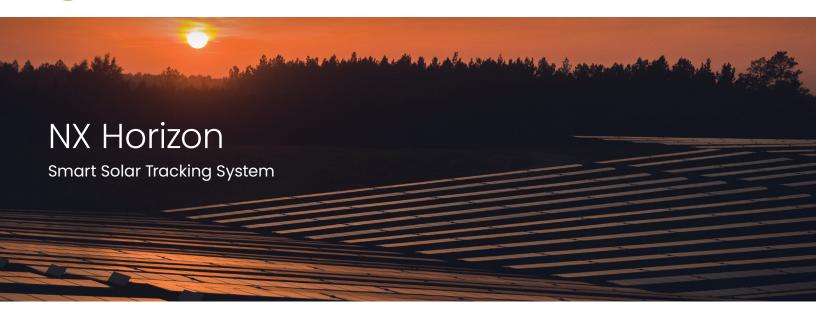
#### \* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserves the right to make necessary adjustment to the information described herein at any time without

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  $% \left\{ 1\right\} =\left\{ 1\right\}$ using our PV modules.

#### **PARTNER SECTION**

the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo  $\,$ of the ground.





Serving as the backbone on over 35 gigawatts of solar power plants around the world, the NX Horizon™ smart solar tracker system combines best-in-class hardware and software to help EPCs and asset owners maximize performance and minimize operational costs.

# Flexible and Resilient by Design

With its self-aligning module rails and vibration-proof fasteners, NX Horizon can be easily and rapidly installed. The self-powered, decentralized architecture allows each row to be commissioned in advance of site power, and is designed to withstand high winds and other adverse weather conditions. On a recent 838 megawatt project in Villanueva, Mexico, these design features allowed for the project to go online nine months ahead of schedule.

# TrueCapture and Bifacial Enabled

Incorporating the most promising innovations in utility scale solar, NX Horizon with TrueCapture™ smart control system can add additional energy production by up to six percent. Further unlocking the advantages of independent-row architecture and the data collected from thousands of sensors across its built-in wireless network, the software continuously optimizes the tracking algorithm of each row in response to site terrain and changing weather conditions. NX Horizon can also be paired with bifacial PV module technology, which can provide even more energy harvest and performance. With bifacial technology, NX Horizon outperforms conventional tracking systems with over 1% more annual energy.

# Quality and Reliability from Day One

Quality and reliability are designed and tested into every NX Horizon component and system across our supply chain and manufacturing operations. Nextracker is the leader in dynamic wind analysis and safety stowing, delivering major benefits in uptime and long-term durability NX Horizon is certified to UL 2703 and UL 3703 standards, underscoring Nextracker's commitment to safety, reliability and quality.

# Features and Benefits

# **5 years** in a row

Global Market Share Leader (2015-18)

#### **35** GW

Delivered on 5 Continents

## **Best-in Class**

Software Ecosystem and Global Services

# **Up to 6%**

Using TrueCapture Smart Control System



GENERAL AND MECHANICAL			
Tracking type	Horizontal single-axis, independent row.		
String voltage	1,500 V <sub>DC</sub> or 1,000 V <sub>DC</sub>		
Typical row size	78-90 modules, depending on module string length.		
Drive type	Non-backdriving, high accuracy slew gear.		
Motor type	24 V brushless DC motor		
Array height	Rotation axis elevation 1.3 to 1.8 m / 4'3" to 5'10"		
Ground coverage ratio (GCR)	Configurable. Typical range 28-50%.		
Modules supported	Mounting options available for virtually all utility-scale crystalline modules, First Solar Series 6 and First Solar Series 4.		
Bifacial features	High-rise mounting rails, bearing + driveline gaps and round torque tube.		
Tracking range of motion	Options for ±60° or ±50°		
Operating temperature range	SELF POWERED: -30°C to 55°C (-22°F to 131°F) AC POWERED: -40°C to 55°C (-40°F to 131°F)		
Module configuration	1 in portrait. 3 x 1,500 V or 4 x 1,000 V strings per standard tracker. Partial length trackers available.		
Module attachment	Self-grounding, electric tool-actuated fasteners.		
Materials	Galvanized steel		
Allowable wind speed	Configurable up to 200 kph (125 mph) 3-second gust		
Wind protection	Intelligent wind stowing with symmetric dampers for maximum array stability in all wind conditions		
Foundations	Standard W6 section foundation posts		

ELECTRONICS AND CONTROLS		
Solar tracking method	Astronomical algorithm with backtracking. TrueCapture™ upgrades available for terrain adaptive backtracking and diffuse tracking mode	
Control electronics	NX tracker controller with inbuilt inclinometer and backup battery	
Communications	Zigbee wireless communications to all tracker rows and weather stations via network control units (NCUs)	
Nighttime stow	Yes	
Power supply	SELF POWERED: NX provided 30 or 60W Smart Panel AC POWERED: Customer-provided 120-240 Vac circut	

INSTALLATION, OPERATIONS AND SERVICE		
PE stamped structural calculations and drawings	Included	
Onsite training and system commissioning	Included	
Installation requirements	Simple assembly using swaged fasteners and bolted connections. No field cutting, drilling or welding.	
Monitoring	NX Data Hub™ centralized data aggregation and monitoring	
Module cleaning compatibility	Compatible with NX qualified cleaning systems	
Warranty	10-year structural, 5-year drive and control components.	
Codes and standards	UL 3703 / UL 2703 / IEC 62817	