

NEOSTAR

2P Mono-Glass Module
450W-485W

Technical Features:

-  Partial Shading Optimisation
-  Better Temperature Coefficient
-  High Temperature Restriction
-  Micro-crack Resistance
-  Higher Power
-  Lower BOS
-  More Aesthetic Values



red dot winner 2023



Product Warranty
Extendable to 25years*



Performance Warranty



Warranty partner

Munich RE 

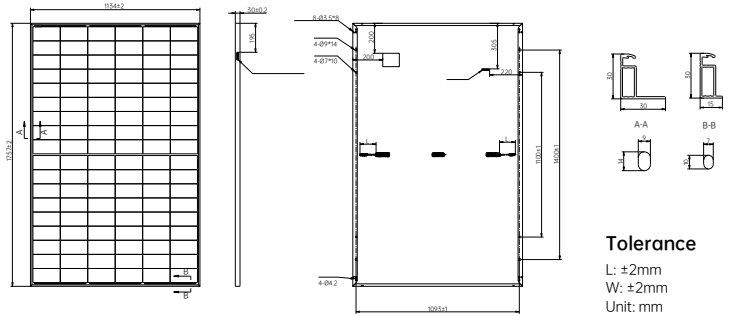
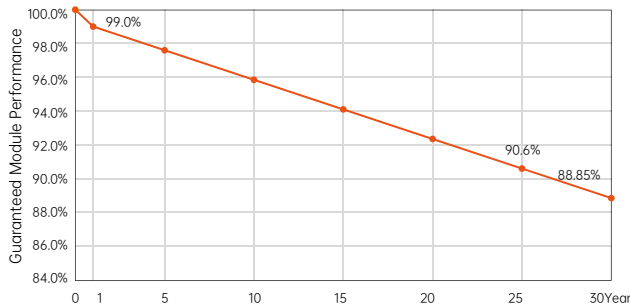
485W
Output

24.3%
Efficiency

≤1%
First-year Degradation

≤0.35%
Annual Degradation from Year 2-30

30-year Linear Performance Warranty



Tolerance
L: ±2mm
W: ±2mm
Unit: mm

Electrical Characteristics (STC: AM1.5 1000W/m² 25°C NOCT: AM1.5 800W/m² 20°C 1m/s) Power Tolerance: 0~ + 3%

Module Type	AIKO-A450-MAH54Mw	AIKO-A455-MAH54Mw	AIKO-A460-MAH54Mw	AIKO-A465-MAH54Mw	AIKO-A470-MAH54Mw	AIKO-A475-MAH54Mw	AIKO-A480-MAH54Mw	AIKO-A485-MAH54Mw
Test Conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P _{max} [W]	450	339	455	343	460	346	465	350
V _{oc} [V]	40.94	38.66	41.00	38.72	41.06	38.77	41.12	38.83
V _{mp} [V]	34.50	32.58	34.56	32.64	34.62	32.69	34.68	32.75
I _{sc} [A]	14.12	11.42	14.22	11.50	14.25	11.52	14.29	11.55
I _{mp} [A]	13.05	10.41	13.17	10.51	13.29	10.61	13.41	10.71
Module Efficiency	22.6%	22.8%	23.1%	23.3%	23.6%	23.8%	24.1%	24.3%

Product Specification

Cell Type	N-Type ABC
Glass	3.2 mm tempered glass
Frame	Black Anodized aluminum
Cable	4mm ² (IEC) 12AWG(UL) ±1200mm
No. of Cells	108(6*18)
Junction Box	IP68, 3 bypass diodes
Connector	Original MC4
Weight	20.6kg±3%
Dimension	1757*1134*30mm
Package Detail	37pcs per pallet / 222pcs per 20'GP / 962pcs per 40'HC

Temperature Ratings (STC)

Temperature Coefficient of I _{sc}	+ 0.05%/ °C
Temperature Coefficient of V _{oc}	- 0.22%/ °C
Temperature Coefficient of P _{max}	- 0.26%/ °C

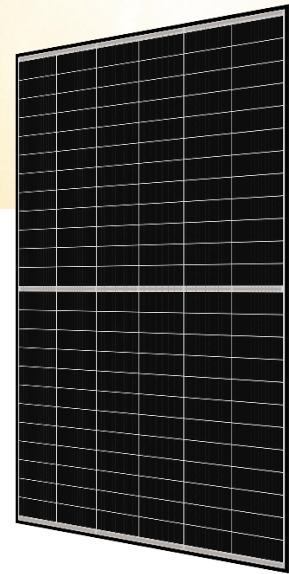
Installation Guide

Operation Temperature	-40°C - +85°C
Maximum Series Fuse Rating	25A
Protection Class	ClassII
V _{oc} and I _{sc} Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Loading	Front 5400Pa Back 2400Pa
Hail Test	40 mm diameter hail at 23 m/s
Fire Rating	IEC Class C



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*AIKO reserves right to update the specification without notice
V3.2_202501_DsDr_EN



TOPHiKu6

N-type TOPCon Technology

440 W ~ 470 W

CS6.2-48TD-440 | 445 | 450 | 455 | 460 | 465 | 470

MORE POWER



Module power up to 470 W
Module efficiency up to 23.5 %



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 35 mm diameter
according to IEC 61215 standard



Minimizes micro-crack impacts



Heavy snow load up to 6000 Pa,
wind load up to 4000 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
IEC 62941: 2019 / Photovoltaic module manufacturing quality system

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730 / CE
UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68
UNI 9177 Reaction to Fire: Class 1 / Take-e-way



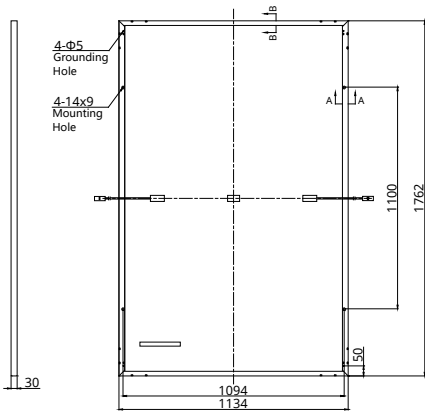
* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates 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 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 23 years, it has successfully delivered over 133 GW of premium-quality solar modules across the world.

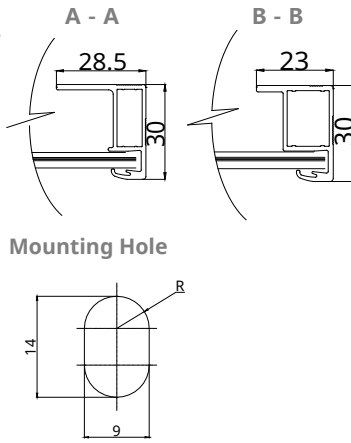
* For detailed information, please refer to the Installation Manual.

ENGINEERING DRAWING (mm)

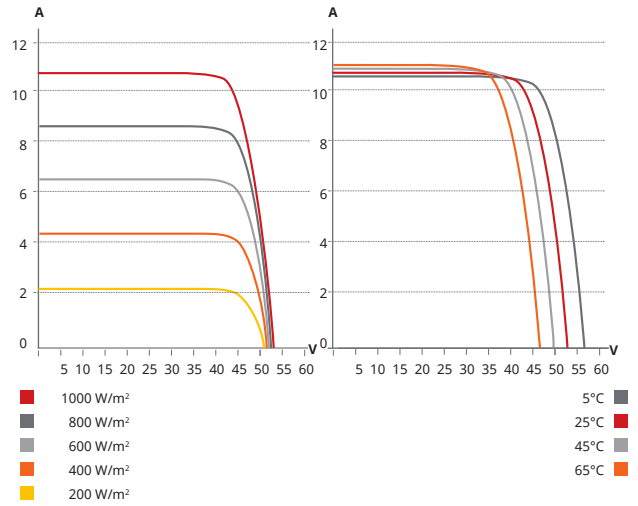
Rear View



Frame Cross Section



CS6.2-48TD-455 / I-V CURVES



ELECTRICAL DATA | STC*

CS6.2-48TD	440	445	450	455	460	465	470
Nominal Max. Power (Pmax)	440 W	445 W	450 W	455 W	460 W	465 W	470 W
Opt. Operating Voltage (Vmp)	44.4 V	44.6 V	44.8 V	45.0 V	45.2 V	45.4 V	45.6 V
Opt. Operating Current (Imp)	9.91 A	9.98 A	10.05 A	10.12 A	10.18 A	10.25 A	10.32 A
Open Circuit Voltage (Voc)	52.5 V	52.7 V	52.9 V	53.1 V	53.3 V	53.5 V	53.7 V
Short Circuit Current (Isc)	10.54 A	10.61 A	10.68 A	10.75 A	10.82 A	10.89 A	10.96 A
Module Efficiency	22.0%	22.3%	22.5%	22.8%	23.0%	23.3%	23.5%
Operating Temperature	-40°C ~ +85°C						
Max. System Voltage	1500V (IEC/UL)						
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC 61730)						
Max. Series Fuse Rating	20 A						
Protection Class	Class II						
Power Tolerance	0 ~ + 10 W						

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

ELECTRICAL DATA | NMOT*

CS6.2-48TD	440	445	450	455	460	465	470
Nominal Max. Power (Pmax)	333 W	337 W	340 W	344 W	348 W	352 W	356 W
Opt. Operating Voltage (Vmp)	42.0 V	42.2 V	42.4 V	42.5 V	42.7 V	42.9 V	43.1 V
Opt. Operating Current (Imp)	7.93 A	7.98 A	8.04 A	8.09 A	8.14 A	8.20 A	8.25 A
Open Circuit Voltage (Voc)	49.7 V	49.9 V	50.1 V	50.3 V	50.5 V	50.7 V	50.8 V
Short Circuit Current (Isc)	8.49 A	8.55 A	8.60 A	8.66 A	8.72 A	8.77 A	8.83 A

* 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	144 [2 x (12 x 6)]
Dimensions	1762 x 1134 x 30 mm (69.4 x 44.6 x 1.18 in)
Weight	24.6 kg (54.2 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 mm ² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	Portrait: 300 mm (11.8 in) (+) / 200 mm (7.9 in) (-); landscape: 1100 mm (43.3 in)*
Connector	T6 or MC4-EVO2 or MC4-EVO2A
Per Pallet	36 pieces
Per Container (40' HQ)	936 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	41 ± 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.

US Series

 Flexible for Mixed Usage

 Free to Scale Up

 19inch Rack Compatible

 High Power Efficiency



Module	US2000C	US3000C	US5000
Nominal Voltage (VDC)	48	48	48
Nominal Capacity (kWh)	2.4	3.55	4.8
Usable Capacity (kWh)	2.28	3.37	4.56
Dimension (W*D*H mm)	442*410*89	442*410*132	442*420*161
Weight (kg)	22.5	32	39.7
Depth of Discharge	95%	95%	95%
Charge/ Discharge (A)	(Normal)	25	37
	(Max)	50-89 @60s	74-89 @60s
	(Peak)	90-200 @15s	90-200 @15s
Communication Port		RS485/CAN	
Single String Quantity (pcs)	16	16	16
Working Temperature/ (°C) Charge		0~55	
Working Temperature/ (°C) Discharge		-10~55	
Storage Temperature/ (°C)		-20~45	
Short current/duration time (A)	<4000/2ms	<4000/2ms	<2000/1ms
IP rating		IP20	
Humidity (RH)		5%-95% No Condensation	
Altitude (m)		<4000	
Design life (@25°C)	15+ Years	15+ Years	15+ Years
Cycle Life (@25°C)	>8,000	>8,000	>8,000
Certification	UL1642/IEC62619/ IEC63056/ IEC61000-6-2/3 UN38.3	UL1973/UL1642/ UL9540A/VDE2510-50/ IEC63056/IEC62619/ IEC62040/IEC62477-1/ IEC61000-6-2/3/UN38.3	UL1973/UL9540A IEC62619/IEC63056/ IEC61000-6-2/3/ UN38.3