Single Phase Hybrid Inverter

SUN-3.6/5/6/7/7.6/8/10K-SG05LP1-EU-AM2-P

- Colorful touch LCD, IP65 protection degree
- AC couple to retrofit existing solar system
- Max. 16 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- Max. charging/discharging current of 190A
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

Deye

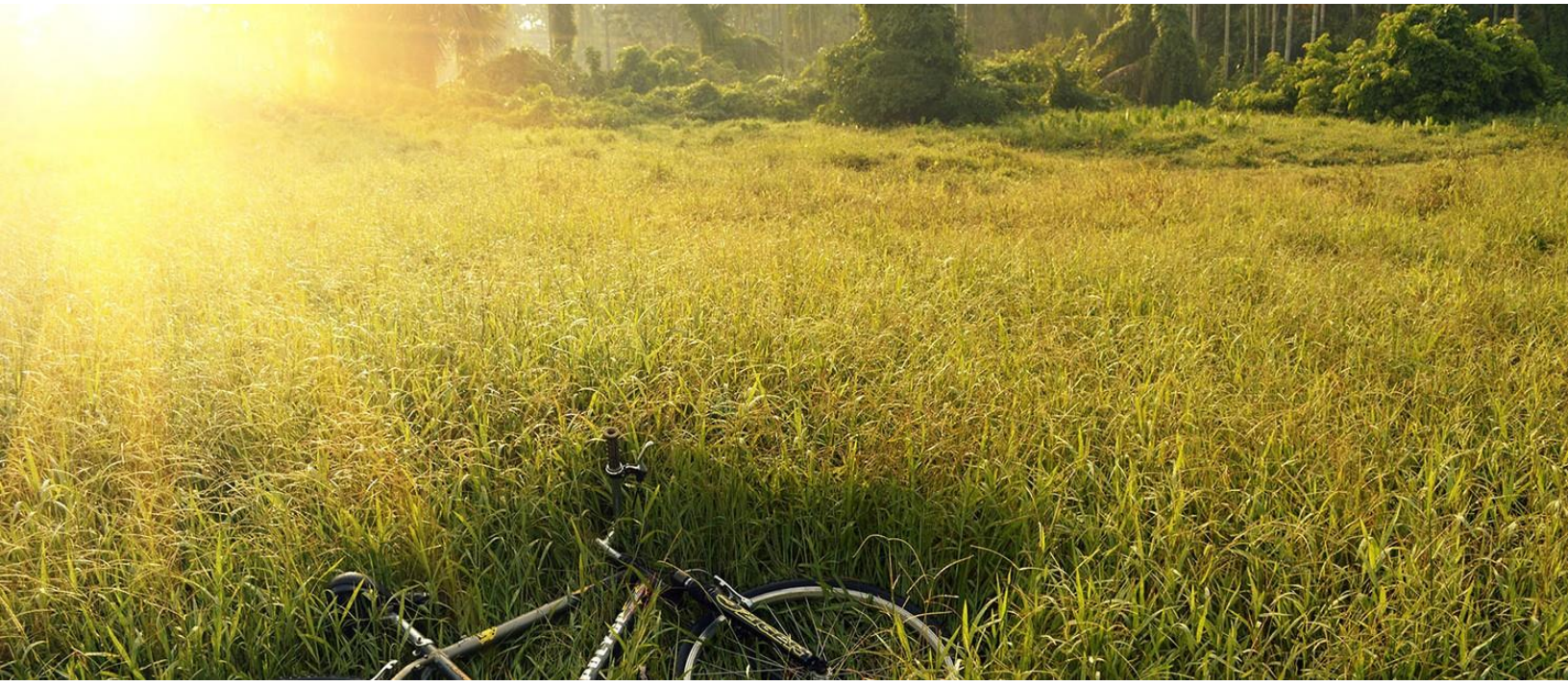
Stock Code: 605117.SH

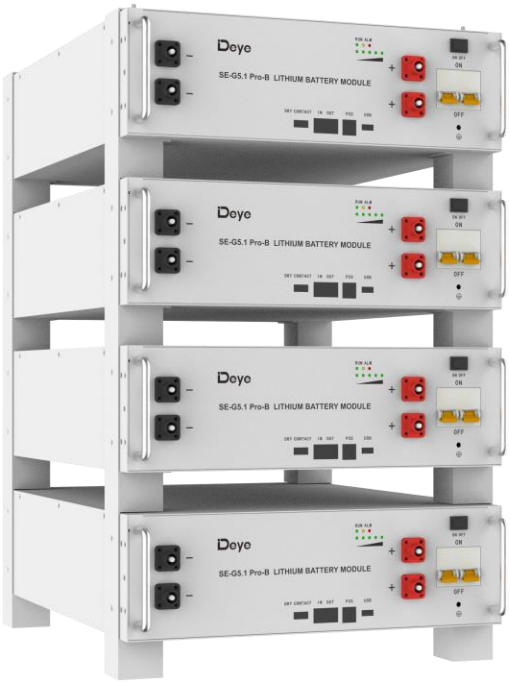
Technical Data

Model	SUN-3.6K-SG05 LP1-EU-AM2-P	SUN-5K-SG05 LP1-EU-AM2-P	SUN-6K-SG05 LP1-EU-AM2-P	SUN-7K-SG05 LP1-EU-AM2-P	SUN-7.6K-SG05 LP1-EU-AM2-P	SUN-8K-SG05 LP1-EU-AM2-P	SUN-10K-SG05 LP1-EU-AM2-P
Battery Input Data							
Battery Type	Lead-acid or Lithium-ion						
Battery Voltage Range (V)	40-60						
Max. Charging Current (A)	90	120	135	175	190	190	210
Max. Discharging Current (A)	90	120	135	175	190	190	210
Charging Strategy for Li-ion Battery	Self-adaption to BMS						
Number of Battery Input	1						
PV String Input Data							
Max. PV Access Power (W)	7200	10000	12000	14000	15200	16000	20000
Max. PV Input Power (W)	5760	8000	9600	11200	12160	12800	16000
Max. PV Input Voltage (V)	500						
Start-up Voltage (V)	125						
MPPT Voltage Range (V)	150-425						
Rated PV Input Voltage (V)	370						
Max. Operating PV Input Current (A)	18+18			32+32			
Max. Input Short-Circuit Current (A)	27+27			48+48			
No. of MPP Trackers/ No. of Strings MPP Tracker	2/1+1			2/2+2			
AC Input/Output Data							
Rated AC Input/Output Active Power (W)	3600	5000	6000	7000	7600	8000	10000
Max. AC Input/Output Apparent Power (VA)	3960	5500	6600	7700	8360	8800	11000
Rated AC Input/Output Current (A)	16.4/15.7	22.7/21.7	27.3/26.1	31.9/30.5	34.5/33	36.4/34.8	45.5/43.5
Max. AC Input/Output Current (A)	18/17.2	25/23.9	30/28.7	35/33.5	38/36.3	40/38.3	50/47.9
Max. Continuous AC Passthrough (grid to load) (A)	35		40	50			
Peak Power (off-grid) (W)	2 times of rated power, 10s						
Power Factor Adjustment Range	0.8 leading to 0.8 lagging						
Rated Input/Output Voltage/Range (V)	220/230 0.85Un-1.1Un						
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65						
Grid Connection Form	L+N+PE						
Total Current Harmonic Distortion THDi	<3% (of nominal power)						
DC Injection Current	<0.5% In						
Efficiency							
Max. Efficiency	97.6%						
Euro Efficiency	96.5%						
MPPT Efficiency	>99%						
Equipment Protection							
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection						
Surge Protection Level	TYPE II(DC), TYPE II(AC)						
Interface							
Communication Interface	RS485/RS232/CAN						
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)						
General Data							
Operating Temperature Range (°C)	-40 to +60°C, >45°C Derating						
Permissible Ambient Humidity	0-100%						
Permissible Altitude	2500m						
Noise (dB)	<30						
Ingress Protection(IP) Rating	IP 65						
Inverter Topology	Non-Isolated						
Over Voltage Category	OVC II(DC), OVC III(AC)						
Cabinet Size (WxHxD mm)	330×580×232 (Excluding Connectors and Brackets)						
Weight (kg)	24.9						
Type of Cooling	Intelligent Air Cooling						
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy						
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G98, G99, VDE-AR-N 4105						
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2						

Ningbo Deye Inverter Technology Co., Ltd.
Address: No. 26 South YongJiang Road, Daqi, Beilun, NingBo, Zhejiang, China. | Tel: +86 (0)574 86228841 | E-mail: market@deye.com.cn

SE-G5.1 Pro-B





- **Safer**

Cobalt Free Lithium Iron Phosphate (LFP) Battery: Safety and long Lifespan, high efficiency and high power density.
Intelligent BMS, providing complete protection.

- **Reliable**

Support high discharge power. IP20, natural cooling, wide temperature range: -20℃ to 55℃.

- **Flexible**

Modular design, easy to expand, Max. 64 units in parallel, Max. capacity of 327kWh.
Suited to residential and commercial applications for increasing the self-consumption ratio.

- **Convenient**

Battery module auto networking, easy maintenance, support remotely monitoring and upgrade, support USB drive upgrade the firmware.

- **Eco-Friendly**

Use environmental protection materials, the whole module non-toxic, pollution-free.

- **Three Mounting Methods**

19inch Standard design, support rack-mounted, wall-mounted, and floor-mounted, saving installation space.

Deye

Stock Code: 605117.SH

Model		SE-G5.1 Pro-B
Main Parameter		
Battery Chemistry		$LiFePO_4$
Capacity (Ah)		100
Scalability		Max. 64 pcs pack (327kWh) in parallel (Max. 32 pcs no external setup)
Nominal Voltage (V)		51.2
Operating Voltage(V)		43.2~57.6
Nominal Energy (kWh)		5.12
Usable Energy (kWh) [1]		4.6
Charge/Discharge Current (A) [2]	Recommend	50
	Max.	100
	Peak(2mins,25℃)	150
Other Parameter		
Recommend Depth of Discharge		90%
Dimension (W/H/D, mm)		440*133*540
Weight Approximate(kg)		45
Master LED Indicator		5LED(SOC:20%~SOC100%),3LED (working, alarming, protecting)
IP Rating of Enclosure		IP20
Operating Temperature		Charge: 0～55℃ (Optional heating: -20℃~55℃), Discharge: -20℃～55℃
Storage Temperature		0～35℃
Humidity		5%~95%
Altitude		≤2000m
Cycle Life		≥6000(25℃±2℃,0.5C/0.5C,90%DOD,70%EOL)
Installation		Wall-Mounted, Floor-Mounted, Rack-Mounted (19-inch standard cabinet, cabinet depth ≥600mm)
Communication Port		CAN2.0, RS485
Warranty Period [3]		10 years
Energy Throughput		16MWh@70%EOL
Certification		UN38.3, IEC62619, CE,UK, VDE2510-50, CEI 0-21, FCC, UL1973, UL9540A

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25℃. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

Introduction

This series lithium iron phosphate battery is one of new energy storage products developed and produced by Deye , it can be used to support reliable power for various types of equipment and systems.

This series is especially suitable for application scene of high power, limited installation space, restricted load-bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What's more, BMS can balance cells charging to extend cycle life. Multiple batteries can connect in parallel for larger capacity and longer power supporting.

Model	Accessories Parts Description	Remark
3U-LBCable150	Battery Parallel Cable (Included)	Battery power and communication parallel connection cable (when using the 3U-bracket floor mount)
3U-LPCable1500	Hybrid inverter Cable (Included)	Battery power and communication cable connect with hybrid inverter
3U-LRfe	Battery Rack Fixed Ears (Included)	Used for battery fixing with 19inch rack or cabinet
3U-Bracket	Battery Brackets (Included)	Simple stacking bracket, 1 unit including 4 pcs brackets, Max. stacking 4 floors
3U-W-Bracket	Battery Wall-Mounted Brackets and screws (Included)	Simple wall hanging support.

Model: 3U-LBCable150

Details: Pair of 150mm 4AWG Battery power cable (both ends have waterproof terminals) and one 250mm RJ45 communication cable for battery parallel.

Model: 3U-LPCable1500

Details: Pair of 4AWG DC power cable (one end has a waterproof terminal, the other end is M10 copper terminal) and one RJ45 communication cable connect with hybrid inverter. The default length is 1500mm.

Model: 3U-LRfe

Details: Pair of rack fixed ears used for battery fixing with 19inch rack or cabinet.

Model: 3U-Bracket

Details: Simple stacking bracket, height 187mm, 1 set including 4 pcs brackets, Max. stacking 4 floors.

Model: 3U-W-Bracket

Details: Pair of simple wall hanging support, included 4 sets of M6 expansion screws.

Mounting example

Floor-Mounted

Wall-Mounted

Rack-Mounted

AIKO

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

TIER 1 BloombergNEF

ESG Shanghai AIKO Energy Co., Ltd.

inter solar award 2023 WINNER

reddot winner 2023

15 year Product Warranty
Extendable to 25years*

30 year Performance Warranty

CE

TÜVRheinland

Warranty partner

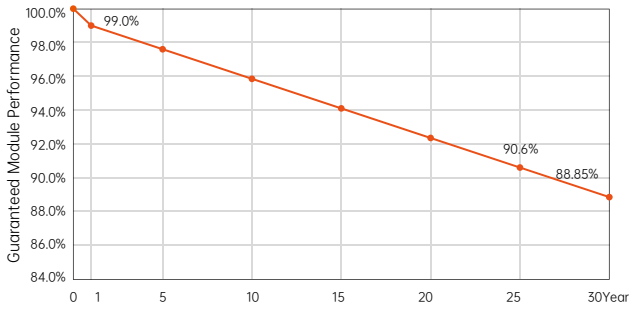
Munich RE

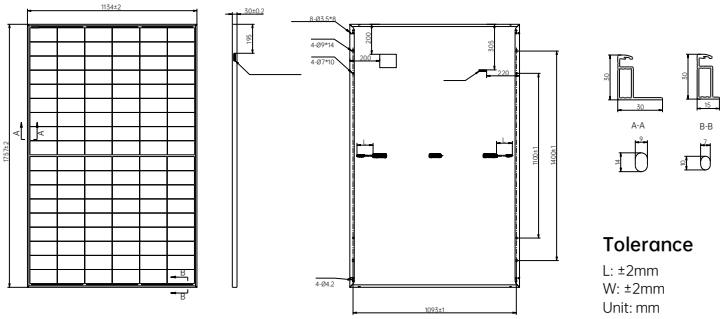
Neostar 2P

AIKO-A-MAH54Mw

485W	24.3%	≤1%	≤0.35%
Output	Efficiency	First-year Degradation	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℃ NOCT: AM1.5 800W/m² 20℃ 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	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P_{max} [W]	450	339	455	343	460	346	465	350	470	354	475	358	480	361	485	365
V_{oc} [V]	40.94	38.66	41.00	38.72	41.06	38.77	41.12	38.83	41.18	38.89	41.24	38.94	41.30	39.00	41.36	39.06
V_{mp} [V]	34.50	32.58	34.56	32.64	34.62	32.69	34.68	32.75	34.74	32.81	34.80	32.86	34.86	32.92	34.92	32.98
I_{sc} [A]	14.12	11.42	14.22	11.50	14.25	11.52	14.29	11.55	14.32	11.58	14.35	11.60	14.38	11.63	14.41	11.66
I_{mp} [A]	13.05	10.41	13.17	10.51	13.29	10.61	13.41	10.71	13.54	10.80	13.66	10.90	13.78	10.99	13.90	11.09
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	4mm²(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%/ ℃
Temperature Coefficient of V_{oc}	- 0.22%/ ℃
Temperature Coefficient of P_{max}	- 0.26%/ ℃

Installation Guide

Operation Temperature	-40℃ - +85℃
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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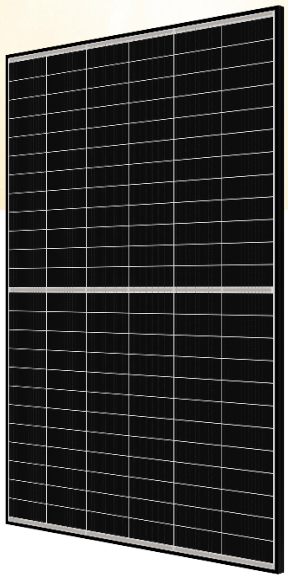
NEW

CanadianSolar



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%/°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*

25 Years **Industry Leading Product Warranty on Materials and Workmanship***

30 Years **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.

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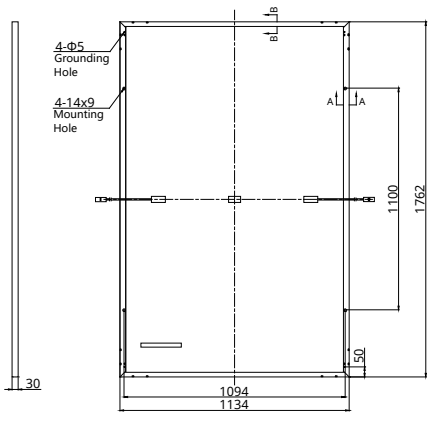
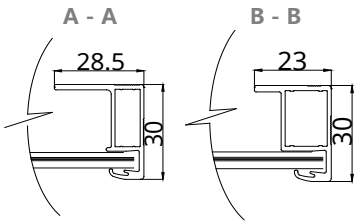
ENGINEERING DRAWING (mm)

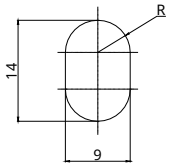
Rear View



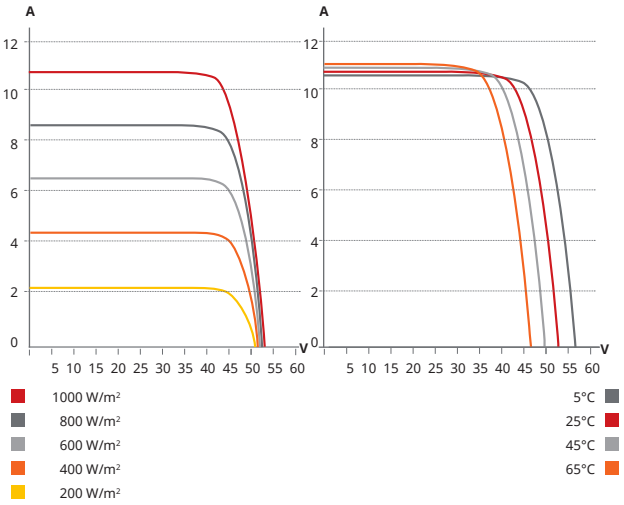
Frame Cross Section



Mounting Hole



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 × 1134 × 30 mm (69.4 × 44.6 × 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 mm² (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.

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