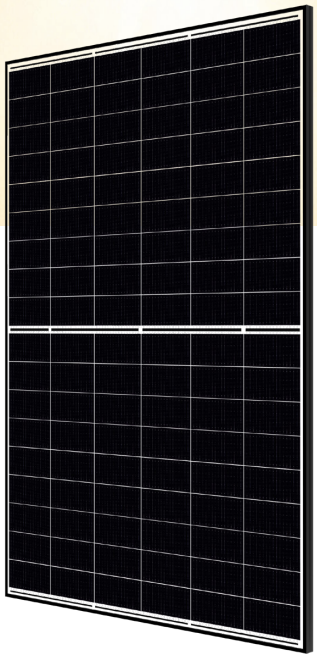
NEW

Preliminary Technical Information Sheet

CanadianSolar



New N-type Bifacial Module

TOPBiHiKu6

CS6.2-54TB-470|475|480|485|490|495|500|505|510|515|520|525|530|535|540|545 (IEC1500V)

MORE POWER

Elegant dual-glass design for installations on rooftops, carports, etc

545 W

Module power up to 545 W
Module efficiency up to 24.5 %

EXTRA POWER

Up to 80% 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

Tested up to ice ball of 35 mm diameter according to IEC 61215 standard

Minimizes micro-crack impacts

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

25 Years **Enhanced 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%**

*According to the applicable Canadian Solar Limited Warranty Statement.

**The value is only for the front side of the module and is not applicable to the rear side of the modules. The rear side value will be no less than the actual power of front side mutiplied to the bifaciality factor.

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*

* 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.

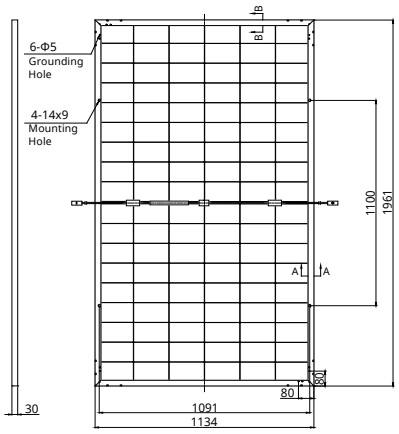
CSI Solar Co., Ltd., a BNEF Tier 1 and S&P Global Tier 1 module manufacturer, is a leading provider of integrated solar and energy storage solutions. With over 24 years of expertise, the company has delivered more than 165 GW of premium-quality solar modules worldwide.

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

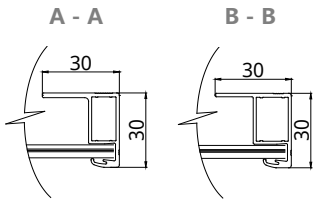
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ENGINEERING DRAWING (mm)

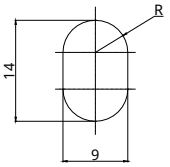
Rear View



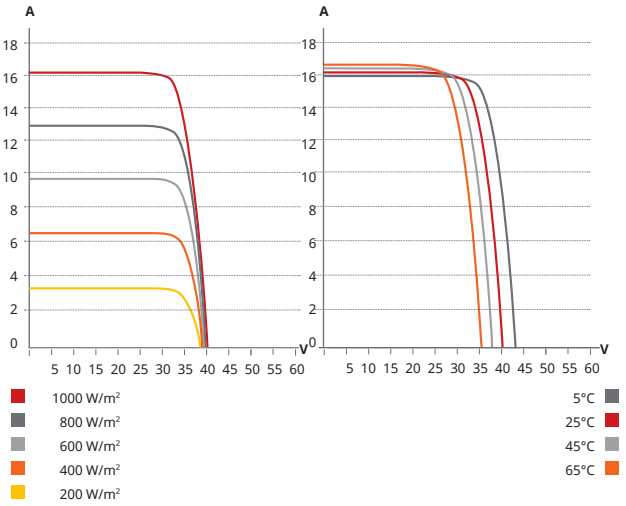
Frame Cross Section



Mounting Hole



CS6.2-54TB-515 (IEC1500V) / I-V CURVES



ELECTRICAL DATA (STC & BNPI & BSI)* | CS6.2-54TB-xxx (IEC1500V) (xxx=470-495)

Testing Conditions	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI
Nominal Max. Power - Pmax (Wp)	470	521	#	475	526	#	480	532	#	485	537	#	490	543	#	495	548	#
Opt. Operating Voltage - Vmp (V)	32.2	#	#	32.4	#	#	32.6	#	#	32.8	#	#	33.0	#	#	33.2	#	#
Opt. Operating Current -Imp (A)	14.60	#	#	14.67	#	#	14.73	#	#	14.79	#	#	14.85	#	#	14.91	#	#
Open Circuit Voltage - Voc (V)	38.4	38.7	#	38.6	38.9	#	38.8	39.1	#	39.0	39.3	#	39.2	39.5	#	39.4	39.7	#
Short Circuit Current - Isc (A)	15.61	17.30	19.36	15.67	17.36	19.43	15.74	17.44	19.52	15.80	17.51	19.59	15.86	17.57	19.67	15.91	17.63	19.73
Module Efficiency (%)		21.1			21.4			21.6			21.8			22.0			22.3	

* STC: Irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C. BNPI: Irradiance of front 1000 W/m², rear 135 W/m². BSI: Irradiance of front 1000 W/m², rear 300 W/m².

Measurement uncertainty: ±3 % (Pmax), ±5% (Voc, Isc).

Electrical DATA (5% & 10% Bifacial Gain**)

Bifacial Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Total Equivalent Power - Pmax (Wp)	494	517	499	523	504	528	509	534	515	539	520	545
Opt. Operating Voltage - Vmp (V)	32.2	32.2	32.4	32.4	32.6	32.6	32.8	32.8	33.0	33.0	33.2	33.2
Opt. Operating Current -Imp (A)	15.33	16.06	15.40	16.14	15.47	16.20	15.53	16.27	15.59	16.34	15.66	16.40
Open Circuit Voltage - Voc (V)	38.4	38.4	38.6	38.6	38.8	38.8	39.0	39.0	39.2	39.2	39.4	39.4
Short Circuit Current - Isc (A)	16.39	17.17	16.45	17.24	16.53	17.31	16.59	17.38	16.65	17.45	16.71	17.50
Module Efficiency (%)	22.2	23.2	22.4	23.5	22.7	23.7	22.9	24.0	23.2	24.2	23.4	24.5

** Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

MECHANICAL DATA

Specification	Data
Cell Type	TOPCon cells
Cell Arrangement	108 [2 x (9 x 6)]
Dimensions	1961 × 1134 × 30 mm (77.2 × 44.6 × 1.18 in)
Weight	27.0 kg (59.5 lbs)
Front Glass	2.0 mm heat strengthened glass with anti-reflecti-ve 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: 1250 mm (49.2 in)*
Connector	Tlian: T6 Stäubli: PV-KST4-EVO2A/6I, PV-KBT4-EVO2A/6I
Per Pallet	36 pieces
Per Container (40' HQ)	864 pieces

* For detailed information, please contact your local Canadian Solar sales and technical represen-tatives.

ELECTRICAL DATA

Operating Temperature	-40°C ~ +85°C
Module (T98)max	70°C
Max. System Voltage	1500 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC61730)
Max. Series Fuse Rating	35 A
Protection Class	Class II
Power Tolerance	- 5 W ~ + 10 W
Power Bifaciality*	80 %

* Power Bifaciality = $Pmax_{rear}$ / $Pmax_{front}$, both $Pmax_{rear}$ and $Pmax_{front}$ are tested under STC. Bifaciality coefficient (±5%): φVoc=99%, φIsc=80%, φPmax=80%.

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

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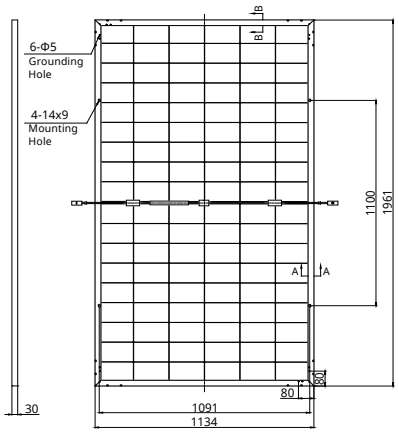
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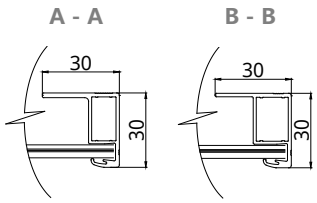
* Manufactured and assembled in China and Thailand.

ENGINEERING DRAWING (mm)

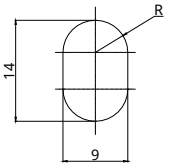
Rear View



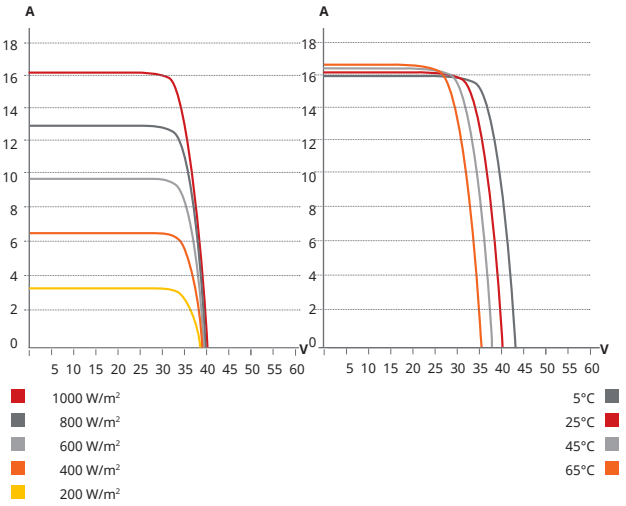
Frame Cross Section



Mounting Hole



CS6.2-54TB-515 (IEC1500V) / I-V CURVES



ELECTRICAL DATA (STC & BNPI & BSI)* | CS6.2-54TB-xxx (IEC1500V) (xxx=500-525)

Testing Conditions	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI
Nominal Max. Power - Pmax (Wp)	500	554	#	505	560	#	510	565	#	515	571	#	520	576	#	525	582	#
Opt. Operating Voltage - Vmp (V)	33.4	#	#	33.6	#	#	33.8	#	#	34.0	#	#	34.2	#	#	34.4	#	#
Opt. Operating Current -Imp (A)	14.98	#	#	15.04	#	#	15.10	#	#	15.16	#	#	15.22	#	#	15.28	#	#
Open Circuit Voltage - Voc (V)	39.6	39.9	#	39.8	40.1	#	40.0	40.3	#	40.2	40.5	#	40.4	40.7	#	40.8	41.1	#
Short Circuit Current - Isc (A)	16.00	17.73	19.84	16.05	17.78	19.90	16.10	17.84	19.96	16.15	17.89	20.03	16.20	17.95	20.09	16.25	18.01	20.15
Module Efficiency (%)		22.5			22.7			22.9			23.2			23.4			23.6	

* STC: Irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C. BNPI: Irradiance of front 1000 W/m², rear 135 W/m². BSI: Irradiance of front 1000 W/m², rear 300 W/m².

Measurement uncertainty: ±3 % (Pmax), ±5% (Voc, Isc).

Electrical DATA (5% & 10% Bifacial Gain**)

Bifacial Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Total Equivalent Power - Pmax (Wp)	525	550	530	556	536	561	541	567	546	572	551	578
Opt. Operating Voltage - Vmp (V)	33.4	33.4	33.6	33.6	33.8	33.8	34.0	34.0	34.2	34.2	34.4	34.4
Opt. Operating Current -Imp (A)	15.73	16.48	15.79	16.54	15.86	16.61	15.92	16.68	15.98	16.74	16.04	16.81
Open Circuit Voltage - Voc (V)	39.6	39.6	39.8	39.8	40.0	40.0	40.2	40.2	40.4	40.4	40.8	40.8
Short Circuit Current - Isc (A)	16.80	17.60	16.85	17.66	16.91	17.71	16.96	17.77	17.01	17.82	17.06	17.88
Module Efficiency (%)	23.6	24.7	23.8	25.0	24.1	25.2	24.3	25.5	24.6	25.7	24.8	26.0

** Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

MECHANICAL DATA

Specification	Data
Cell Type	TOPCon cells
Cell Arrangement	108 [2 x (9 x 6)]
Dimensions	1961 × 1134 × 30 mm (77.2 × 44.6 × 1.18 in)
Weight	27.0 kg (59.5 lbs)
Front Glass	2.0 mm heat strengthened glass with anti-reflecti-ve 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: 1250 mm (49.2 in)*
Connector	Tlian: T6 Stäubli: PV-KST4-EVO2A/6I, PV-KBT4-EVO2A/6I
Per Pallet	36 pieces
Per Container (40' HQ)	864 pieces

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

ELECTRICAL DATA

Operating Temperature	-40°C ~ +85°C
Module (T98)max	70°C
Max. System Voltage	1500 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC61730)
Max. Series Fuse Rating	35 A
Protection Class	Class II
Power Tolerance	- 5 W ~ + 10 W
Power Bifaciality*	80 %

* Power Bifaciality = $Pmax_{rear}$ / $Pmax_{front}$, both $Pmax_{rear}$ and $Pmax_{front}$ are tested under STC. Bifaciality coefficient (±5%): φVoc=99%, φIsc=80%, φPmax=80%.

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

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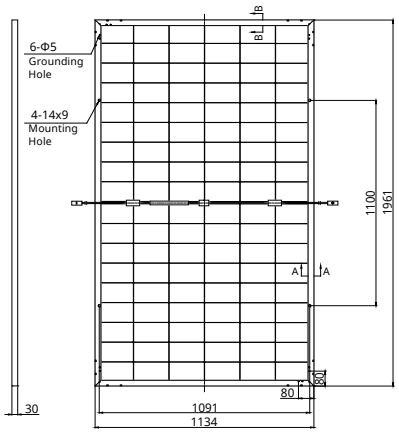
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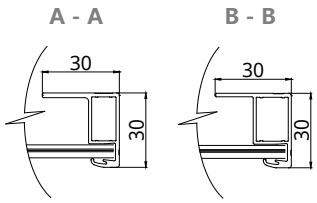
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ENGINEERING DRAWING (mm)

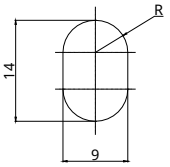
Rear View



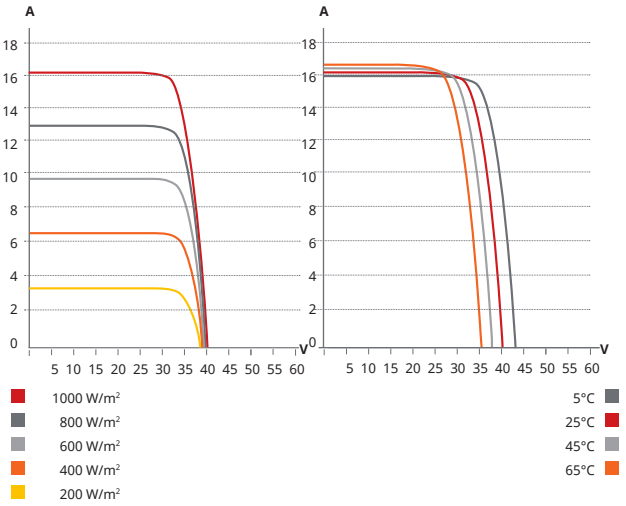
Frame Cross Section



Mounting Hole



CS6.2-54TB-515 (IEC1500V) / I-V CURVES



ELECTRICAL DATA (STC & BNPI & BSI)* | CS6.2-54TB-xxx (IEC1500V) (xxx=530-545)

Testing Conditions	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI	STC	BNPI	BSI
Nominal Max. Power - Pmax (Wp)	530	587	#	535	593	#	540	598	#	545	604	#
Opt. Operating Voltage - Vmp (V)	34.6	#	#	34.8	#	#	35.0	#	#	35.2	#	#
Opt. Operating Current -Imp (A)	15.34	#	#	15.40	#	#	15.45	#	#	15.50	#	#
Open Circuit Voltage - Voc (V)	41.0	41.3	#	41.2	41.5	#	41.4	41.7	#	41.8	42.1	#
Short Circuit Current - Isc (A)	16.30	18.06	20.21	16.35	18.12	20.27	16.40	18.17	20.34	16.45	18.23	20.40
Module Efficiency (%)		23.8			24.1			24.3			24.5	

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Measurement uncertainty: ±3 % (Pmax), ±5% (Voc, Isc).

Electrical DATA (5% & 10% Bifacial Gain**)

Bifacial Gain	5%	10%	5%	10%	5%	10%	5%	10%
Total Equivalent Power - Pmax (Wp)	557	583	562	589	567	594	572	600
Opt. Operating Voltage - Vmp (V)	34.6	34.6	34.8	34.8	35.0	35.0	35.2	35.2
Opt. Operating Current -Imp (A)	16.11	16.87	16.17	16.94	16.22	17.00	16.28	17.05
Open Circuit Voltage - Voc (V)	41.0	41.0	41.2	41.2	41.4	41.4	41.8	41.8
Short Circuit Current - Isc (A)	17.12	17.93	17.17	17.99	17.22	18.04	17.27	18.10
Module Efficiency (%)	25.0	26.2	25.3	26.5	25.5	26.7	25.7	27.0

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Operating Temperature	-40°C ~ +85°C
Module (T98)max	70°C
Max. System Voltage	1500 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC61730)
Max. Series Fuse Rating	35 A
Protection Class	Class II
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Specification	Data
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Temperature Coefficient (Voc)	-0.25 % / °C
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Nominal Module Operating Temperature	41 ± 3°C

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