

100/125 kW, 1500 Vdc String Inverters for North America

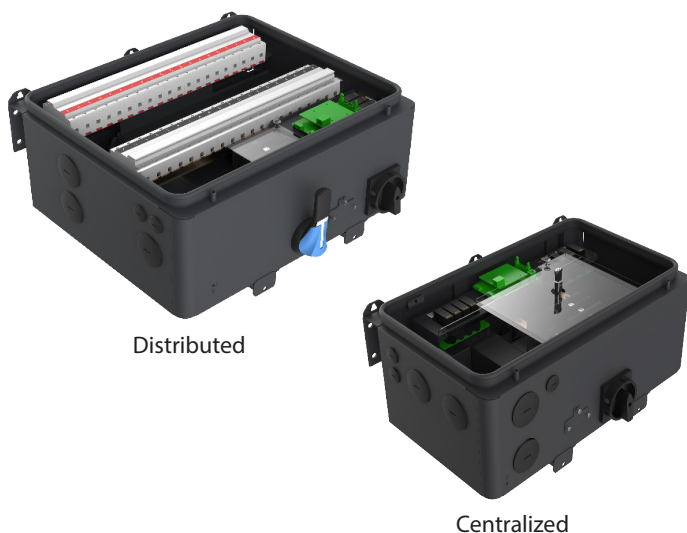


CPS SCH100/125KTL-DO/US-600

The 100 and 125 kW high power CPS three-phase string inverters are designed for ground mount and carport applications at 1500 Vdc. The units are high performance, advanced, and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges, and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125 kW products ship with the Distributed or Centralized Wire Box, each fully integrated and separable with AC and DC disconnect switches. Enhanced DC Wire Boxes are available to allow DC disconnection under short circuit conditions. The CPS FlexOM Gateway enables communication, controls, and remote product upgrades.

Key Features

- UL 1741-SA/SB and IEEE 1547-2018 certified
- Touch-safe DC Fuse holders add convenience and safety
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper- and aluminum-compatible AC connections
- NEMA Type 4X outdoor rated enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100 kW @ 0.9 PF and 125 kW @ 0.95 PF
- Generous 1.87 (100 kW) and 1.5 (125 kW) DC/AC inverter load ratios
- Separable wire box design for fast service
- Enhanced DC wire boxes available



Standard Wire Boxes



Enhanced DC Wire Boxes

Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV power	187.5 kW	
Max. DC input voltage	1500 V	
Operating DC input voltage range	860-1450 Vdc	
Start-up DC input voltage / power	900 V / 250 W	
Number of MPP trackers	1	
MPPT voltage range ¹	870-1300 Vdc	
Max. PV short-circuit current ²	220 A	
Number of DC inputs	Distributed Wire Box: 20 PV source circuits, positive and negative fused Centralized Wire Box: 1 input circuit, 1-2 terminations per pole, non-fused	
DC disconnection type	Load-rated DC switch	
DC surge protection	Type II MOV (with indicator/remote signaling)	
AC Output		
Rated AC output power ³	100 kW	125 kW
Max. AC apparent power (selectable ⁴)	100 kVA / 111 kVA (PF>0.9)	125 kVA / 132 kVA (PF>0.95)
Rated output voltage	600 Vac	
Output voltage range ⁵	528-660 Vac	
Grid connection type ⁶	3Φ / PE / N (neutral optional)	
Max. AC output current @ 600 Vac	96.2 A (@ 100 kVA) / 106.8 A (@ 111 kVA)	120.3 A (@ 125 kVA) / 127.0 A (@ 132 kVA)
Rated output frequency	60 Hz	
Output frequency range ⁵	57-63 Hz	
Power factor	>0.99 (±0.8 adjustable)	
Current TRD @ rated load	< 3%	
Max. fault current contribution (1 cycle RMS)	41.47 A	
Max. OCPD rating	200 A	
AC disconnection type	Load-rated AC switch	
AC surge protection	Type II MOV (with indicator/remote signaling)	
System		
Topology	Transformerless	
Max. efficiency	99.1%	
CEC efficiency	98.5%	
Standby / night consumption	< 4 W	
Environment		
Enclosure protection degree	NEMA Type 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range ⁴	-22°F to 140°F / -30°C to 60°C	
Non-operating temperature range	-40°F to 158°F / -40°C to 70°C	
Operating humidity	0-100%	
Operating altitude	8202 ft / 2500 m (no derating)	
Audible noise	< 65 dBA @ 1 m and 77°F (25°C)	
Display and Communication		
User interface and display	LED indicators, Wi-Fi and app	
Inverter monitoring	Modbus RS485	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W × H × D)	Distributed Wire Box: 45.28 × 24.25 × 9.84 in (1150 × 616 × 250 mm) Centralized Wire Box: 39.37 × 24.25 × 9.84 in (1000 × 616 × 250 mm)	
Weight	Inverter: 121 lbs (55 kg) Distributed Wire Box: 55 lbs (25 kg) Centralized Wire Box: 33 lbs (15 kg)	
Mounting / installation angle	15-90 degrees from horizontal (vertical or angled)	
AC termination	M10 stud type terminal [3Φ] (wire range: 1/0 AWG-500 kcmil CU/AL; lugs not supplied) Screw clamp terminal block [N] (#12-1/0 AWG CU/AL)	
DC termination	Distributed Wire Box: Screw clamp fuse holder (wire range: #12-#6 AWG CU) Centralized Wire Box: Busbar, M10 bolts (wire range: #1 AWG-500 kcmil CU/AL [1 termination per pole], #1 AWG-300 kcmil CU/AL [2 terminations per pole]; lugs not supplied)	
Fused string inputs	Distributed Wire Boxes: 20 A or 25 A fuses provided (fuse values up to 30 A acceptable)	
Safety		
Certifications and standards	UL 1741-SA/SB Ed. 3, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART15	
Selectable grid standards	IEEE 1547a-2014, IEEE 1547-2018 ⁷ , CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Vol-Watt	
Warranty		
Standard	5 years	
Extended terms	10, 15, and 20 years	

1) See user manual for further information regarding MPPT voltage range when operating at non-unity PF.

2) The sum of parallel-connected PV module short-circuit currents.

3) 100 kW active power derating begins at 113°F (45°C) when MPPT ≥ Vmin; 125 kW active power derating begins at 107.6°F (42°C) when PF = ±0.95 and MPPT ≥ Vmin, and at 113°F (45°C) when PF=1 and MPPT ≥ Vmin.

4) Inverters are factory set to 100 kVA and 125 kVA by default. Contact CPS to enable the higher kVA setting.

5) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.

6) Delta configurations must not be corner-grounded.

7) Firmware version 12.0 or later required.



/ SHP 125-US-21 / SHP 150-US-21 / SHP 165-US-21 / SHP 172-US-21



Sunny Highpower PEAK3-US

125 / 150 / 165 / 172

A superior distributed generation
solution for large-scale power plants

25 YEAR
DESIGN LIFE



SMA
Smart Connected



Cost effective

- Modular architecture reduces BOS and maximizes system uptime
- Compact design and high power density maximize transportation and logistical efficiency

Maximum flexibility

- Scalable 1,500 VDC building block with best-in-class performance
- Flexible architecture creates scalability while maximizing land usage

Simple install, commissioning

- Ergonomic handling and simple connections enable quick installation
- Centralized commissioning and control with SMA Data Manager

Highly innovative

- SMA Smart Connected reduces O&M costs and simplifies field-service
- Powered by award winning ennexOS cross sector energy management platform

The Sunny Highpower PEAK3 1,500 VDC inverter offers high power density in a modular architecture that achieves a cost-optimized solution for large-scale PV integrators.

With fast, simple installation and commissioning, the PEAK3 is accelerating the path to energization. SMA has also brought its field-proven Smart Connected technology to the PEAK3, which simplifies O&M and contributes to lower lifetime service costs. The PEAK3 power plant solution is powered by the ennexOS cross sector energy management platform, 2018 winner of the Intersolar smarter E AWARD.

SHP-US\$-en-23 Changes to products and services, including those resulting from country-specific requirements, as well as deviations from technical data are subject to change at any time without notice. SMA assumes no liability for typographical or other errors. Please visit www.SMA-Solar.com for the latest information.


BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-XXXDE19R

PRODUCT RANGE: 560-585W

585W

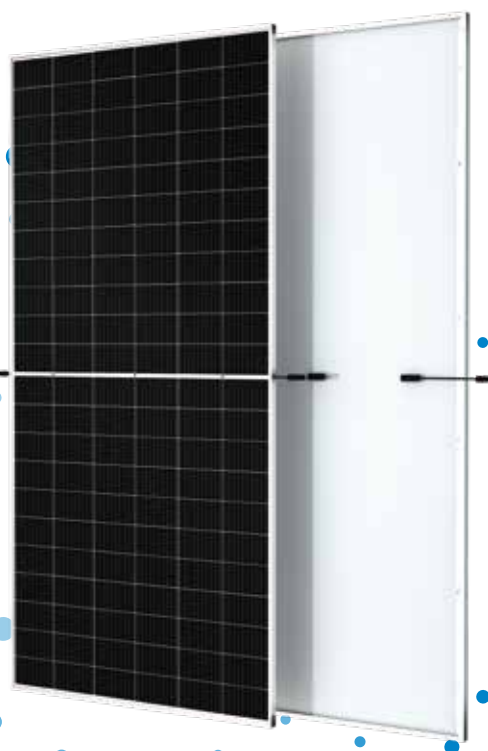
MAXIMUM POWER OUTPUT

0~+5W

BINNING TOLERANCE

21.6%

MAXIMUM EFFICIENCY



High customer value

- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lower first year and annual degradation
- Designed for compatibility with existing mainstream system components
- Higher return on Investment



High power up to 585W

- Up to 21.6% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



High reliability

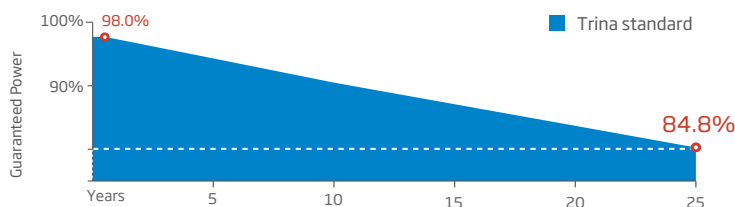
- Minimized micro-cracks with innovative non-destructive cutting technology
- Resistant to harsh environments such as salt, ammonia, high temperature and high humidity areas and Fire class rating C
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load



High energy yield

- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions
- Lower temperature coefficient (-0.34%) and operating temperature

Trina Solar's Backsheet Performance Warranty



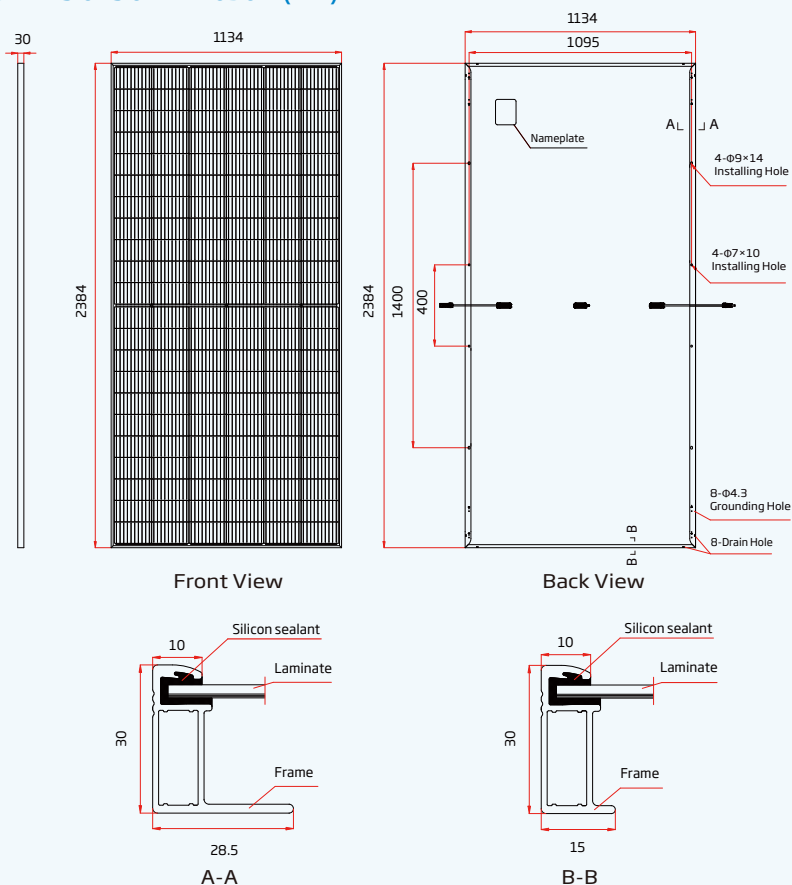
Comprehensive Products and System Certificates



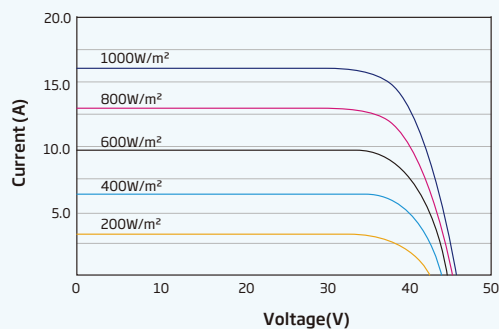
IEC61215/IEC61730/IEC61701/IEC62716
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



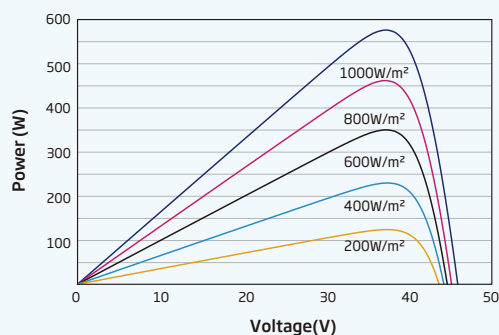
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(575 W)



P-V CURVES OF PV MODULE(575W)



ELECTRICAL DATA (STC) TSM-XXXDE19R(XXX=560-585)

Peak Power Watts-P _{MAX} (Wp)*	560	565	570	575	580	585
Binning Tolerance-P _{MAX} (W)	0 ~ +5					
Maximum Power Voltage-V _{MPP} (V)	38.0	38.3	38.5	38.8	39.0	39.3
Maximum Power Current-I _{MPP} (A)	14.72	14.76	14.79	14.83	14.86	14.90
Open Circuit Voltage-V _{OC} (V)	45.3	45.6	45.8	46.1	46.3	46.6
Short Circuit Current-I _{SC} (A)	15.76	15.81	15.85	15.90	15.94	15.99
Module Efficiency η _m (%)	20.7	20.9	21.1	21.3	21.5	21.6

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

Maximum Power-P _{MAX} (Wp)	423	428	431	435	439	443
Maximum Power Voltage-V _{MPP} (V)	35.1	35.3	35.5	35.8	35.9	36.2
Maximum Power Current-I _{MPP} (A)	12.06	12.10	12.13	12.17	12.20	12.24
Open Circuit Voltage-V _{OC} (V)	42.6	42.9	43.1	43.4	43.6	43.9
Short Circuit Current-I _{SC} (A)	12.70	12.74	12.77	12.81	12.84	12.88

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1134×30 mm (93.86×44.65×1.18 inches)
Weight	28.8kg (63.49 lb)
Glass	3.2 mm (0.13 inches), High Transmission, Tempered Glass
Encapsulant material	EVA/POE
Backsheet	White
Frame	30mm(1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²), Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	Staubli MC4 EVO2 / Trina Solar TS4 Plus/ Trina Solar TS4

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P _{MAX}	-0.34%/°C
Temperature Coefficient of V _{OC}	-0.25%/°C
Temperature Coefficient of I _{SC}	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A

WARRANTY

12 year Product Workmanship Warranty
25 year Power Warranty
2% first year degradation
0.55% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

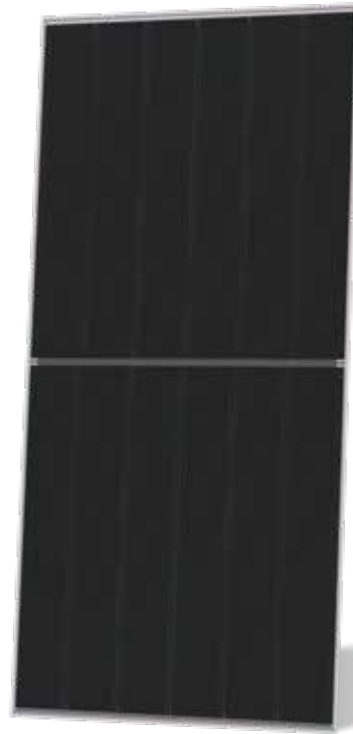
Modules per box: 36 pieces
Modules per 40' container: 720 pieces

66QL6-BDV

650-670 Watt

85±5% Bifaciality

BIFACIAL MODULE



Higher Power on Front Side

Leading power class based on the enhanced N-type TOPCon platform, through cutting-edge technology and an optimized layout that captures more sunlight.



Better Generation on Rear Side

Enabling industry-leading bifaciality in TOPCon cells through an improved structure that enhances light absorption and trapping.



Optimized Heat Resistance

Optimized temperature coefficient via advanced graphical patterning, busbar and multi-cells technology.



Proven Low Light Performance

Enhanced cell structure ensures superior module performance under low-light conditions.



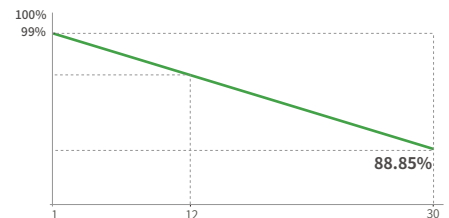
Industry Leading Warranty

Advanced metallization and iterated module encapsulation deliver superior resistance to PID, LID / LeTID, and UV degradation.



Mechanical Load Enhanced

Certified to withstand:
5400 Pa front side max static test load
2400 Pa rear side max static test load



12 Year
Product Warranty

30 Year
Linear Power
Warranty

1%
First-year
Degradation

0.35%
Annual Degradation
Over 30 Years

- IEC61215:2021 / IEC61730:2023
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



POSITIVE QUALITY™
Continuous Quality Assurance

JKM650-670N-66QL6-BDV-F2-EN

66QL6-BDV 650-670 Watt

Mechanical Characteristics

Cell Type	N- type Mono-crystalline
No. of Cells	264 (66×4)
Dimensions	2382×1134×30 mm
Weight	32.5 kg
Front Glass	2.0 mm, Anti-reflection Coating
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	JK03M / JK03M2 / Others*
Output Cables (Including Connector)	4.0 mm ² (+): 600 mm , (-): 400 mm or Customized Length

*MC4-EVO2 available upon request and subject to availability

Packaging Configuration

Pallet Dimensions	2396×1110×1251 mm
Packing Detail (Two pallets = One stack)	36 pcs/pallet, 72 pcs/stack, 720 pcs/ 40'HQ Container

Specifications (STC)

Maximum Power - Pmax [Wp]	650	655	660	665	670
Maximum Power Voltage - Vmp [V]	42.57	42.70	42.83	42.96	43.09
Maximum Power Current - Imp [A]	15.27	15.34	15.41	15.48	15.55
Open-circuit Voltage - Voc [V]	50.26	50.44	50.62	50.80	50.98
Short-circuit Current - Isc [A]	15.98	16.04	16.10	16.16	16.22
Module Efficiency STC [%]	24.06	24.25	24.43	24.62	24.80
Bifacial Factor	85 ± 5%				
Power Tolerance	0 ~ +3 %				
Temperature Coefficient of Pmax	-0.26 %/°C				
Temperature Coefficient of Voc	-0.24 %/°C				
Temperature Coefficient of Isc	0.046 %/°C				

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

Specifications (BNPI)

Maximum Power - Pmax [Wp]	724	729	735	741	746
Maximum Power Voltage - Vmp [V]	42.52	42.69	42.86	43.03	43.20
Maximum Power Current - Imp [A]	17.04	17.10	17.17	17.23	17.30
Open-circuit Voltage - Voc [V]	50.38	50.56	50.74	50.92	51.10
Short-circuit Current - Isc [A]	17.80	17.87	17.94	18.00	18.07

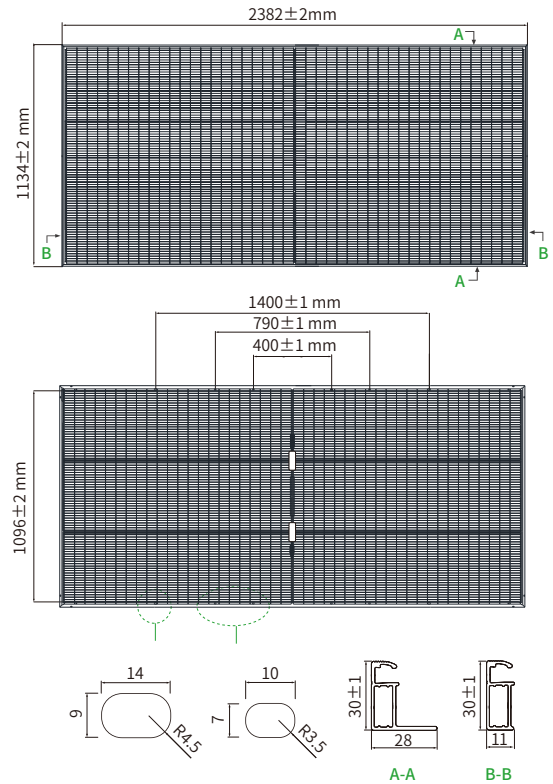
BNPI: Irradiance: Front 1000W/m², Rear 135W/m², Cell Temperature 25°C, AM=1.5

Application Conditions

Level T ₉₈ ≤ 70 °C	-40 °C ~ +70 °C*
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	35 A
Bifaciality Coefficients	φVoc: 98±5 %, φIsc: 85±5 %, φPmax: 85±5 %

*Short-term up to 85°C; higher operation requires IEC TS 63126 testing

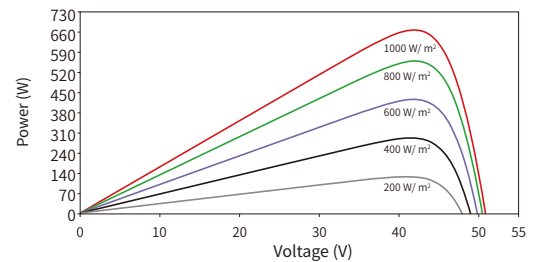
Engineering Drawings



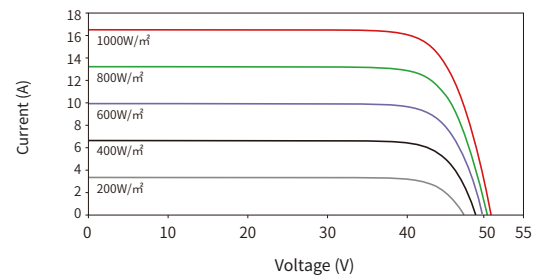
Note: For specific dimensions and tolerance ranges, please refer to the corresponding detailed module drawings.

Electrical Performance

Power-Voltage Curves (66QL6-BDV 660W)



Current-Voltage Curves (66QL6-BDV 660W)



Jinko Solar

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Note: Please read the safety and installation manual before using the product. We reserve the right of final interpretation. The specifications in this datasheet are subject to change without notice.

JKM650-670N-66QL6-BDV-F2-EN

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