

SOLECTRIA® XGI 1500-166 SERIES

PREMIUM 3-PHASE TRANSFORMERLESS UTILITY-SCALE INVERTERS

FEATURES

- Made in the USA with global components
- Buy American Act (BAA) compliant
- Four models:
 - 125kW/125kVA,
 - 125kW/150kVA,
 - 150kW/166kVA,
 - 166kW/166kVA
- Additional models available certified to UL1699b, Photovoltaic DC Arc-Fault Circuit Protection
- 99.0% peak efficiency
- Flexible solution for distributed and centralized system architecture
- Advanced grid-support functionality Rule 21/UL1741SA
- Robust, dependable, & built to last
- Lowest O&M and installation costs
- Access all inverters on site via WiFi from one location
- Remote diagnostics and firmware upgrades
- SunSpec Modbus Certified
- Tested compatible with the TESLA PowerPack Microgrid System app for system visibility

OPTIONS

- String combiners for distributed and centralized systems
- Web-based monitoring
- Extended warranty



Yaskawa Solectria Solar's XGI 1500 utility-scale string inverters are designed for high reliability and built of the highest quality components that were selected, tested and proven to last beyond their warranty.

XGI 1500 inverters provide advanced grid-support functionality and meet the latest IEEE 1547 and UL 1741 standards for safety. They are the most powerful 1500 VDC string inverters in the PV market and have been engineered for both distributed and centralized system architecture.

Designed and engineered in Lawrence, MA, XGI inverters are assembled and tested at Yaskawa America's facilities in Buffalo Grove, IL. They are Made in the USA with global components and are compliant with the Buy American Act.

SOLECTRIA® XGI 1500-166 SERIES TECHNICAL DATA

SPECIFICATIONS

SOLECTRIA XGI 1500 Model		XGI 1500-125/125-UL XGI 1500-125/125-UL-A	XGI 1500-125/150-UL XGI 1500-125/150-UL-A	XGI 1500-150/166-UL XGI 1500-150/166-UL-A	XGI 1500-166/166-UL XGI 1500-166/166-UL-A	
DC Input	Absolute Max Input Voltage	1500 VDC	1500 VDC	1500 VDC	1500 VDC	
	Max Power Input Voltage Range (MPPT)	860-1250 VDC	860-1250 VDC	860-1250 VDC	860-1250 VDC	
	Operating Voltage Range (MPPT)	860-1450 VDC	860-1450 VDC	860-1450 VDC	860-1450 VDC	
	Number of MPP Trackers	1 MPPT	1 MPPT	1 MPPT	1 MPPT	
	Max Operating Input Current	148.3 A	148.3 A	178.0 A	197.7 A	
	Max Operating PV Power	128 kW	128 kW	153 kW	170 kW	
	Max DC/AC Ratio Max Rated PV Power	2.6 332 kW	2.6 332 kW	2.2 332 kW	2.0 332 kW	
	Max Rated PV Short-Circuit Current ($\Sigma I_{sc} \times 1.25$)	500 A	500 A	500 A	500 A	
AC Output	Nominal Output Voltage	600 VAC, 3-Ph	600 VAC, 3-Ph	600 VAC, 3-Ph	600 VAC, 3-Ph	
	AC Voltage Range	-12% to +10%	-12% to +10%	-12% to +10%	-12% to +10%	
	Continuous Real Output Power	125 kW	125 kW	150 kW	166 kW	
	Continuous Apparent Output Power	125 kVA	150 kVA	166 kVA	166 kVA	
	Max Output Current	120 A	144 A	160 A	160 A	
	Nominal Output Frequency	60 Hz	60 Hz	60 Hz	60 Hz	
	Power Factor (Unity default)	+/- 0.80 Adjustable	+/- 0.80 Adjustable	+/- 0.80 Adjustable	+/- 0.80 Adjustable	
	Total Harmonic Distortion (THD) @ Rated Load	<3%	<3%	<3%	<3%	
	Grid Connection Type	3-Ph + N/GND	3-Ph + N/GND	3-Ph + N/GND	3-Ph + N/GND	
	Fault Current Contribution (1 cycle RMS)	144 A	173 A	192 A	192 A	
	Efficiency	Peak Efficiency	98.9%	98.9%	99.0%	99.0%
		CEC Average Efficiency	98.5%	98.5%	98.5%	98.5%
Tare Loss		<1 W	<1 W	<1 W	<1 W	
Temperature	Ambient Temp Range	-40°F to 140°F (-40C to 60C)		-40°F to 140°F (-40C to 60C)		
	De-Rating Temperature	122°F (50C)		113°F (45C)		
	Storage Temperature Range	-40°F to 167°F (-40C to 75C)		-40°F to 167°F (-40C to 75C)		
	Relative Humidity (non-condensing)	0 - 95%		0 - 95%		
	Operating Altitude	Full Power up to 9,840 ft (3.0 km); De-Rate to 70% of Full Power at 13,123 ft (4.0 km)				
Communications	Advanced Graphical User Interface	WiFi				
	Communication Interface	Ethernet				
	Third-Party Monitoring Protocol	SunSpec Modbus TCP/IP				
	Web-Based Monitoring	Optional				
	Firmware Updates	Remote and Local				
Testing & Certifications	Safety Listings & Certifications	UL 1741, IEEE 1547, UL 1998 (All models) UL 1699b Photovoltaic Arc-Fault Circuit Protection Certified (-A models)				
	Advanced Grid Support Functionality	Rule 21, UL 1741SA				
	Testing Agency	ETL				
Warranty	FCC Compliance	FCC Part 15 (Subpart B, Class A)				
	Standard and Options	5 Years Standard; Option for 10 Years				
Enclosure	Acoustic Noise Rating	73 dBA @ 1 m ; 67dBA @ 3 m				
	DC Disconnect	Integrated 2-Pole 250 A DC Disconnect				
	Mounting Angle	Vertical only				
	Dimensions	Height: 29.5 in. (750 mm) Width: 39.4 in. (1000 mm) Depth: 15.1 in. (380 mm)				
	Weight	270 lbs (122 kg)				
	Enclosure Rating and Finish	Type 4X, Polyester Powder-Coated Aluminum				



ZXM7-SHLDD144 Series ZNSHINESOLAR

Znshinesolar 10BB HALF-CELL Bifacial Light-Weight Double Glass Monocrystalline PERC PV Module

525W | 530W | 535W | 540W | 545W | 550W



Excellent cells efficiency

MBB technology decreases the distance between busbar and finger grid line which is benefit to power increase.



Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



TIER 1

Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing.



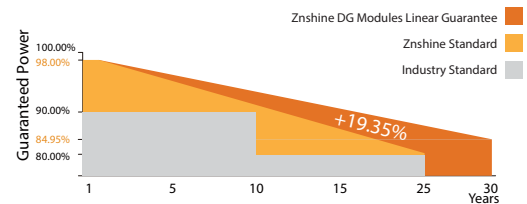
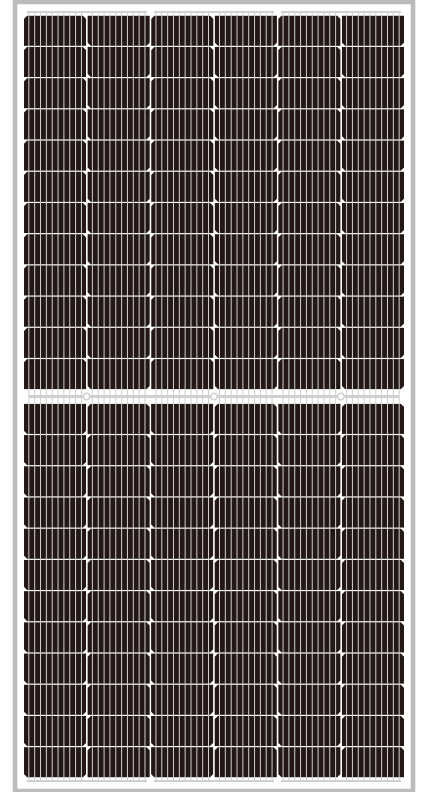
Excellent Quality Management System

Warranted reliability and stringent quality assurances well beyond certified requirements.



Bifacial Technology

Up to 25% additional power gain from back side depending on albedo.



12 years product guarantee
30 years output guarantee



0.45% annual degradation
over 30 years



IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO45001: Occupational Health and Safety Management System

Founded in 1988, ZNShine solar is a world's leading high-tech PV module manufacturer. With the state-of-the-art production lines, the company boasts module capacity of 6GW. Bloomberg has listed ZNShine as a global Tier 1 PV module maker. Today Znshine has distributed its sales to more than 60 countries around the globe.

www.znshinesolar.com

ELECTRICAL CHARACTERISTICS | STC*

Nominal Power Watt Pmax(W)*	525	530	535	540	545	550
Power Output Tolerance Pmax(%)	0~+3	0~+3	0~+3	0~+3	0~+3	0~+3
Maximum Power Voltage Vmp(V)	40.90	41.10	41.30	41.50	41.70	41.90
Maximum Power Current Imp(A)	12.85	12.91	12.96	13.02	13.07	13.13
Open Circuit Voltage Voc(V)	49.20	49.40	49.60	49.80	50.00	50.20
Short Circuit Current Isc(A)	13.59	13.65	13.71	13.77	13.83	13.89
Module Efficiency (%)	20.32	20.52	20.71	20.90	21.10	21.29

*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25°C, AM 1.5
*Measuring tolerance: ±3%

ELECTRICAL CHARACTERISTICS | NMOT*

Maximum Power Pmax(Wp)	392.70	396.40	399.90	403.60	406.80	410.80
Maximum Power Voltage Vmp(V)	38.00	38.20	38.40	38.50	38.80	38.90
Maximum Power Current Imp(A)	10.33	10.38	10.42	10.47	10.49	10.56
Open Circuit Voltage Voc(V)	46.00	46.20	46.30	46.50	46.70	46.90
Short Circuit Current Isc(A)	10.98	11.02	11.07	11.12	11.17	11.22

*NMOT(Nominal module operating temperature):Irradiance 800W/m², Ambient Temperature 20°C,AM 1.5,Wind Speed 1m/s

ELECTRICAL CHARACTERISTICS WITH 25% REAR SIDE POWER GAIN

Front power Pmax/W	525	530	535	540	545	550
Total power Pmax/W	656	663	669	675	681	688
Vmp/V(Total)	41.00	41.20	41.40	41.60	41.80	42.00
Imp/A(Total)	16.01	16.08	16.15	16.23	16.30	16.37
Voc/V(Total)	49.30	49.50	49.70	49.90	50.10	50.30
Isc/A(Total)	16.95	17.02	17.10	17.17	17.25	17.32

MECHANICAL DATA

Solar cells	Mono PERC
Cells orientation	144 (6×24)
Module dimension	2278×1134×30 mm(With Frame)
Weight	33.5 kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	IP 68, 3 diodes
Cables	4 mm ² ,350 mm
Connectors	MC4-compatible

TEMPERATURE RATINGS

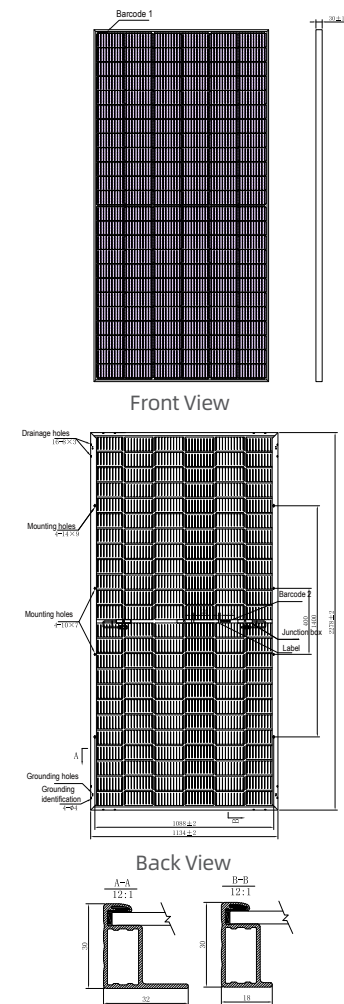
NMOT	44°C ±2°C	Maximum system voltage	1500 V DC
Temperature coefficient of Pmax	-0.35%/°C	Operating temperature	-40°C~+85°C
Temperature coefficient of Voc	-0.29%/°C	Maximum series fuse	30 A
Temperature coefficient of Isc	0.05%/°C	Maximum load(snow/wind)	5400 Pa / 2400 Pa
Refer.Bifacial Factor	70±5%		

*Do not connect Fuse in Combiner Box with two or more strings in parallel connection
*Remark:Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

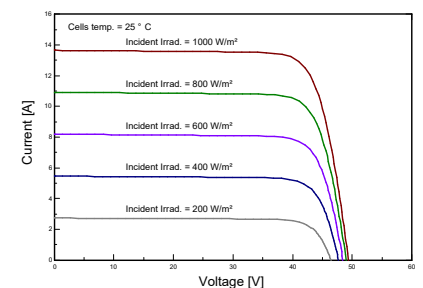
PACKAGING CONFIGURATION

Piece/Box	36	
Piece/Container(40'HQ)	720	*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.
Piece/Container(with additional small package)	/	

DIMENSIONS(MM)



I-V CURVES OF PV MODULE(530W)



P-V CURVES OF PV MODULE(530W)

