

ARRAY

ENGINEERED SIMPLICITY

99.9%
UPTIME

7%
LOWER LCOE

31%
LOWER LIFETIME O&M

ARRAY DuraTrack®

The most durable, reliable tracking system under the sun. While our single-bolt module clamp and forgiving tolerances streamline installation, and our flexibly linked architecture maximizes power density, it's our innovative use of fewer components and a failure-free wind management system that makes ARRAY Technologies the best choice for solar trackers.

Better. Stronger. Smarter.



Zero Scheduled Maintenance

Maintenance-free motors and gears, fewer moving parts, and industrial-grade components, means no scheduled maintenance required for our customers. While our competitors average two unscheduled maintenance events per day, we average only one per year.



Failure-free wind management

Nobody can control the weather, but DuraTrack self-manages wind events to power through even the harshest storms.



High Power Density

Higher density means more power and more profit. DuraTrack offers the unique ability to maximize the power density of each site, boasting up to 120 modules per row and higher density than our closest competition.



Fewer Components. Greater Reliability.

ARRAY was founded on a philosophy of engineered simplicity. Minimizing potential failure points. With fewer components than competitors, DuraTrack consistently delivers higher reliability and superior uptime.

COST VERSUS VALUE

Value is more than the cost of a tracking system. It's about building with forgiving tolerance and fewer parts so construction crews can work efficiently. It means protecting your investment with a failure-free wind management system. It also includes increasing power density. But most of all, value is measured in operational uptime, or reliability.

THE GLOBAL LEADER IN RELIABILITY

Maintenance-free motors and gears, fewer moving parts, and industrial-grade components, means no scheduled maintenance required for our customers. While our competitors average two unscheduled maintenance events per day, we average only one per year.

ARRAY TECHNOLOGIES

3901 Midway Place NE
Albuquerque, NM 87109 USA

sales@arraytechinc.com
arraytechinc.com

30+ GW YEARS OF OPERATION

NEARLY **200x**
FEWER ELECTRICAL COMPONENTS PER
100MWAC THAN DECENTRALIZED TRACKERS

STRUCTURAL & MECHANICAL FEATURES/SPECIFICATIONS

Tracker Type	Horizontal single axis (1 module in portrait)
Ground Cover Ratio (GCR)	Site configurable. Typical: 28-45%
Linked Rows per Drive Motor	Up to 32
Drive Type	Rotating gear drive connected by drivelines (no driveline or bearing lubrication required)
Array Height	Torque Tube Elevation: 54" standard, adjustable (48" min height above grade)
Tracking Range of Motion	+/- 52°
Terrain Flexibility (N-S)	Up to 8.5° standard (up to 15° optional)
Terrain Flexibility (E-W)	Up to 30° combined angle
Wind Protection	Autonomous passive mechanical system No sensors or grid power required to activate
Max Wind Speed	140mph (225 km/h) per ASCE 7-10 (3-second gust), higher wind speeds possible depending on project conditions
Operating Temp Range	Standard: -4°F to 140°F (-20°C to 60°C) Optional: -40°F to 104°F (-40°C to 40°C)
Materials	Pre-galv steel, HDG steel and aluminum structural members, as required.
Codes and Standards	Certified to UL 3703 and IEC 62817

MODULE COMPATIBILITY

c-Si Modules per Row (1500V DC)	Typical: 84-112 Maximum: 120
First Solar Modules per Row (1500V DC)	Series 6 Plus: 84-108 Series 7: 96-114
Modules Supported	Most commercially available, including framed or frameless crystalline, thin film, bifacial, and back rails
Module Attachment	Single fastener, high-speed mounting clamps with integrated grounding. Traditional rails for crystalline in landscape, custom racking for thin film and frameless crystalline and bifacial per manufacturer specs.

CONTROL SYSTEM DETAILS

Baseline Solar Tracking Method	SANDIA's Ephemeris Model
Control Electronics	ARRAY SmarTrack™ Controller Site Data Controller 6X Motor Controllers
Communications	MODBUS TCP
Backtracking	Yes (Optional terrain adaptive backtracking with SmarTrack)
Diffuse Light Response	Optional with SmarTrack
Night-time Stow	Yes (configurable)
Tracking Accuracy	+/- 2°
Motor Type	2HP, 3 Phase, 480V AC

INSTALLATION, OPERATION, AND MAINTENANCE

Annual Power Consumption (kWh per 1 MW)	Approximately 310 kWh per MW
PE Stamped Structural Calculations & Drawings	Yes
On-site Training and System Commissioning	Yes
Connection	100% bolted connections. No drilling, cutting or welding on-site or in-field fabrication
Scheduled Maintenance	None required
Module Cleaning Compatibility	Robotic, Tractor, Manual
Warranty	10 years structural; 5 years drive and controls components

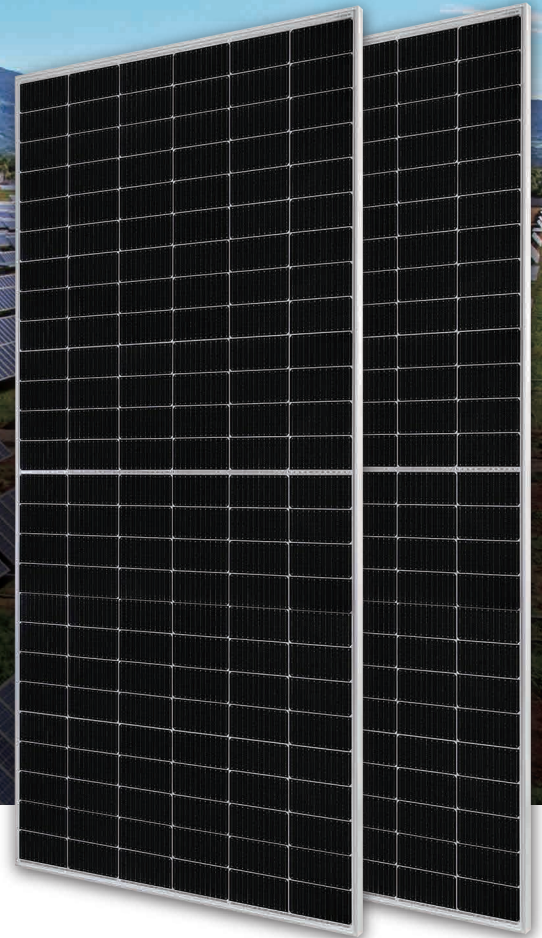
DEEP BLUE 3.0

Mono

605W MBB Half-cell Module
JAM78S30 580-605/MR Series

Introduction

Assembled with 11BB PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.



Higher output power



Lower LCOE



Less shading and lower resistive loss

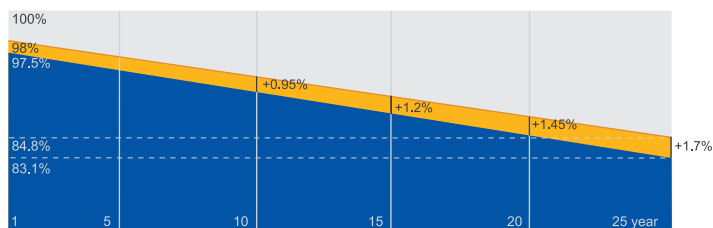


Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty

0.55% Annual Degradation Over 25 years



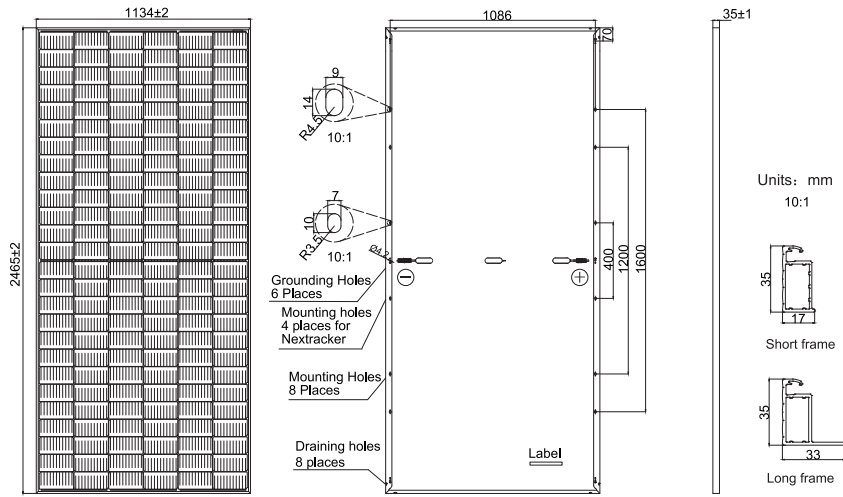
■ New linear power warranty ■ Standard module linear power warranty

Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval



MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	31.1kg±3%
Dimensions	2465±2mm×1134±2mm×35±1mm
Cable Cross Section Size	4mm ² (IEC) , 12 AWG(UL)
No. of cells	156(6×26)
Junction Box	IP68, 3 diodes
Connector	QC 4.10(1000V) QC 4.10-35(1500V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1500mm(+)/1500mm(-)
Packaging Configuration	31pcs/Pallet 496pcs/40HQ Container

ELECTRICAL PARAMETERS AT STC

TYPE	JAM78S30 -580/MR	JAM78S30 -585/MR	JAM78S30 -590/MR	JAM78S30 -595/MR	JAM78S30 -600/MR	JAM78S30 -605/MR
Rated Maximum Power(Pmax) [W]	580	585	590	595	600	605
Open Circuit Voltage(Voc) [V]	53.11	53.20	53.30	53.40	53.50	53.61
Maximum Power Voltage(Vmp) [V]	44.35	44.56	44.80	45.05	45.30	45.53
Short Circuit Current(Isc) [A]	13.84	13.88	13.93	13.98	14.03	14.08
Maximum Power Current(Imp) [A]	13.08	13.13	13.17	13.21	13.25	13.29
Module Efficiency [%]	20.7	20.9	21.1	21.3	21.5	21.6
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α _{Isc})	+0.045%/°C					
Temperature Coefficient of Voc(β _{Voc})	-0.275%/°C					
Temperature Coefficient of Pmax(γ _{Pmp})	-0.350%/°C					
STC	Irradiance 1000W/m ² , cell temperature 25°C, AM1.5G					

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.

ELECTRICAL PARAMETERS AT NOCT

TYPE	JAM78S30 -580/MR	JAM78S30 -585/MR	JAM78S30 -590/MR	JAM78S30 -595/MR	JAM78S30 -600/MR	JAM78S30 -605/MR
Rated Max Power(Pmax) [W]	438	442	446	450	454	458
Open Circuit Voltage(Voc) [V]	50.45	50.59	50.72	50.86	51.01	51.17
Max Power Voltage(Vmp) [V]	42.55	42.69	42.82	42.94	43.07	43.21
Short Circuit Current(Isc) [A]	11.02	11.07	11.13	11.19	11.25	11.30
Max Power Current(Imp) [A]	10.30	10.36	10.42	10.48	10.54	10.60
NOCT	Irradiance 800W/m ² , ambient temperature 20°C,wind speed 1m/s, AM1.5G					

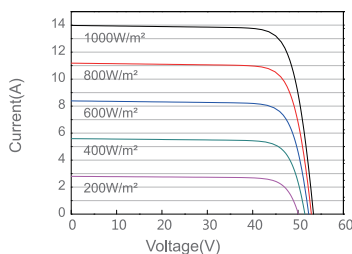
*The mounting installation by 400mm spaced holes is not applicable for JAM78S30 MR.

OPERATING CONDITIONS

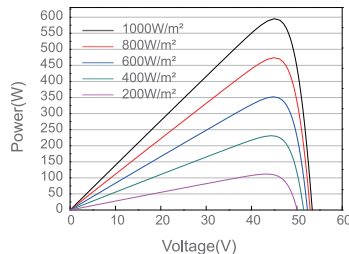
Maximum System Voltage	1000V/1500V DC
Operating Temperature	-40 °C ~+85 °C
Maximum Series Fuse Rating	25A
Maximum Static Load,Front*	5400Pa(112lb/ft ²)
Maximum Static Load,Back*	2400Pa(50lb/ft ²)
NOCT	45±2 °C
Safety Class	Class II
Fire Performance	UL Type 1

CHARACTERISTICS

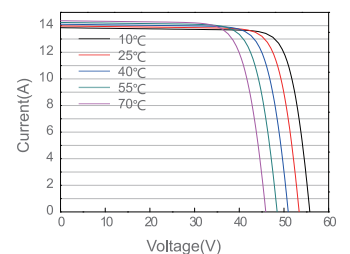
Current-Voltage Curve JAM78S30-595/MR



Power-Voltage Curve JAM78S30-595/MR



Current-Voltage Curve JAM78S30-595/MR



SOLECTRIA® XGI 1500-250 SERIES

PREMIUM 3-PHASE TRANSFORMERLESS UTILITY-SCALE INVERTERS

FEATURES

- NEW and MORE POWERFUL!
 - XGI 1500-250/250-600
 - XGI 1500-225-600 (Selectable: 225kW/225kVA or 225kW/250kVA)
 - XGI 1500-200/200-480
 - XGI 1500-175-480 (Selectable: 175kW/175kVA or 175kW/200kVA)
- Industry-leading maximum DC/AC Ratio of 2.0
- Accepts two input PV Output Circuits, with no overcurrent protection required
- Made in the USA with global components
- Buy American Act (BAA) compliant
- 99.0% peak efficiency
- Flexible solution for distributed and centralized system architecture
- Advanced grid-support functionality Rule 21/UL1741SB
- Robust, dependable and 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

OPTIONS

- PV Source Circuit Combiners
- Web-based monitoring
- Extended warranty



Yaskawa Solectria Solar is pleased to introduce its most powerful XGI 1500 inverters, with the XGI 1500-250 models at 600 Vac, and the XGI 1500-200 models for 480 Vac service.



The XGI 1500-250 and XGI 1500-200 feature SiC technology, high power and high efficiency that places them at the top end of the utility-scale string inverters in the market.

Yaskawa Solectria Solar designs all XGI 1500 utility-scale string inverters for high reliability and builds them with the highest quality components -- selected, tested and proven to last beyond their warranty. The XGI 1500 inverters provide advanced grid-support functionality and meet the latest IEEE 1547 and UL 1741 standards for safety.

The XGI 1500 inverters provide ideal solutions for ground-mounted utility-scale PV systems, with models available for service connections at 600 Vac and 480 Vac. Designed and engineered in Lawrence, MA, the SOLECTRIA XGI inverters are assembled and tested at Yaskawa America's facilities in Buffalo Grove, IL. The XGI 1500 inverters are Made in the USA with global components, and are compliant with the Buy American Act.

SOLECTRIA® XGI 1500-250 SERIES TECHNICAL DATA

SPECIFICATIONS

PRODUCT SPECIFICATION		XGI 1500 INVERTER MODEL			
		XGI 1500 250/250-600	XGI 1500 225-600	XGI 1500 200/200-480	XGI 1500 175-480
DC Input	Absolute Maximum Input Voltage	1500 VDC			
	Maximum Power Voltage Range (MPPT)	860-1250 VDC		750-1250 VDC	
	Operating Voltage Range (MPPT)	860-1450 VDC		750-1450 VDC	
	Number of MPP Trackers	1 MPPT			
	Maximum Operating Input Current	296.7 A	267 A	237.3 A	207.6 A
	Maximum Operating PV Power	255 kW	230 kW	204 kW	179 kW
	Maximum DC/AC Ratio Max Rated PV Power	2.0 500 kW	2.22 500 kW	2.5 500 kW	2.86 500 kW
	Max Rated PV Short-Circuit Current ($\Sigma I_{sc} \times 1.25$)	800 A			
AC Output	Nominal Output Voltage	600 VAC, 3-Phase		480 VAC, 3-Phase	
	AC Voltage Range	-12% to +10%			
	Continuous Real Output Power	250 kW	225 kW	200 kW	175 kW
	Continuous Apparent Output Power (kVA)	250	250 225	200	200 175
	Maximum Output Current (A_{RMS})	240.6	XGI 1500- 225/225: 216.5 225/250: 240.6	240.6	XGI 1500- 175/175: 210.5 175/200: 240.6
	Fault Current Contribution (1 cycle RMS)	390 A	390 A 351 A	312 A	312 A 273 A
	Conductor Compatibility	600 kcmil max, Cu or Alum, 1 or 2 conductors with lugs			
	Nominal Output Frequency	60 Hz			
	Power Factor (Unity default)	+/- 0.80 Adjustable			
	Total Harmonic Distortion (THD) @ Rated Load	< 3%			
	Grid Connection Type	3-Ph + N/GND			
	Efficiency	Peak Efficiency	99.0%		
CEC Average Efficiency		98.5%			
Tare Loss		<1 W			
Ambient Temperature Range		-40°F to 140°F (-40°C to 60°C)			
Temperature	De-Rating Temperature	113°F (45°C)	127°F (53°C)	113°F (45°C)	131°F (55°C)
	Storage Temperature Range	-40°F to 167°F (-40°C to 75°C)			
	Relative Humidity (non-condensing)	0 - 95%			
	Operating Altitude	9,840 ft (3 km)			
Communications	Advanced Graphical User Interface	WiFi			
	Communication Interface	Ethernet			
	Third-Party Monitoring Protocol	SunSpec Modbus TCP/IP			
	Web-Based Monitoring	Optional			
Testing & Certifications	Firmware Updates	Remote and Local			
	Safety Listings & Certifications	UL 1741, IEEE 1547, UL 1699b Photovoltaic Arc-Fault Circuit Protection Certified			
	Advanced Grid Support Functionality	Rule 21, UL 1741SB			
	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 400 A DC Disconnect			
	Mounting Angle	Vertical only			
	Dimensions	Height: 29.5 in. (750 mm) Width: 44.3 in. (1125 mm) Depth: 15.4 in. (390 mm)			
	Weight	290 lbs (131.5 kg)			
	Enclosure Rating and Finish	Listed Type 3R, Self-Certified NEMA 4X and IEC IP66, Polyester Powder-Coated Aluminum			

