

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/UL1741SB
- 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

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 UL1741SB 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

Product Specification		XGI 1500 Inverter 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 (ΣIsc x 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	2.75 W	2.75 W	2.75 W	2.75 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	UL1741SB, IEEE 1547, UL 1699b Photovoltaic Arc-Fault Circuit Protection Certified (-A models)			
	Advanced Grid Support Functionality	Rule 21, UL 1741SB			
	Testing Agency	ETL			
	FCC Compliance	FCC Part 15 (Subpart B, Class A)			
Warranty	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			



YASKAWA
SOLECTRIA SOLAR

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IT'S PERSONAL



ALL TERRAIN TRACKER

BECAUSE THE WORLD IS NOT FLAT

Nevados is the premier solar tracker company for PV power plants built on sloped and rolling terrain. We offer innovative all-terrain trackers paired with a comprehensive software suite in an integrated technology platform that optimizes solar performance, improves plant reliability and respects the natural landscape.

SLOPE CHANGE AT EVERY PILE

BEARING TYPE	SLOPE CHANGE (%)
Straight-Through	± 4.4
Single Articulating	± 13
Double Articulating	± 26

1 FOLLOW THE LAND

- Industry's first and most capable terrain following tracker
- Eliminates civil grading & eases permitting
- Reduced pile length saves steel

3 MANAGE EXTREME WEATHER RISK

- Extensive wind tunnel studies on variable terrain
- 75° hail stow
- Integrated friction dampers for unparalleled wind performance

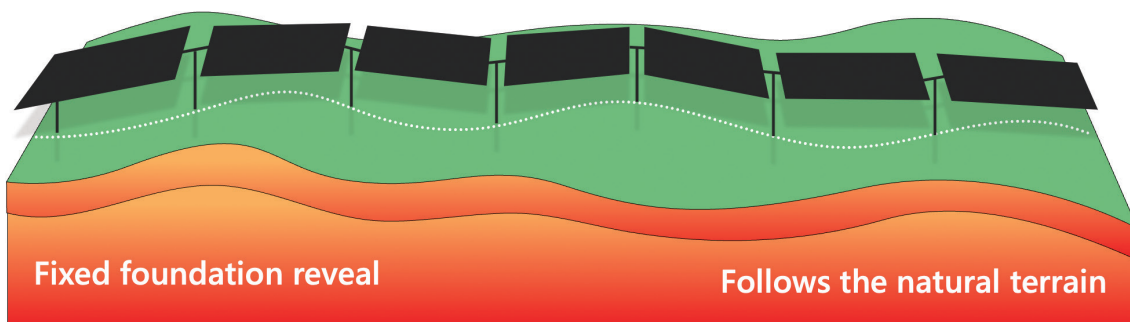
2 INCREASE SITE OPTIONS

- Convert sites from fixed tilt to tracker
- Revisit sites previously disqualified due to grading
- Build on sites with differential settlement risk
- Fastest installation, zero custom tools or jigs

4 OPTIMIZE SITE DESIGN AND PERFORMANCE

- Proprietary TRACE Terrain-Aware Backtracking schedules for zero shading & increased energy yield
- Unique software for site design optimization
- Off-azimuth, variable GCR, variable tilt schedules

Nevados All Terrain Tracker (ATT)



ROW CONFIGURATION	<ul style="list-style-type: none"> • Up to 96 modules per row • 5 to 8 modules per bay
TRACKING ANGLE CAPABILITIES	<ul style="list-style-type: none"> • $\pm 60^\circ$ tracking expandable to $\pm 75^\circ$ tracking • Single row actuation with 24VDC slew drive
TERRAIN FOLLOWING	<ul style="list-style-type: none"> • Straight Through bearing: $\pm 3.5\%$ slope change at each foundation • Single Articulating bearing: $\pm 13\%$ slope change at each foundation • Double Articulating bearing: $\pm 26\%$ slope change at each foundation • 37% max N-S and E-W slope
FOUNDATION	<ul style="list-style-type: none"> • I-Beam or ground screw foundations installed at consistent reveal throughout site
GROUND COVERAGE RATIO	<ul style="list-style-type: none"> • Configurable, typically greater than or equal to 28%
DESIGN LOADS	<ul style="list-style-type: none"> • Designed to applicable ASCE • Configurable to 135+ MPH • Configurable to 50+ PSF snow load • Loads studied in wind tunnels for variable terrain; no external dampers required for wind dynamics
INCLUDED SERVICES	<ul style="list-style-type: none"> • Preliminary layouts and site design optimization • Structural calculations, IFC package and foundation design • TRACE Terrain-Aware Backtracking or True Tracking
OPERATING TEMPERATURE	<ul style="list-style-type: none"> • $-20^\circ\text{C} - 55^\circ\text{C}$
MODULE CONNECTION/GROUNDING:	<ul style="list-style-type: none"> • Self-grounding module brackets • UL2703 and UL3703
TOLERANCES	<ul style="list-style-type: none"> • Reveal height: $+4'' / -0''$, N-S: $\pm 1.5''$ (expandable), 2° vertical plumb, 9° twist • Flat-land: $\pm 12''$ vertical & E-W at each pile, may change based on neighboring foundations
CONTROLS	<ul style="list-style-type: none"> • Web-based dashboard for monitoring & operation with row-level control • SCADA integration via Modbus TCP/IP for monitoring & operation with row-level control • Wireless, self-powered row controllers and weather stations • AC-powered Zone Controllers
WARRANTY	<ul style="list-style-type: none"> • 10-year structural, 5-year drive & controls warranty



SOLAR TRACKER CONTROLS

FOR ALL TERRAIN ENVIRONMENTS

The Nevados control system is designed to optimize power generation from your project site and account for variable shadow fall on flat, sloped, and rolling terrain. Each row of up to 96 modules is monitored by a single row controller. Row controllers are connected and optimized through zone controllers, each of which can manage up to 180 row controllers. The system provides detailed operational information from each row, which can be utilized to increase row-to-row efficiency and maximize output. String-level current sensing can be added to identify any inter-row shadowing, blown fuses, poor performing strings, and bad electrical connectors.

1 CURRENT SENSOR

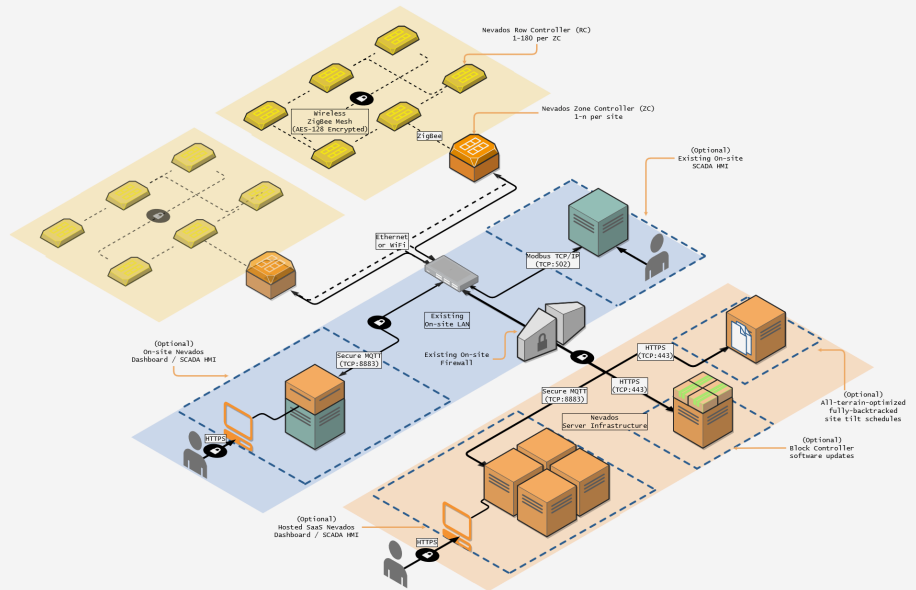
- Enables continuous commissioning
- Identifies poor performing strings
- Assembled with the wiring harness at the factory, or installs in minutes in the field
- IP65

2 ROW CONTROLLER

- Configurable for most environments
- Retrofits to existing install
- Wireless and self-powered
- IP65

3 ZONE CONTROLLER

- Active optimization
- Choose either cloud-hosted or fully on-premises monitoring and control
- Failure prediction
- O&M reporting
- IP65



MODULES

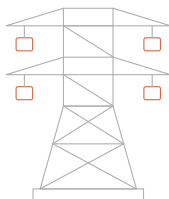
CURRENT
SENSOR

ROW
CONTROLLER

ZONE
CONTROLLER

CLOUD
SERVER

DASHBOARD



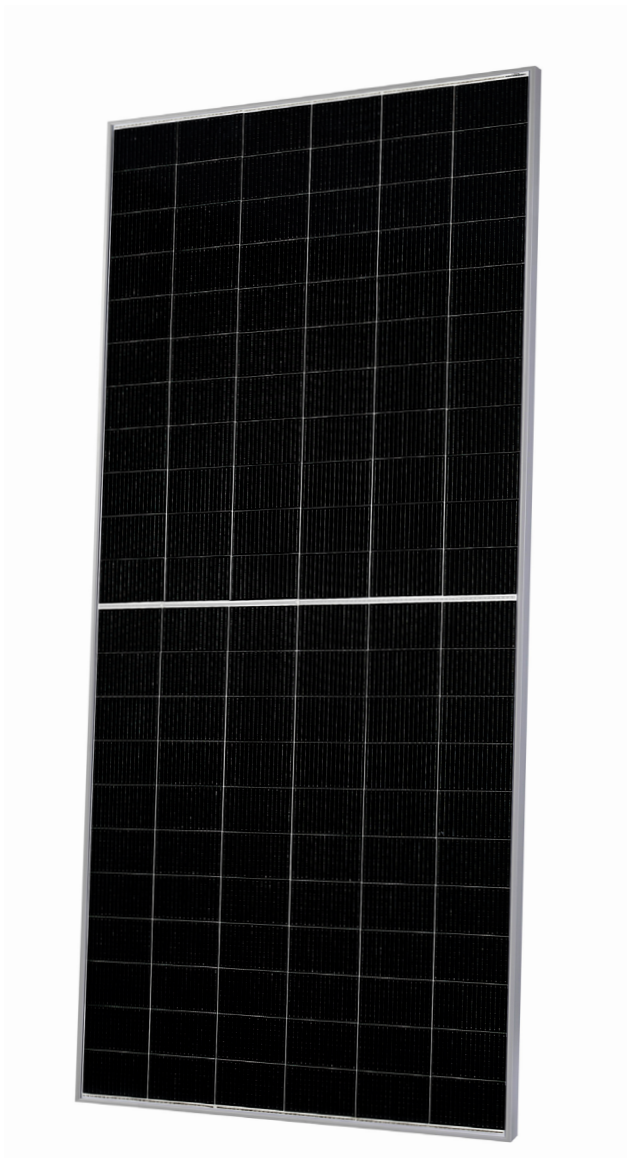
COMMUNICATIONS	ROW CONTROLLER	ZONE CONTROLLER
WIRELESS	<ul style="list-style-type: none">ZigBee (with external antenna) between RC and ZC	<ul style="list-style-type: none">ZigBee communication to manage RC
WIRED	<ul style="list-style-type: none">Cat5/6 between ZC and SCADARS485 between RC and string current sensor	<ul style="list-style-type: none">Manage with SCADA over ModbusReporting to on-premises or cloud-hosted monitoring and control dashboardIntegrated web portal for simple management
ENCLOSURE		
SIZE (LxWxD)	<ul style="list-style-type: none">10" x 12" x 3.5" – max external dimension of enclosure (not including mounting tabs)	<ul style="list-style-type: none">13" x 15" x 5"
DESIGN	<ul style="list-style-type: none">IP67, Plastic (injection molded), Membrane vent (Amphenol BJ001, Gore Vent, or similar)	<ul style="list-style-type: none">Compression molded fiberglass reinforced polyesterCompression molded fiberglass reinforced polyester
SERVICE/ACCESS	<ul style="list-style-type: none">Access panel for battery only	
MOUNTING	<ul style="list-style-type: none">Direct mount RC to auxiliary solar moduleMount aux module to torque tube using standard module clips	<ul style="list-style-type: none">IP65 ratedMounted near or on inverter skid, or other ethernet and power access point.Integrated web portal for simple management
POWER	<ul style="list-style-type: none">Auxiliary solar module, 40W and 36V, approx 645mm x 345mm x 25mm	<ul style="list-style-type: none">120V AC wired to enclosure
BATTERY	<ul style="list-style-type: none">3-6Ah LiFEPO4 battery with optional cold weather package	
INPUTS	<ul style="list-style-type: none">RS485 port w. Weather capE-StopStatus LED (optional)Auxiliary module power cables	<ul style="list-style-type: none">120V ACEthernet
OUTPUTS	<ul style="list-style-type: none">Motor Cable with screw-on connector to motorExternal ZigBee Co-ax connector for antenna wire	<ul style="list-style-type: none">External ZigBee co-ax connector for antenna wire
BOARD COMPONENTS	<ul style="list-style-type: none">XBee X2C or XBee3PTC (resettable fuse)Motor over-current monitoring and protection16bit Microcontroller @ >8MHzAccelerometer	<ul style="list-style-type: none">Xbee S2C, S2C Pro or 3Optional wind sensor

Q.PEAK DUO ML-G12S SERIES



660 - 680 Wp | 132 Cells
21.9 % Maximum Module Efficiency

MODEL Q.PEAK DUO ML-G12S.3/BFG Q.PEAK DUO ML-G12S.7/BFG
Q.PEAK DUO ML-G12S.d/BFG



Highest Power Class Module

With the new G12, Qcells heralds the next generation of solar modules' enabling more power generation than ever before.



Bifacial energy yield gain of up to 20%

Bifacial Q.ANTUM solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.



Low electricity generation costs

Q.ANTUM DUO technology with optimized module layout to boost module power and improve LCOE.



A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty¹.



Enduring high performance

Long-term yield security with Anti LID and Anti PID Technology², Hot-Spot Protect.



Frame for versatile mounting options

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (2600 Pa)³.



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

¹ See data sheet on rear for further information.

² APT test conditions according to IEC/TS 62804-1:2015 method B (~1500V, 168h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)

³ See Installation Manual for instructions

The ideal solution for:



Ground-mounted solar power plants



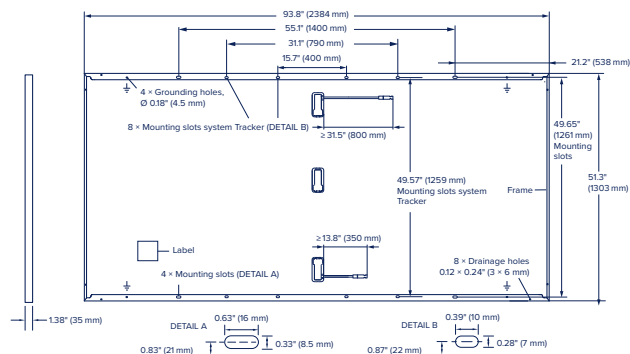
Solar power plants with tracker



Q.PEAK DUO ML-G12S SERIES

Mechanical Specification

Format	93.8 in × 51.3 in × 1.38 in (including frame) (2384 mm × 1303 mm × 35 mm)
Weight	84.2 lbs (38.2kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Anodized aluminum
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), Protection class IP68, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 31.5 in (800 mm), (-) ≥ 13.8 in (350 mm)
Connector	Stäubli MC4; Stäubli MC4-Evo2; - IP68



Electrical Characteristics

POWER CLASS	660	665	670	675	680
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MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5 W/-0 W)

Minimum			BSTC*		BSTC*		BSTC*		BSTC*	
	Power at MPP ¹	P _{MPP} [W]	660	721.9	665	727.4	670	732.9	675	738.4
	Short Circuit Current ¹	I _{SC} [A]	18.36	20.10	18.39	20.13	18.42	20.16	18.45	20.20
	Open Circuit Voltage ¹	V _{OC} [V]	45.68	45.84	45.70	45.86	45.72	45.88	45.74	45.90
	Current at MPP	I _{MPP} [A]	17.39	19.03	17.45	19.09	17.51	19.16	17.56	19.22
	Voltage at MPP	V _{MPP} [V]	37.94	37.94	38.11	38.10	38.27	38.26	38.43	38.42
	Efficiency ¹	η [%]	≥ 21.2		≥ 21.4		≥ 21.6		≥ 21.7	≥ 21.9

Bifaciality of P_{MPP} and I_{SC} 70% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

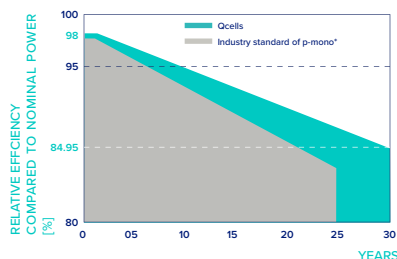
¹ Measurement tolerances P_{MPP} ± 3%; I_{SC}, V_{OC} ± 5% at STC: 1000 W/m²; * at BSTC: 1000 W/m² + φ × 135 W/m², φ = 72%, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²

Minimum	Power at MPP	P _{MPP} [W]	496.9	500.7	504.4	508.2	512.0
	Short Circuit Current	I _{SC} [A]	14.79	14.81	14.84	14.86	14.89
	Open Circuit Voltage	V _{OC} [V]	43.20	43.22	43.24	43.26	43.28
	Current at MPP	I _{MPP} [A]	13.67	13.73	13.78	13.83	13.88
	Voltage at MPP	V _{MPP} [V]	36.34	36.48	36.62	36.75	36.89

¹ Measurement tolerances P_{MPP} ± 3%; I_{SC}, V_{OC} ± 5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • ² 800 W/m², NMOT, spectrum AM 1.5

Qcells PERFORMANCE WARRANTY

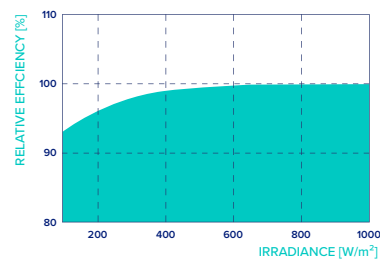


At least 98% of nominal power during first year. Thereafter max. 0.45% degradation per year. At least 93.95% of nominal power up to 10 years. At least 84.95% of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organization of your respective country.

*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of V _{OC}	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT	[°F]	108 ± 5.4 (42 ± 3 °C)

Properties for System Design

Maximum System Voltage	V _{sys}	[V]	1500	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	35	Fire Rating based on ANSI/UL 61730	TYPE 29 ⁴
Max. Push Load ³ , Test/Design		[lbs/ft ²]	113 (5400 Pa)/75 (3600 Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Max. Pull Load ³ , Test/Design		[lbs/ft ²]	54 (2600 Pa)/36 (1730 Pa)		

³ See Installation Manual for instructions

⁴ New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

UL 61730, CE-compliant,
IEC 61215:2016,
IEC 61730:2016,
U.S. Patent No. 9,893,215
(solar cells)



Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.
*Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

Hanwha Q CELLS USA Corp. 300 Spectrum Center Drive, Suite 500, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL na.support@qcells.com | WEB www.qcells.com/us

qcells

Q.TRON XL-G2 SERIES



610 - 635 Wp | 156 Cells
22.7 % Maximum Module Efficiency

MODEL Q.TRON XL-G2.3/BFG



High performance Qcells N-type solar cells

Q. ANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.7%.



Bifacial energy yield gain of up to 21%

Bifacial Q. ANTUM NEO solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.



A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty¹.



Enduring high performance

Long-term yield security with Anti LeTID and Anti PID Technology², Hot-Spot Protect.



Frame for versatile mounting options

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (3750 Pa)³.



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

¹ See data sheet on rear for further information.

² APT test conditions according to IEC/TS 62804-1:2015 method B (~1500 V, 168 h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)

³ See Installation Manual for instructions

The ideal solution for:



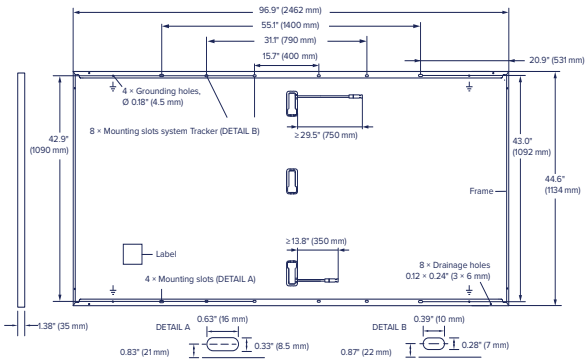
Ground mounted
solar panels



Q.TRON XL-G2 SERIES

Mechanical Specification

Format	96.9 in × 44.6 in × 1.38 in (including frame) (2462 mm × 1134 mm × 35 mm)
Weight	78.0 lbs (35.4 kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Anodised aluminium
Cell	6 × 26 monocrystalline Q.ANTUM NEO solar half cells
Junction box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 29.5 in (750 mm), (–) ≥ 13.8 in (350 mm)
Connector	Stäubli MC4-Evo2, Stäubli MC4 ; IP68



Electrical Characteristics

POWER CLASS			610		615		620		625		630		635		
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W/–0 W)															
Minimum				BSTC*		BSTC*		BSTC*		BSTC*		BSTC*		BSTC*	
	Power at MPP ¹	P _{MPP}	[W]	610	675.4	615	681.0	620	686.5	625	692.0	630	697.6	635	703.1
	Short Circuit Current ¹	I _{SC}	[A]	13.65	15.13	13.71	15.19	13.76	15.25	13.82	15.31	13.88	15.38	13.93	15.44
	Open Circuit Voltage ¹	V _{OC}	[V]	56.11	56.34	56.39	56.62	56.67	56.90	56.95	57.18	57.23	57.46	57.51	57.74
	Current at MPP	I _{MPP}	[A]	12.95	14.34	13.00	14.40	13.05	14.46	13.10	14.51	13.15	14.57	13.21	14.62
	Voltage at MPP	V _{MPP}	[V]	47.10	47.09	47.30	47.29	47.50	47.49	47.70	47.69	47.89	47.88	48.09	48.08
	Efficiency ¹	η	[%]	≥21.8		≥22.0		≥22.2		≥22.4		≥22.6		≥22.7	

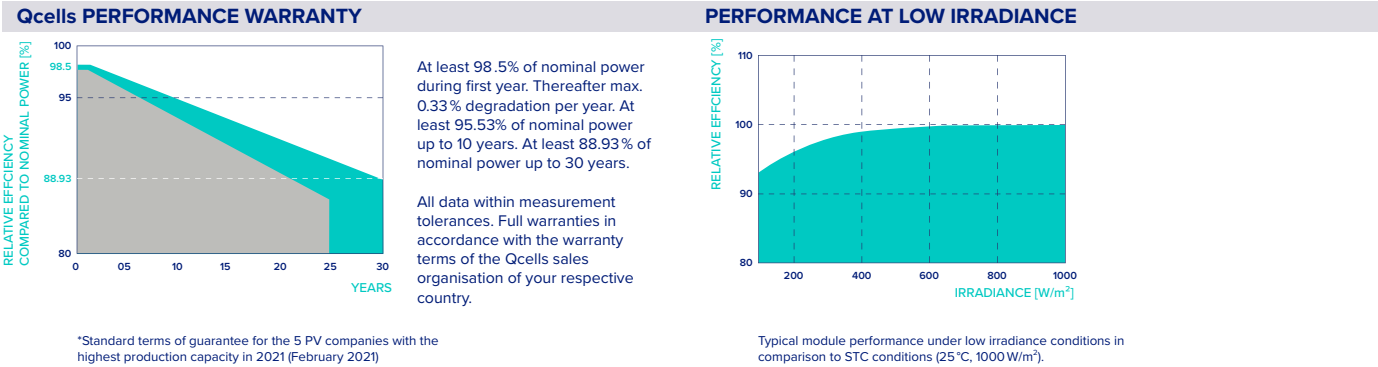
Bifaciality of P_{MPP} and I_{SC} 80% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

¹Measurement tolerances P_{MPP} ± 3%; I_{SC}, V_{OC} ± 5% at STC: 1000 W/m²; *at BSTC: 1000 W/m² + φ × 135 W/m², φ = 80%, 25 ± 2°C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²w

Minimum	Power at MPP	P _{MPP}	[W]	461.1	464.9	468.7	472.5	476.2	480.0
	Short Circuit Current	I _{SC}	[A]	11.00	11.05	11.09	11.14	11.18	11.23
	Open Circuit Voltage	V _{OC}	[V]	53.24	53.51	53.77	54.04	54.31	54.58
	Current at MPP	I _{MPP}	[A]	10.18	10.22	10.26	10.30	10.34	10.38
	Voltage at MPP	V _{MPP}	[V]	45.28	45.48	45.67	45.86	46.05	46.24

²800 W/m², NMOT, spectrum AM 1.5



TEMPERATURE COEFFICIENTS			
Temperature Coefficient of I _{SC}	α	[%/K]	+0.04
Temperature Coefficient of P _{MPP}	γ	[%/K]	–0.30
Temperature Coefficient of V _{OC}	β	[%/K]	–0.24
Nominal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3°C)

Properties for System Design

Maximum System Voltage	V _{sys}	[V]	1500	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	30	Fire Rating based on ANSI/UL 61730	TYPE 29 ⁴
Max. Push Load ³ , Test/Design		[lbs/ft ²]	113 (5400 Pa)/75 (3600 Pa)	Permitted Module Temperature on Continuous Duty	–40°F up to +185°F (–40°C up to +85°C)
Max. Pull Load ³ , Test/Design		[lbs/ft ²]	78 (3750 Pa)/52 (2500 Pa)		

³ See Installation Manual for instructions

⁴ New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

UL 61730-1 & UL 61730-2, CE-compliant,
Quality Controlled PV - TÜV Rheinland,
IEC 61215:2016, IEC 61730:2016,
U.S. Patent No. 9,893,215(solar cells)



* Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.

Harwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL hqc-inquiry@qcells.com | WEB www.qcells.com

