AXIbipremium XXL HC MW

530 - 555 Wp

High performance bifacial solar module
144 halfcell, monocrystalline

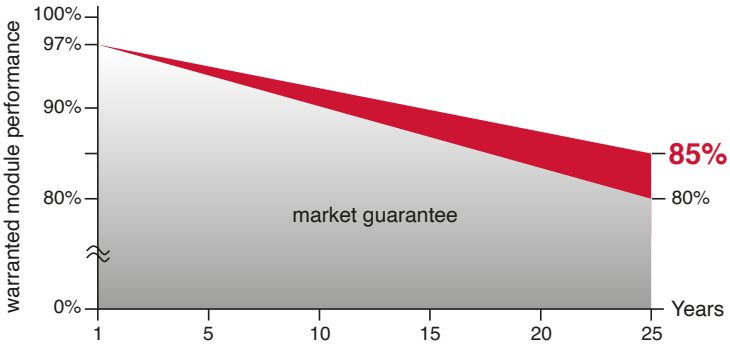
German-American-Engineering

Fig. similar 144MHUSA230801A

The advantages:

- 15 Years — 15 years Manufacturer‘s warranty
- HC — High module performance through Half-Cut-technology and selected materials
- Wp — Guaranteed positive power tolerance from 0-5 Wp by individual measurement
- 100% — 100 % visual electroluminescence inspection in production
- Frame — High stability due to innovative frame design
- IP 68 — High quality junction box and connector systems
- 25 Years — 25 years Performance guarantee

Exclusive linear AXITEC high performance guarantee!



AXITEC Warranty Added Value: up to 5% more power after 25 years

Intertek

Conforms to ETL STD No.1703
Certified to ULC/ORD Std. C1703

AXITEC, LLC, 510 Pedricktown Road Suite A, Logan Township, New Jersey 08085 USA, www.axitecsolar.com

AXIbipremium XXL HC MW 530 - 555 Wp

Electrical data (at standard conditions (STC) irradiance 1000 watt/m². spectrum AM 1.5 at a cell temperature of 25°C)

Type	AC-530MBT/144V	AC-535MBT/144V	AC-540MBT/144V	AC-545MBT/144V	AC-550MBT/144V	AC-555MBT/144V
Nominal output	**530 Wp**	**535 Wp**	**540 Wp**	**545 Wp**	**550 Wp**	**555 Wp**
Nominal voltage Umpp	41.31 V	41.47 V	41.64 V	41.80 V	41.96 V	42.11 V
Nominal current Impp	12.83 A	12.91 A	12.97 A	13.04 A	13.11 A	13.18 A
Short circuit current Isc	13.72 A	13.79 A	13.86 A	13.93 A	14.00 A	14.07 A
Open circuit voltag Uoc	49.30 V	49.45 V	49.60 V	49.75 V	49.90 V	50.05 V
Module conversion efficiency	20.52 %	20.71 %	20.90 %	21.10 %	21.29 %	21.48 %
Bifacial output - Backside Power gain						
10% Power output	583.00 Wp	588.50 Wp	594.00 Wp	599.50 Wp	605.00 Wp	610.50 Wp
Module Effiency	22.57 %	22.78 %	22.99 %	23.21 %	23.41 %	23.62 %
15% Power output	609.50 Wp	615.25 Wp	621.00 Wp	626.75 Wp	632.50 Wp	638.25 Wp
Module Effiency	23.59 %	23.82 %	24.04 %	24.26 %	24.47 %	24.70 %
20% Power output	636.00 Wp	642.00 Wp	648.00 Wp	654.00 Wp	660.00 Wp	666.00 Wp
Module Effiency	24.62 %	24.85 %	25.08 %	25.32 %	25.54 %	25.77 %
25% Power output	662.50 Wp	668.75 Wp	675.00 Wp	681.25 Wp	687.50 Wp	693.75 Wp
Module Effiency	25.65 %	25.89 %	26.13 %	26.37 %	26.60 %	26.84 %

Design

Frontside	0.13 inch (3.2 mm) hardened, low-reflection white glass
Cells	144 monocrystalline high efficiency cells
Backside	Composite film, cell caps white
Frame	1.38 inch (35 mm) silver aluminium frame

Mechanical data

L x W x H	89.68 x 44.64 x 1.38 inch (2278 x 1134 x 35 mm)
Weight	61.73 lbs (28 kg) with frame

Mechanical load

Design load (pressure/suction)	33.3 PSF / 33.3 PSF
Test load (pressure/suction)	50 PSF / 50 PSF

Power connection

Socket	Protection Class IP68
Wire	51.18 inch, AWG 11
Plug-in system	Plug/socket IP68, Stäubli EVO2

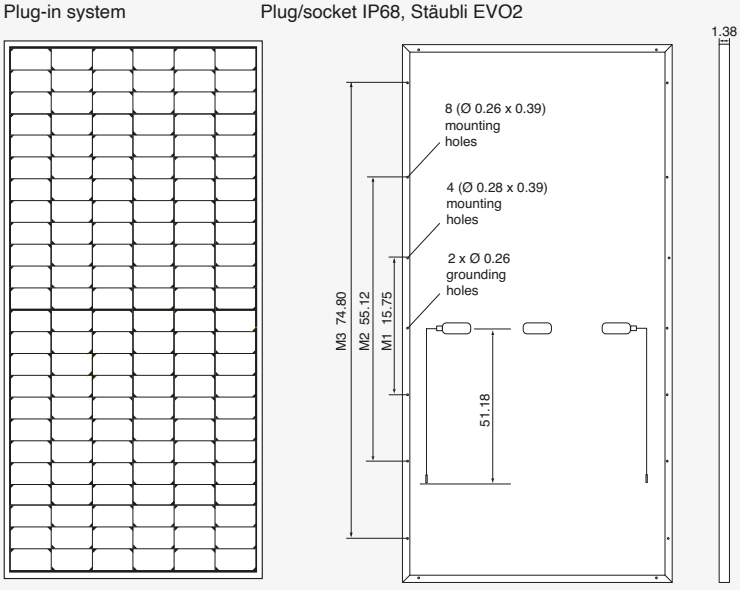


Fig. principle sketch

All dimensions in inch

Limit values

System voltage	1500 VDC (UL) 1000 VDC (IEC)
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)
NOCT (nominal operating cell temperature)*	45°C +/-2K
Reverse current feed IR	30.0 A
Permissible operating temperature	-40°C to 85°C / -40F to 185F
Bifaciality	70 % ± 10 %

(No external voltages greater than Vo may be applied to the module)

* NOCT, irradiance 800 W/m²; AM 1.5; wind speed 1 m/s; Temperature 20°C

Temperature coefficients

Voltage Uoc	-0.29 %/K
Current Isc	0.048 %/K
Output Pmpp	-0.35 %/K

Low-light performance (Example for AC-555MH/144V)

I-U characteristic curve	Current Ipp	Voltage Upp
200 W/m²	2.69 A	40.53 V
400 W/m²	5.43 A	40.99 V
600 W/m²	8.12 A	41.31 V
800 W/m²	10.73 A	41.67 V
1000 W/m²	13.18 A	42.11 V

Packaging

Module pieces per pallet	31
Module pieces per HC-container	620

MIN 8200~11400TL-XH-US

- Battery Ready for DC Coupled and AC Coupled systems
- With backup power and dark start operations
- Support RSD and AFCI
- Support multiple energy management modes: Self-consumption, Zero Export,TOU and Off-grid
- Comply with UL1741SA, CA Rule 21 & HECO

POWER-ING TOMO-RROW

GROWATT

www.growatt-america.com

Datasheet	MIN 8200TL-XH-US	MIN 9000TL-XH-US	MIN 10000TL-XH-US	MIN 11400TL-XH-US
Input Data (PV)				
Max. Recommended PV Power(STC)	16400W	18000W	20000W	22800W
DC/AC Ratio	2			
Max. DC System Voltage	600V			
Startup Voltage	50V			
Full load voltage range	170-500V	190-500V	210-500V	235-500V
Nominal Voltage	360V			
Operating Voltage Range	50~550V			
No. of MPP Trackers	4			
No. of PV Strings per MPP Trackers	2			
Max. Input Current per MPP Trackers	13.5A			
Max. Short-circuit current per MPP trackers	16.9A			
Input/Output Data (DC)				
Battery Voltage Range	360V~550V			
Nominal DC Voltage	400V			
I/O DC Current	24A/24A	27A/27A	30A/30A	30A/30A
I/O DC Power	8500W	9300W	10300W	10300W
Battery Technology	LFP / NMC			
Battery Capacity per Module	9.9kWh / 9.6kWh			
Scalability	Up to 4 / Up to 2 in parallel			
Compatible Batterys	Growatt ARO HV battery / LG Prime (Gen3) battery			
Output Data (AC)				
AC Nominal Power@240V AC	8200W	9000W	10000W	11400W
AC Nominal Power@208V AC	7280W	7900W	8735W	9880W
Max. AC Apparent Power	8200VA	9000VA	10000VA	11400VA
Nominal AC Voltage	208V/240V			
AC Voltage Range @208V AC @240V AC	183V~229V/211V~264V			
AC Grid Frequency	50/60Hz			
AC Grid Frequency Range	45~65Hz			
Max. Output Current	35A	38A	42A	48A
Power Factor(@Nominal Power)	>0.99			
Adjustable Power Factor	0.8 leading~0.8 lagging			
THDi	<3%			
AC Grid Connection Type	L1/L2/N/PE			
Output Data (Backup)				
AC Nominal Power	8200W	9000W	10000W	11400W*
Max. AC Power Output	9840VA	10800VA	12000VA	13680VA
Nominal AC Voltage	240V			
Max. Output Current	41A	45A	50A	57A
THD	5%			
AC Port-V2 inverter	2AC Ports, 1 for ON Grid, 1 for Backup(EPS) compatible with ATS-US for Partial Home Backup			
AC Port-V3 Inverter	1AC Port for 1 ON Grid compatible with SYN200-US for Whole Home Backup			
Efficiency				
Max. Efficiency	98.3%	98.3%	98.3%	98.5%
CEC Efficiency@208V AC	97.5%	97.5%	97.5%	97.5%
CEC Efficiency@240V AC	97.5%	97.5%	97.5%	98.0%
Protection Devices				
DC Reverse-polarity Protection	Yes			
DC Switch	Yes			
DC Surge Protection	Type II			
Insulation Resistance Monitoring	Yes			
AC Surge Protection	Type III			
AC short-circuit Protection	Yes			
Ground Fault Monitoring	Yes			
Grid Monitoring	Yes			
Anti-islanding Protection	Yes			
Residual-current Monitoring Unit	Yes			
AFCI Protection	Yes			
General Data				
Dimensions (W / H / D)	15.8/25.2/7.4inch(400/638/187mm)			
Weight	45.2 lbs /20.5kg			
Operating Temperature Range	-13°F~+140°F (-25 °C ~ +60 °C)de-rating above 113°F			
Altitude	9843ft (3000m)			
Internal Consumption at Night	<1W (for PV inverter)/ <5W (for storage inverter)			
Cooling	Natural Convection			
Electronics Protection Degree	NEMA4X (IP65)			
Relative Humidity	0~95%			
Interfaces				
RS485	Yes			
WIFI/4G Communication	Optional			
Warranty: 10 Years	Yes(optional for extended 15 and 20 years warranty)			
Revenue Grade Meter	ANSI C12.20 (meet 0.5% accuracy)			
	IEEE1547, CA Rule21, Rule14(HECO Compliant), FCC Part15 Class B, UL1741,UL1741SA,CSA C22.2, UL1699B, UL1741 CRD, UL9540			

*11.4kW off-grid output requires both PV and battery power supply, and the battery itself has a rated off-grid power of 10kW.

GROWATT USA INC. Address: 9227 Reseda Blvd. #435 Northridge, CA 91324. Sales Hotline : 818 800 9455 Service Hotline : 1866 686 0298
Email: usa@ginverter.com

OMCO Solar Field-Fast™ Mounting System

OMCO's proprietary design provides a cutting edge solution which includes various features to markedly reduce installation costs and ensure proper construction. Buying direct from the manufacturer provides a cost advantage along with unparalleled customer support.

DIRECT FROM MANUFACTURER: Competitive advantage in pricing and customer support direct from a knowledgeable and experienced team.

OMCO FIELD-FAST™ FEATURES & BENEFITS: This fixed-tilt system design provides a solution which includes various features to reduce installation costs and ensure proper construction.

- ***PREASSEMBLED COMPONENTS:***
  - ***Module Clamps:*** Optimizes packaging and shipping, reduces on-site labor requirements, accelerates total build time, and eliminates loose hardware.
  - ***Tilt-Bracket Subassembly:*** Reduces number of items on bill of materials, improves speed of installation, and streamlines unloading process at project-site
- ***SLIDE AND STAY MODULES:*** Allows a simple two person installation that improves safety by utilizing no overhead lifting.
- ***REVERSE CLIP INSTALL:*** Allows all work to be completed at ground level, eliminating lift equipment, and consolidating tool.
- ***INNOVATIVE ASSEMBLY FEATURES:*** The rail is designed to hold modules during installation through integrated locating/spacing features, engineered tabs for safety/speed, and ensuring optimal orientation for any framed module.
- ***ROW PITCH CAPABILITIES:*** Simplifies installation on uneven terrain, maximizes linear articulation, and utilizes a single point connection.

PROVIDES ENHANCED FLEXIBILITY: OMCO has the ability to make modifications to the system as needed by site locations, customer specific requirements, and overall customization. The system is designed for use with all framed modules.

LOGISTICAL BENEFITS: There are multiple logistical saving through the convenience of sourcing direct from the manufacturer, manufacturing capabilities throughout the U.S., also gives OMCO customers more competitive freight costs and lead-time advantages.

MANUFACTURING CAPABILITIES: By being the supplier and manufacturer of the racking system, OMCO can furnish quotes faster and be more responsive to our customers through product and industry knowledge.

OMCO SOLAR
a division of OMCO Holdings

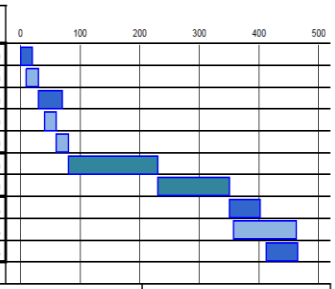
TECHNICAL SPECIFICATIONS

FIELD-FAST RACKING SYSTEM NOTES	MODULES IN PORTRAIT & LANDSCAPE
TILT ANGLES	5˚ - 45˚
TERRAIN ARTICULATION	GRADE CHANGES CAN BE ACCOMMODATED WITH STANDARD COMPONENTS FROM EAST TO WEST
MATERIAL (GALVANIZED STEEL)	PER ASTM A653 LATEST EDITION
BONDING/GROUNDING	PER UL 2703
MODULE COMPATABILITY	ANY COMMERICALLY AVAILABLE FRAMED FLAT PLATE MODULE
TYPICAL FOUNDATION	PILE-DRIVEN
IN-FIELD FLEXIBILITY	SEVERAL BUILT-IN ADJUSTABILITY FEATURES VIA CUSTOM SLOT CONFIGURATIONS TO ACCOUNT FOR POST MISALIGNMENT AND TERRAIN ELEVATION CHANGES WITH NO ADDITIONAL COMPONENTS
POST TOLERANCES	EAST-WEST POST TILT TOLERANCE ± 1° NORTH-SOUTH POST TILT TOLERANCE ± 1°
INSTALLATION RATES	THE FASTEST PANEL INSTALLATION TIME IN THE SOLAR INDUSTRY! ADDITIONAL TIME STUDY DETAILS NOTED BELOW
WIND/SNOW LOAD INFORMATION	WIND – UP TO 180/MPH SNOW – UP TO 90 PSF
WARRANTY	20 YEAR LIMITED WARRANTY
MANUFACTURING	OMCO SOLAR'S FIELD-FAST MOUNTING SYSTEM COMES DIRECT FROM THE MANUFACTURER; YOUR SINGLE-SOURCE SUPPLIER

TIME STUDY - MBOS

Work Combination Table for: MBOS Set* with 2 installers — 2/6/17 — NS

	Activity	Op #	CT secs / comp	# of comp.	Total CT
1	Hang Tilt Bracket on Post with 1 bolt	1	20	1	20
2	Diagonal Strut to T-Bracket with 1 bolt	2	20	1	20
3	D-Strut to Post and torque 2 bolts	1	40	1	40
4	D-Strut to T-Bracket with 1 bolt, torque	2	20	1	20
5	T-Bracket on post, 1 bolt, torque	2	20	1	20
6	Install Rack Beam	1&2	150	1	150
7	Install Bridge Beam	1&2	120	1	120
8	Grab Mod Rail and latch on Beam	1	10	5.25	53
9	Bolt Mod Rail on top using ladder	2	20	5.25	105
10	Bolt Mod Rail on bottom	1	10	5.25	53

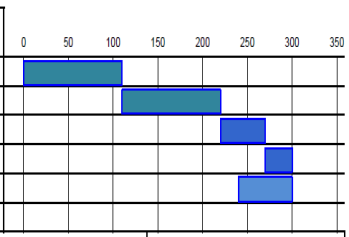


Number of installers:	2	Labor efficiency:	85%	Cycle time per set:	465 secs
Total man hrs per set:	0.304	Panels in set:	10	Sets per hour:	7
Burdened labor rate:	$40.0	PV wattage	300	Sets per shift:	49
* Note: a set consists of components contained between 2 posts (see layout tab)				Labor cost per watt:	$0.0041

TIME STUDY – PANEL INSTALLATION

Work Combination Table for: Module Installation Set* with 2 installers — 3/13/17 — NS

	Activity	Op #	CT secs / comp	# of comp.	Total CT
1	Slide in top panel and latch	1&2	22	5	110
3	Slide bottom panel and latch	1&2	22	5	110
4	Install bottom clamps	1	10	5	50
5	Torque clamps from under rack	1	6	5	30
6	Torque clamps from under rack	2	6	10	60
			6		



Number of installers:	2	Labor efficiency:	85%	Cycle time per set:	306 secs
Total man hrs per set:	0.200	Panels in set:	10	Modules per hour:	100
Burdened labor rate:	$40.0	PV wattage	300	Watts installed per hour:	30,000
* Note: a set consists of 10 modules average between 2 posts				Labor cost per watt:	$0.0027

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