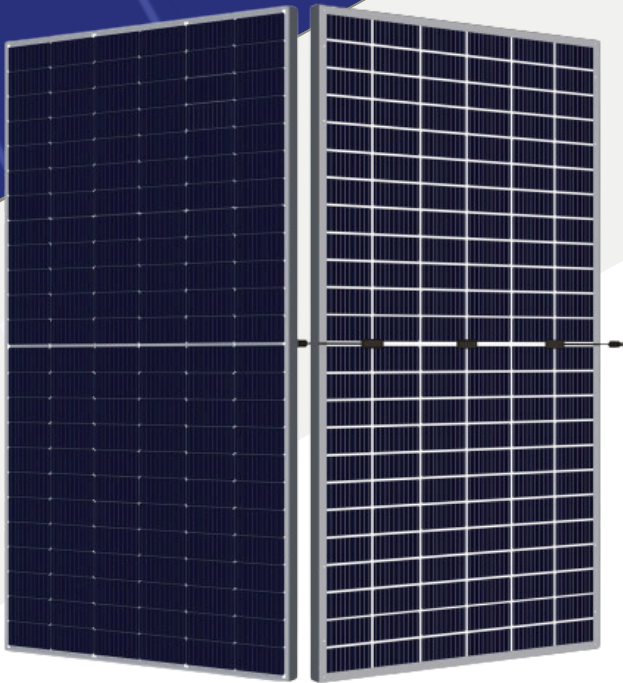


## TOP - 615/635M-156BI

156 CELL  
Mono N - Type Module615 - 635Wp  
Power Output Range1500VDC  
Maximum System Voltage22.72%  
Maximum Efficiency

## KEY SALIENT FEATURES



Industry leading lowest thermal co-efficient of power



Industry leading 15 years product warranty



Excellent low irradiance performance



Excellent PID resistance



Positive power tolerance of 0~+3%



Fully automated production at all stages



Fully Reduced power loss by minimizing the effect of shadow shading ( 9 - 18 Busbar)



European Warranty &amp; After - Sales Service



## TAMESOL BUILDING A GREEN FUTURE S.L

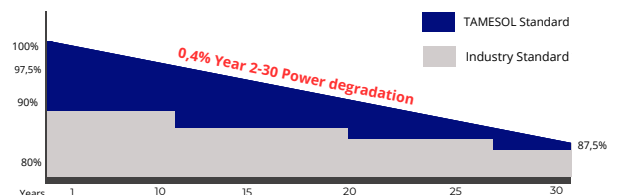
TAMESOL is a global provider of high-efficiency PV panels with a 10GW annual production capacity and a 100% automated production line, innovating state-of-the-art products for over 15 years. Our panels have been installed in more than 50 countries, with over 20 million panels already connected to the grid.

Tel : +34 872 222 388

E - mail: [info@tamesol.com](mailto:info@tamesol.com) Website: [www.tamesol.com](http://www.tamesol.com)

## LINEAR PERFORMANCE WARRANTY

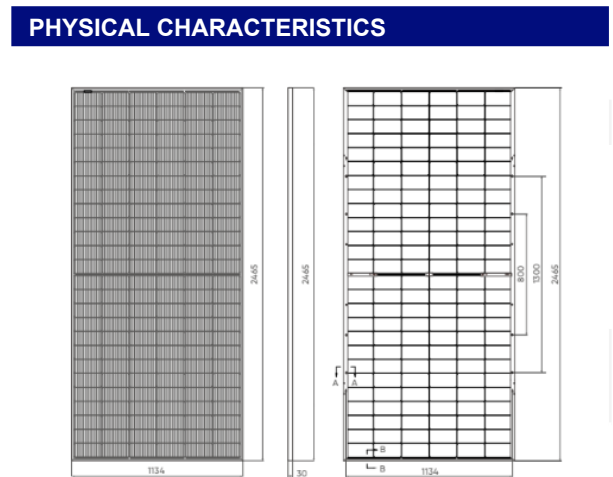
15 year Product Warranty / 30-Year Linear Power Warranty



<b>22,72%</b> MAX MODULE EFFICIENCY	<b>0 - 5%</b> POWER TOLERANCE	<b>1,0%</b> FIRST YEAR POWER DEGRADATION	<b>0,40%</b> YEAR 2-30 POWER DEGRADATION	<b>N-TYPE CELL</b> Lower operating temperature
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ELECTRICAL CHARACTERISTICS		STC: AM1.5 1.000W/m2 NOTC: AM1.5 800W/m2 20° 1 m/s Test uncertainty for Pmax +-3%									
Module type	TOP - 615M-156BI		TOP - 620M-156BI		TOP - 625M-156BI		TOP - 630M-156BI		TOP - 635M-156BI		
Testing condition	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	
Maximum Power (Pmax/w)	615	463	620	467	625	471	630	475	635	479	
Open Circuit Voltage (Voc/V)	56.29	53.85	56.82	53.97	56.95	54.10	57.08	54.22	57.21	54.34	
Short Circuit Current (Isc/A)	13.68	11.04	13.74	11.09	13.80	11.14	13.86	11.19	13.92	11.24	
Voltage at Maximum Power (Vmp/V)	47.20	44.39	47.37	44.54	47.54	44.69	47.70	44.83	47.86	44.98	
Current at maximum Power (Imp/A)	13.03	10.44	13.09	10.59	13.15	10.54	13.21	10.59	13.27	10.64	
Module Efficiency (%)	22.00%		22,18%		22,36%		22,54%		22,72%		

MECHANICAL PARAMETERS	
Cell Orientation	single crystal N-Topcon 182x99,5mm (156 pieces)
Junction Box	IP68, three diodes
Output Cable	4.0mm² 300mm(+) / 300mm(-) or customized
Glass	2.0mm tempered coated glass, low iron
Frame	Anodized aluminum alloy frame
Weight	34,5kg
Dimensión	2465*1134*30mm
Packaging	36 pcs*pallet / 576pcs*40HC



OPERATING PARAMETERS	
Operational Temperature	-40°C - +85°C
Power Output Tolerance	(0, +5%)
Voc and Isc Tolerance	±5%
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25 A
Nominal Operating Cell Temperature	45±2°C
Protection Glass	Class II
Fire Rating	Class C
Bifacial - Factor	80% ± 10%

MECHANICAL LOADING	
Front Side Maximum Static Loading	5400 PA
Rear Side Maximum Static Loading	2400 PA
Hailstone Test	Diameter 25mm, impact speed 23m/s

TEMPERATURA RATINGS (STC)	
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.30%/°C

PACKING MANNER	
Container	40ft(HQ)
Number of modules per container	576
Number of modules per pallet	36
Number of pallets per container	16

TAMESOL Authorized Solar Dealer

**Note:** The specifications are obtained under the Standard Test Conditions (STCs): 1000 W/m2 solar irradiance, 1.5 Air Mass, and cell temperature of 25°C. The NOCT is obtained under the Test Conditions: 800 W/m2, 20°C ambient temperature, 1m/s wind speed, AM 1.5 spectrum. Please contact [info@tamesol.com](mailto:info@tamesol.com) for technical support. The actual transactions will be subject to the contracts. This parameter is for reference only and it is not a part of the contracts. The specifications are subject to change without prior notice.