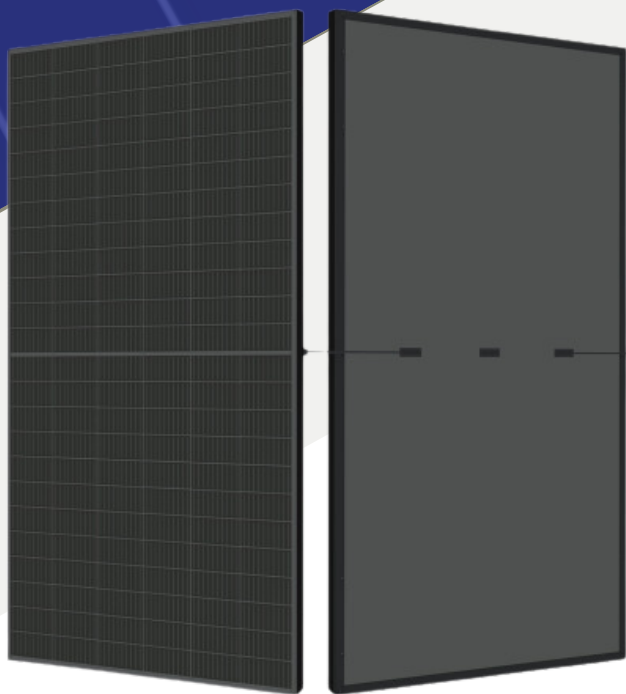


TOPSUN

# ALL BLACK

HIGH PERFORMANCE  
MONOCRYSTALLINE  
N- TYPE TECHNOLOGY



## TOP - 610/630M-156AB









**156 CELL**  
Mono N - Type Module

**610 - 630Wp**  
Power Output Range

**1500VDC**  
Maximum System Voltage

**22.53%**  
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 & After - Sales Service



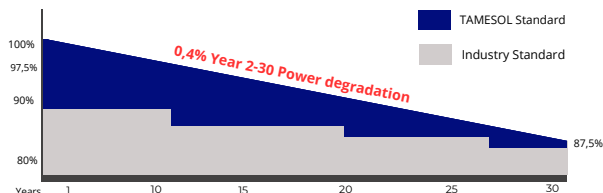
### TAMESOL BUILDING A GREEN FUTURE S.L

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

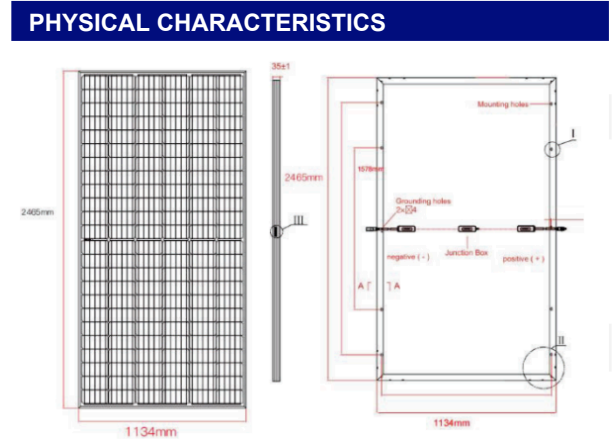


*Since 2007, building a green future*

<b>22,53%</b> MAX MODULE EFFICIENCY	<b>0 - 3%</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 - 610M-156AB		TOP - 615M-156AB		TOP - 620M-156AB		TOP - 625M-156AB		TOP - 630M-156AB		
Testing condition	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	
Maximum Power (Pmax/w)	610	459	615	463	620	467	625	470	630	473	
Open Circuit Voltage (Voc/V)	55.33	52.56	55.48	52.70	55.63	52.84	55.78	52.98	55.93	53.12	
Short Circuit Current (Isc/A)	14.09	11,37	14,16	11,43	14.23	11,48	14,30	11,54	14.37	11,60	
Voltage at Maximum Power (Vmp/V)	45.66	42.28	45.76	42.49	45.86	42.61	45.96	42.72	46.06	42.83	
Current at maximum Power (Imp/A)	13,36	10,83	13,44	10,89	13.52	10,95	13,60	11,01	13.67	11,04	
Module Efficiency (%)	22.02%		22,20%		22,38%		22,44%		22,53%		

MECHANICAL PARAMETERS	
Cell Orientation	single crystal N-Topcon 182x91mm (156 pieces)
Junction Box	IP68, three diodes
Output Cable	1200mm (can be customized)
Glass	3.2mm high transparency, tempered glass
Frame	Anodized aluminum alloy frame
Weight	31kg
Dimensión	2465*1134*35mm
Packaging	31 pcs*pallet / 620 pcs*40HQ



OPERATING PARAMETERS	
Operational Temperature	-40°C - +85°C
Power Output Tolerance	(0, +3%)
Voc and Isc Tolerance	±3%
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

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

PACKING MANNER	
Container	40ft(HQ)
Number of modules per container	620
Number of modules per pallet	31
Number of pallets per container	20

TEMPERATURA RATINGS (STC)	
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Pmax	-0.30%/°C

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.