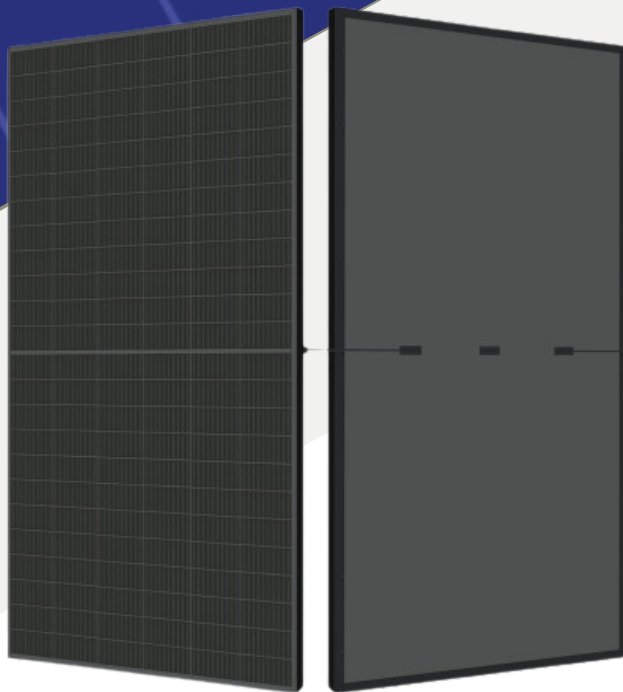


TOPSUN

DARKSUN

HIGH PERFORMANCE
MONOCRYSTALLINE
N- TYPE TECHNOLOGY

144



TOP - 560/580M-144AB

144 CELL
Mono N - Type Module

560 - 580Wp
Power Output Range

1500VDC
Maximum System Voltage

22.44%
Maximum Efficiency

KEY SALIENT FEATURES



Industry leading lowest thermal co-efficient of power



Industry leading 25 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

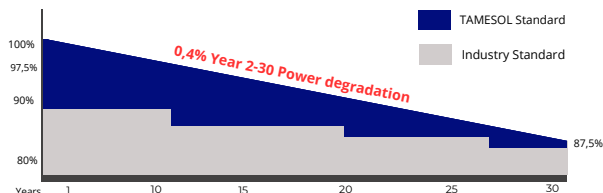
TAMESOL is a global provider of high-efficiency PV panels with a 10GW annual production capacity and a 100% automated production line, innovating state-of-the-art products for over 15 years. Our panels have been installed in more than 50 countries, with over 20 million panels already connected to the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

Tel : +34 872 222 388

E - mail: info@tamesol.com Website: www.tamesol.com

LINEAR PERFORMANCE WARRANTY

25 year Product Warranty / 30-Year Linear Power Warranty



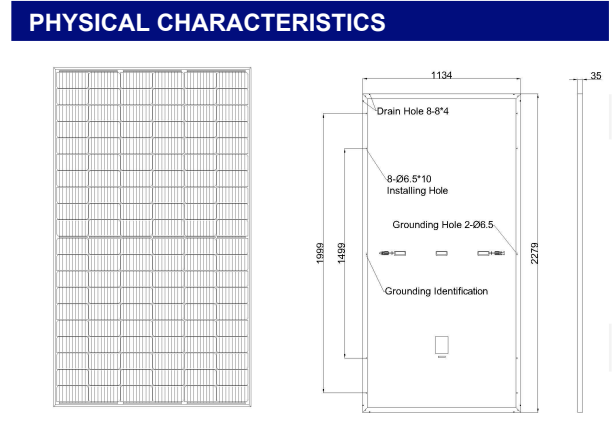
TAMESOL
— be bright, go solar —

Since 2007, building a green future

22,44% MAX MODULE EFFICIENCY	0 - 3% POWER TOLERANCE	1,0% FIRST YEAR POWER DEGRADATION	0,40% YEAR 2-30 POWER DEGRADATION	N-TYPE CELL Lower operating temperature
--	----------------------------------	---	---	---

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 - 560M-144AB		TOP - 565M-144AB		TOP - 570M-144AB		TOP - 575M-144AB		TOP - 580M-144AB		
Testing condition	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	
Maximum Power (Pmax/w)	560	421	565	425	570	429	575	432	580	436	
Open Circuit Voltage (Voc/V)	50,46	47,94	50,60	48,07	50,74	48,2	50,88	46,9	51,02	48,47	
Short Circuit Current (Isc/A)	14,15	11,2	14,23	11,28	14,31	11,35	14,39	11,4	14,47	11,47	
Voltage at Maximum Power (Vmp/V)	41,77	39,68	41,92	39,79	42,07	39,9	42,22	40,01	42,37	40,12	
Current at maximum Power (Imp/A)	13,41	10,61	13,48	10,69	13,55	10,76	13,62	10,8	13,69	10,87	
Module Efficiency (%)	21,75%	16,29%	21,86%	16,44%	22,06%	16,16%	22,25%	16,72%	22,44%	16,87%	

MECHANICAL PARAMETERS	
Cell Orientation	single crystal N-Topcon 182x91mm (144 pieces)
Junction Box	IP68, three diodes
Output Cable	4.0mm² 300mm(+) / 300mm(-) or customized
Glass	3.2mm high transparency, tempered glass
Frame	Anodized aluminum alloy frame
Weight	25 kg
Dimensión	2279*1134*35mm
Packaging	31 pcs*pallet / 255pcs*20GP / 620pcs*40HC



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

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

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

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 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.