

TOPSUN

BIFACIAL

HIGH PERFORMANCE
MONOCRYSTALLINE
N-TYPE TECHNOLOGY

108

TOP - 420/440M-108BI

108 CELL
Mono N - Type Module






420 - 440Wp
Power Output Range

1500VDC
Maximum System Voltage

22.50%
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~+5%
-  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

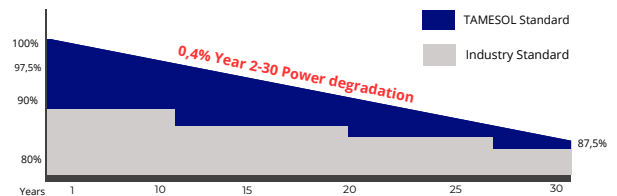
TAMESOL is a global provider of high-efficiency PV panels with a 10GW annual production capacity and a 100% automated production line, innovating state-of-the-art products for over 15 years. Our panels have been installed in more than 50 countries, with over 20 million panels already connected to the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

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TAMESOL
Energia para vivir

LINEAR PERFORMANCE WARRANTY

15 year Product Warranty / 30-Year Linear Power Warranty

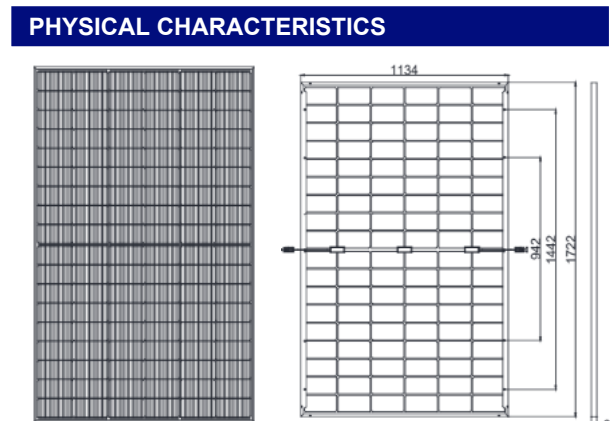


Since 2007, building a green future

22,50% 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
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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 0 - +3%				
Module type	TOP - 420M-108BI		TOP - 425M-108BI		TOP - 430M-108BI		TOP - 435M-108BI		TOP - 440M-108BI	
Testing condition	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC
Maximum Power (Pmax/w)	420	318	425	321	430	325	435	329	440	333
Open Circuit Voltage (Voc/V)	38.70	36,76	38,99	37.04	39.29	37.33	39.58	36,57	39.86	37.87
Short Circuit Current (Isc/A)	13,74	10.99	13.80	11,04	13.85	11,08	13.91	11,26	13.97	11,18
Voltage at Maximum Power (Vmp/V)	32.11	30.34	32.37	30.59	32.63	30.84	32.88	30,29	33.13	31.31
Current at maximum Power (Imp/A)	13.08	10,46	13,13	10,50	13,18	10,54	13,23	10,67	13,28	10,71
Module Efficiency (%)	21,50%		21,80%		22.0%		22,30%		22.50%	

MECHANICAL PARAMETERS	
Cell Orientation	single crystal N-Topcon 182x91mm (108 pieces)
Junction Box	IP68, three diodes
Output Cable	300mm, 1200mm (can be customized)
Glass	3.2mm / 3.2mm
Frame	Anodized aluminum alloy frame
Weight	20,23,24,8kg
Dimensión	1722*1134*30mm
Packaging	36/37 pcs*pallet / 936pcs*40HC



OPERATING PARAMETERS	
Operational Temperature	-40°C - +85°C
Power Output Tolerance	(0, +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
Bifacial - Factor	80% ± 10%

MECHANICAL LOADING	
Front Side Maximum Static Loading	5400 PA
Rear Side Maximum Static Loading	2400 PA

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	936/962
Number of modules per pallet	36/37
Number of pallets per container	26

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.