

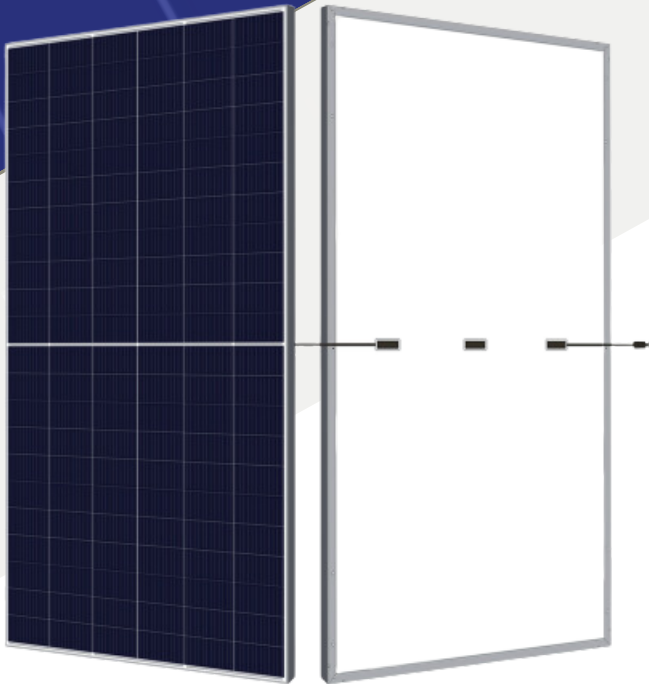
TOP - 415/435M-108HC

108 CELL
Mono N - Type Module









415 - 435Wp
Power Output Range

1500VDC
Maximum System Voltage

22.28%
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



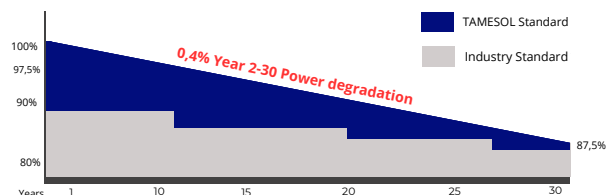
TAMESOL BUILDING A GREEN FUTURE S.L

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.

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LINEAR PERFORMANCE WARRANTY

25 year Product Warranty / 30-Year Linear Power Warranty



22,28%

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

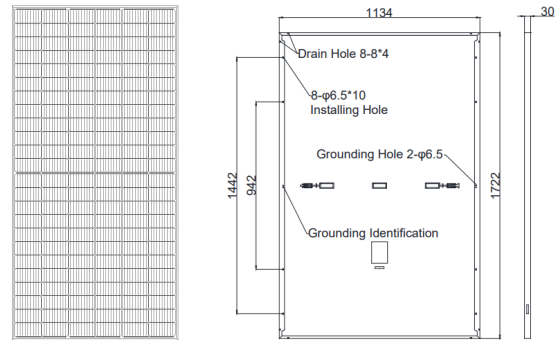
STC: AM1.5 1.000W/m² NOTC: AM1.5 800W/m² 20° 1 m/s Test uncertainty for Pmax +3%

Module type	TOP - 415M-108HC		TOP - 420M-108HC		TOP - 425M-108HC		TOP - 430M-108HC		TOP - 435M-108HC	
	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC
Testing condition										
Maximum Power (Pmax/w)	415	312	420	316	425	320	430	323	435	327
Open Circuit Voltage (Voc/V)	37,92	36,02	38,11	36,20	38,30	36,39	38,49	36,57	38,68	36,75
Short Circuit Current (Isc/A)	13,99	11,07	14,07	11,15	14,15	11,22	14,23	11,26	14,31	11,33
Voltage at Maximum Power (Vmp/V)	31,32	29,75	31,51	29,93	31,70	30,12	31,88	30,29	32,06	30,46
Current at maximum Power (Imp/A)	13,25	10,49	13,33	10,56	13,41	10,63	13,49	10,67	13,57	10,74
Module Efficiency (%)	21,25%	15,98%	21,51%	16,18%	21,76%	16,39%	22,02%	16,54%	22,28%	16,75%

MECHANICAL PARAMETERS

Cell Orientation	single crystal N-Topcon 182x91mm (108 pieces)
Junction Box	IP68, three diodes
Output Cable	4.0mm ² 300mm(+) / 300mm(-) or customized
Glass	3.2mm tempered coated glass, low iron
Frame	Anodized aluminum alloy frame
Weight	20.5 kg
Dimensión	1722*1134*30mm
Packaging	36 pcs*pallet / 366pcs*20GP / 936pcs*40HC

PHYSICAL CHARACTERISTICS



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	-0.25%/°C
Temperature Coefficient of Pmax	-0.30%/°C

PACKING MANNER

Container	40ft(HQ)
Number of modules per container	936
Number of modules per pallet	36
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.