TOPSUN

HIGH PERFOMANCE MONOCRYSTALLINE N- TYPE TECHNOLOGY

















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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TOP - 600/620M-132HC

132 CELL

1500VDC

Mono N - Type Module

600 - 620WpPower Output Range

Wiolio N - Type Wiodale

22.95%

Maximum System Voltage

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



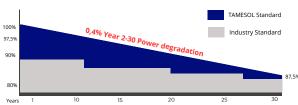
Fully Reduced power loss by minimizing the effect of shadow shading (9 - 18 Busbar)



European Warranty & After - Sales Service

LINEAR PERFORMANCE WARRANTY

25 year Product Warranty / 30-Year Linear Power Warranty



Since 2007, building a green future



TOP-600/620M-132HC

22,95%

MAX MODULE EFFICIENCY 0 - 3%

POWER

TOLERANCE

1,0%
FIRST YEAR POWER DEGRADATION

0,40% YEAR 2-30 POWER DEGRADATION **N-TYPE CELL**

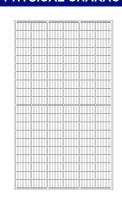
Lower operating temperature

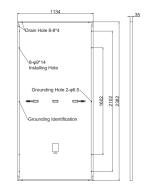
| ELECTRICAL CHARACTERISTICS STC: AM1.5 1.000W/m2 NOTC: AM1.5 800W/m2 20° 1 m/s Test uncertainty for Pmax +-3% | | | | | | | | | | |
|--|-----------|---------|------------|---------|----------|----------|-----------|---------|-----------|---------|
| Module type | TOP - 600 | M-132HC | TOP - 6051 | W-132HC | TOP - 61 | 0M-132HC | TOP - 615 | M-132HC | TOP - 620 | M-132HC |
| Testing condition | STC | NOTC | STC | NOTC | STC | NOTC | STC | NOTC | STC | NOTC |
| Maximum Power (Pmax/w) | 600 | 451 | 605 | 455 | 610 | 459 | 615 | 462 | 620 | 466 |
| Open Circuit Voltage (Voc/V) | 48.28 | 45.86 | 48.48 | 46.06 | 48.68 | 46.25 | 48.88 | 46.44 | 49.08 | 46.63 |
| Short Circuit Current (Isc/A) | 15.84 | 12.53 | 15.90 | 12,58 | 15.96 | 12.64 | 16.02 | 12.67 | 16.08 | 12.72 |
| Voltage at Maximum Power (Vmp/V) | 40.16 | 38.15 | 40.31 | 38.29 | 40.46 | 38.44 | 40.60 | 38.57 | 40.74 | 38.70 |
| Current at maximum Power (Imp/A) | 14.94 | 11.82 | 15.01 | 11.88 | 15.08 | 11.94 | 15.15 | 11.98 | 15.22 | 12.04 |
| Module Efficiency (%) | 22.21% | 16.70% | 22,40% | 16.84% | 22,58% | 16.99% | 22,27% | 17.10% | 22,95% | 17.25% |

MECHANICAL PARAMETERS

| Cell Orientation | single crystal N-Topcon 182x105mm (132 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 | 31 kg |
| Dimensión | 2382*1134*35mm |
| Packaging | 31 pcs*pallet / 255pcs*20GP / 620pcs*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 | 30 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 | 620 |
| Number of modules per pallet | 31 |
| Number of pallets per container | 20 |

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.