

TN-60-6M

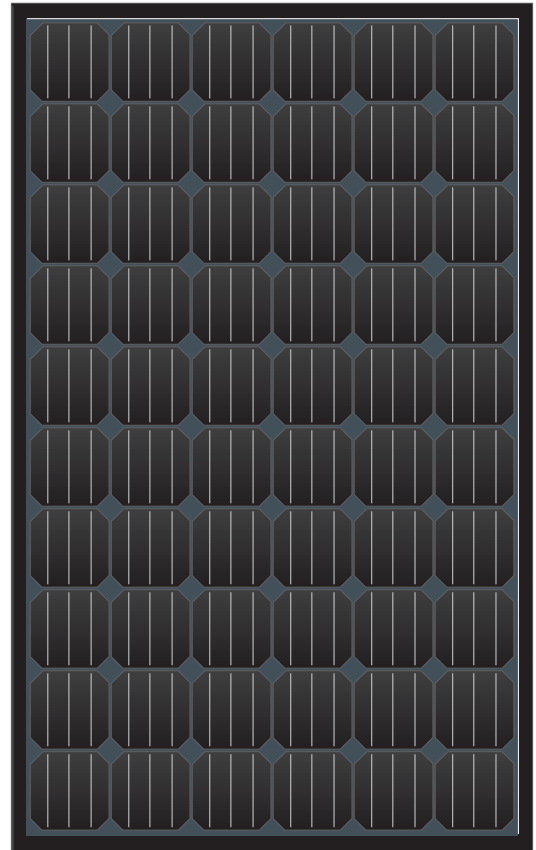
Black Series

210W | 220W | 230 W | 240 W | 250 W | 260 W

Monocrystalline silicon photovoltaic modules

Quality from TNS SOLAR

- 10 Year Product Warranty
- 12 year performance guarantee for a 90% power output
- 30 year performance guarantee for a 80% power output



High module conversion efficiency

Module efficiency up to 16.0% achieved through advanced cell technology and manufacturing capabilities



Self-cleaning & anti-reflective

Higher module efficiency from anti-reflective, hydrophobic layer with higher light absorption and minimal surface dust



Positive tolerance

Guaranteed positive tolerance of up to 5% or up to 13W delivers higher outputs' reliably



Easy Installation

Low weight, convenient format Horizontal and vertical installation possible Optimal utilisation of the roof surface



Independently certified

Independently certified by international certification bodies



High performance

High performance under low light conditions Cloudy days, mornings and evenings

ELECTRICAL TYPICAL VALUES

| Model | Rated Power (Pmax) | Tolerance | Rated current (Imp) | Rated Voltage (Vmp) | Short Circuit Current (Isc) | Open circuit voltage (Voc) | Module Efficiency(%) |
|-------------|--------------------|-----------|---------------------|---------------------|-----------------------------|----------------------------|----------------------|
| TN-60-6M210 | 210W | 0/+5% | 7.30A | 28.8V | 7.85A | 36.8V | 12.90 |
| TN-60-6M220 | 220W | 0/+5% | 7.54A | 29.2V | 8.05A | 37.0V | 13.60 |
| TN-60-6M230 | 230W | 0/+5% | 7.78A | 29.6V | 8.25A | 37.3V | 14.14 |
| TN-60-6M240 | 240W | 0/+5% | 8.00A | 30.0V | 8.45A | 37.6V | 14.80 |
| TN-60-6M250 | 250W | 0/+5% | 8.24A | 30.4V | 8.65A | 37.9V | 15.40 |
| TN-60-6M260 | 260W | 0/+5% | 8.46A | 30.8V | 8.85A | 39.1V | 16.00 |

TEMPERATURE CHARACTERISTICS

NOCT (Nominal Operation Temperature): $45^{\circ}\pm 2^{\circ}\text{C}$

Temperature Coefficient: $-0.35\% / \text{K}$

Current Temperature Coefficient: $-0.05\% / \text{K}$

Power Temperature Coefficient: $-0.48\% / \text{K}$

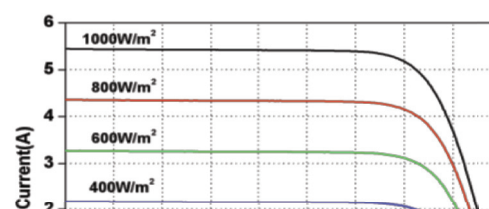
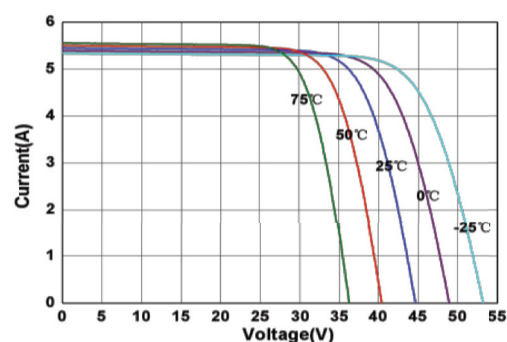
MECHANICAL CHARACTERISTICS

| | |
|--------------|--|
| Solar Cells | Mono crystal Si 125 mm \times 125 mm Square, 6 \times 12 pieces in series |
| Dimension | Length: 1640mm, Width: 992mm, Thickness: 50mm |
| Front Glass | 3.2 mm High transparency solar glass |
| Frame | Anodized aluminium alloy |
| Cable | 0.9m wire (ϕ 4 mm ²) |
| Diodes | 6 pieces schottky by-pass diodes |
| Junction Box | IP 65 Rated |
| Connectors | MC4 Connectors |

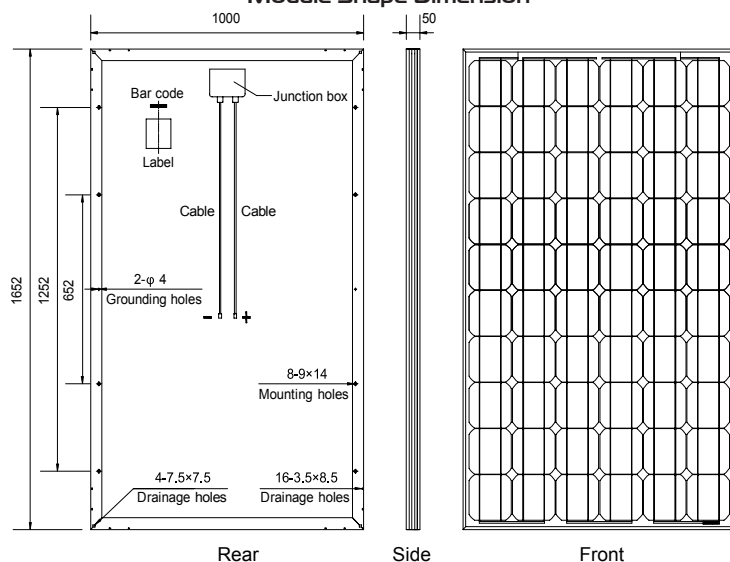
ABSOLUTE MAXIMUM RATING

| Parameter | Values |
|-----------------------------------|-------------------------------------|
| Operating temperature | From -40° to $+85^{\circ}$ |
| Typical Application | 24 V DC |
| Hail Diameter @ 80km/h | Up to 25mm |
| Maximum Series Fuse Rating | 10 |
| IEC Application Class (IEC 61215) | A |
| Fire Rating (UL 1703) | C |
| Maximum System Voltage | 1000 V DC (IEC 61215) |
| | 600 V (UL 1703) |

I-V graph (-60-6M 250)



Module Shape Dimension



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