AEON SERIES

MünchenSolar
MAXIMALENERGIE

LASER CUT TECHNOLOGY

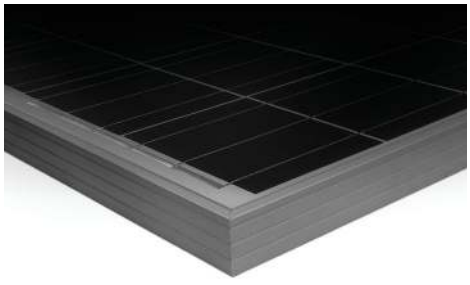
3 BUSBAR CELL

ANTI REFLECTIVE GLASS

BETTER EFFICIENCY

IP67
ULTIMATE PROTECTION



# AEON SERIES
## Multicrystalline MSPxxxSC-36

### LASER CUT TECHNOLOGY
By reducing the area of each wafer before cell production, with precision revolutionizing laser cut processing, then connecting cells in a parallel formation, the amount of electrical current carried by each busbar is reduced by 20%. This results in the decrease of electrical resistance within the busbars and an increase in overall efficiency of up to 2.5%.

### 3 BUSBAR CELL
Through an industry-leading innovation of integrating 3 busbars into each cell, internal electrical resistance is reduced, boosting cell output up to 3%*. This is possible because the distances between the busbars are shorter and less current flows through each smaller electrode where resistance is the highest.

*Approximate improvement compared to a standard 2 busbar cell.

### ANTI REFLECTIVE GLASS
An anti-reflective coating has been added to the glass of our modules. It improves the light transmittance of the glass by reducing the amount of reflection on the surface. This improvement has led to a module output increase of 2%. Furthermore, München Solar modules use a non-porous type of anti-reflective coating, which is more resistant to the adhesion of dust than porous types.

### PID (POTENTIAL INDUCED DEGRADATION) FREE
Our AEON Series PID Free modules are tested under the condition of 60°C/ 85% RH, setting a new standard for Quality and Performance of PV modules. Our modules can be used in all areas, especially ideal for installations in regions of high temperature and high humidity. Our 60°C/ 85% RH certified PID Free module ensures highest reliability under extreme conditions.

### FRAME FIXATION
Traditionally this process has been achieved through the use of silicon sealant. All AEON series modules utilize industry leading high-end adhesive tapes, for a tighter seal to guarantee higher reliability when bonding frames to solar laminates.

12 year product warranty

25 year power output warranty

# AEON SERIES
## Multicrystalline MSPxxxSC-36

POWERED BY MÜNCHEN SOLAR

## ELECTRICAL PERFORMANCE

### Electrical parameters at Standard Test Conditions (STC)

| Module Type | MSPxxxSC-36 (xxx=$P_{max}$) | | | | | | |
|---|---|---|---|---|---|---|---|
| Power output | $P_{max}$ | | 235 | 240 | 245 | 250 | 255 |
| Power output tolerances | $\Delta P_{max}$ | % | 0 / +3 | | | | |
| Module efficiency | $\eta_m$ | % | 14.47 | 14.78 | 15.09 | 15.40 | 15.71 |
| Voltage at Pmax | $V_{mpp}$ | V | 37.22 | 37.66 | 37.8 | 37.81 | 38.18 |
| Current at Pmax | $I_{mpp}$ | A | 6.31 | 6.37 | 6.48 | 6.61 | 6.68 |
| Open circuit voltage | $V_{oc}$ | V | 44.50 | 44.93 | 45.07 | 45.40 | 45.55 |
| Short circuit current | $I_{sc}$ | A | 6.76 | 6.82 | 6.94 | 7.07 | 7.15 |

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5G spectrum
Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

## THERMAL CHARACTERISTICS

| Nominal operating cell temperature | NOCT | °C | 47 +/-2 |
|---|---|---|---|
| Temperature coefficient of $P_{max}$ | $\gamma$ | % / °C | -0.45 |
| Temperature coefficient of $V_{oc}$ | $\beta_{Voc}$ | % / °C | -0.33 |
| Temperature coefficient of $I_{sc}$ | $\alpha_{Isc}$ | % / °C | +0.04 |
| Temperature coefficient of $V_{mpp}$ | $\beta$Vmpp | % / °C | -0.35 |

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature, 1m/s wind speed.
Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

## OPERATING CONDITIONS

| Max. System Voltage | 1000VDC |
|---|---|
| Max. series fuse rating | 15A |
| Limiting reverse current | 15A |
| Operating temperature range | -40°C to 85°C |
| Max. static load, front (e.g., snow and wind) | 5400Pa |
| Max. static load, back (e.g., wind) | 2400Pa |
| Max. hailstone impact (diameter / velocity) | 25mm / 23m/s |

## MECHANICAL CHARACTERISTICS

| Front Cover (material / thickness) | Micro - structured solar glass / 3.2mm |
|---|---|
| Cell (quanity / material / dimensions) | 72 / multicrystalline silicon / 156 x 130mm |
| Encapsulant (material) | EVA |
| Frame material | anodized aluminum alloy |
| Junction box (protection degree) | ≥ IP67 (3 bypass-diodes) |
| Cable (length / cross sectional area) | 900mm / 4mm² |
| Plug connector (type / protection degree) | MC4 / IP67 |
| Fire Safety Classification (IEC 61730) | Class C |

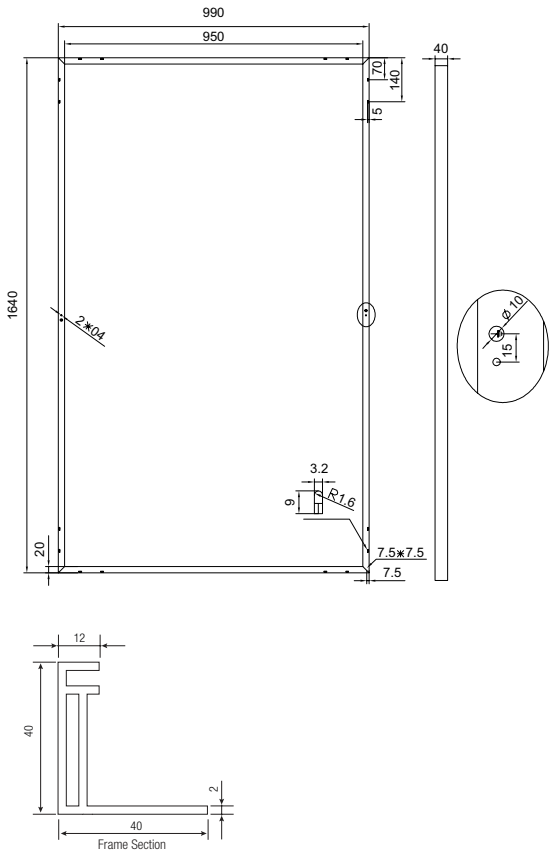
All values indicated in this data sheet are subject to change without prior announcement. The specifications may vary slightly. All specifications are in accordance with standard EN 50380. Color differences of the modules relative to the figures as well as discolorations of/in the modules which do not impair their proper functioning are possible and do not constitute a deviation from the specification.

## PARTNERS

## GENERAL CHARACTERISTIC

| Dimensions | 1640mm / 990mm / 40mm |
|---|---|
| Weight | 18.6kg |

Unit: mm







MünchenSolar
MAXIMALENERGIE

© München Solarenergie GmbH I www.munchensolar.de

REV2014Q1