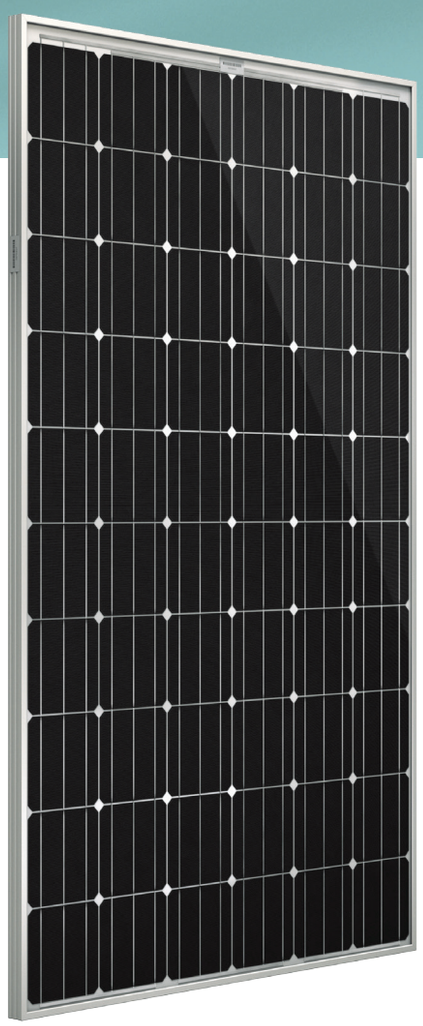
aleo

# Powerful projects



## P19

290 - 300 W

QUALITY SIGNED AND SEALED

| 60 | 35 mm | up to 18.3 % |
|---|---|---|
| cells | frame | efficiency |

**PID FREE**
PID tested with excellent results under the harshest conditions

**25 YEARS LINEAR PERFORMANCE WARRANTY**

**12 YEARS PRODUCT WARRANTY**

**CRAFTED WITH PASSION**

**CONSTANTLY HIGH CELL QUALITY**
through strict quality examinations by highresolution electroluminescence and infraredmeasurements

Made in Germany

# aleo solar module P19

| ELECTRICAL DATA (STC) | | | P19_290 | P19_295 | P19_300 |
|---|---|---|---|---|---|
| Rated power | $P_{MPP}$ | [W] | 290 | 295 | 300 |
| Rated voltage | $V_{MPP}$ | [V] | 31.3 | 31.3 | 31.2 |
| Rated current | $I_{MPP}$ | [A] | 9.25 | 9.42 | 9.63 |
| Open-circuit voltage | $V_{OC}$ | [V] | 39.3 | 39.3 | 39.4 |
| Short-circuit current | $I_{SC}$ | [A] | 9.80 | 9.87 | 9.97 |
| Efficiency | n | [%] | 17.6 | 18.0 | 18.3 |

Electrical values measured under standard test conditions (STC): 1000 W/m²; 25°C; AM 1.5

| ELECTRICAL DATA (NOCT) | | | P19_290 | P19_295 | P19_300 |
|---|---|---|---|---|---|
| Power | $P_{MPP}$ | [W] | 212 | 215 | 220 |
| Voltage | $V_{MPP}$ | [V] | 28.4 | 28.4 | 28.5 |
| Current | $I_{MPP}$ | [A] | 7.45 | 7.59 | 7.72 |
| Open-circuit voltage | $V_{OC}$ | [V] | 36.2 | 36.2 | 36.3 |
| Short-circuit current | $I_{SC}$ | [A] | 7.93 | 7.99 | 8.07 |
| Efficiency | n | [%] | 16.1 | 16.4 | 16.7 |

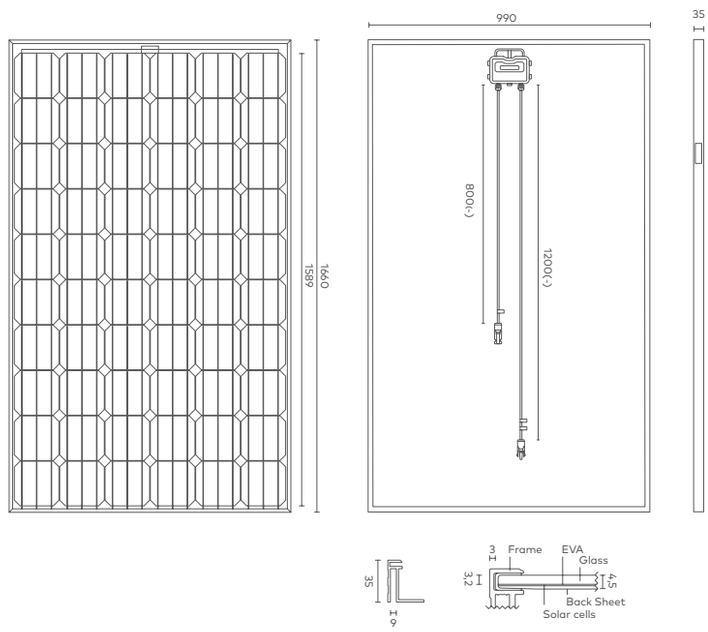
Electrical values measured under nominal operating conditions of cells: 800 W/m²; 20°C; AM 1.5; wind 1 m/s
NOCT: 48°C (nominal operating cell temperature)

| TEMPERATURE COEFFICIENTS | | | |
|---|---|---|---|
| Temperature coefficient $I_{SC}$ | a ($I_{SC}$) | [%/K] | +0.05 |
| Temperature coefficient $V_{OC}$ | ß ($V_{OC}$) | [%/K] | -0.29 |
| Temperature coefficient $P_{MPP}$ | Y ($P_{MPP}$) | [%/K] | -0.40 |

| BASIC DATA JUNCTION BOX | | |
|---|---|---|
| Length x width x height | [mm] | 148 x 123 x 27 |
| IP class | | IP67 |
| Cable length | [mm] | 1200 (+), 800 (-) |
| Connectors | | PV-JM601 |
| Bypass diodes | | 3 |

Measurement tolerance of $P_{MPP}$ under STC -3/+3% | Accuracy of other electrical values -10/+10%
Efficiency relating to gross module area

## DIMENSIONS [MM]




| BASIC MODULE DATA | | |
|---|---|---|
| Length x width x height | [mm] | 1660 x 990 x 35 |
| Weight | [kg] | 19 |
| Number of cells | | 60 |
| Cell size | [mm] | 156.75 x 156.75 |
| Cell material | | Monocrystalline Si |
| Front sheet | | Solar glass (TSG) |
| Back sheet | | Polymer sheet, white |
| Frame material | | Al alloy, silver |

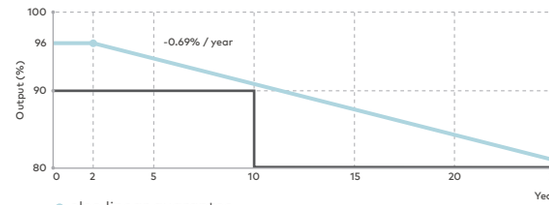
| CERTIFICATIONS AND WARRANTY | |
|---|---|
| Product Guarantee | 12 years |
| Power Guarantee | 25 years – Linear |
| Fire Resistance | Class C |
| Protection Against Electric Shock | II |
| Certifications | § IEC 61215, IEC 61730-1/-2 |
| | § IEC 62716 – Ammonia Resistance |
| | § IEC 61701 – Salt mist Resistance |
| | § IEC 62804 – PID Resistance |
| | § MCS 010; MCS 005 |

| LOADS | | | |
|---|---|---|---|
| Max. module pressure load | | [Pa] | 5400* |
| Max. module suction load | | [Pa] | 2400* |
| Max. system voltage | | [$V_{DC}$] | 1000 |
| Reverse current load | $I_R$ | [A] | 20 |

Mechanical load acc. to IEC/EN 61215
* Please observe the mounting conditions in the installation manual

| ADDITIONAL ELECTRICAL DATA | | |
|---|---|---|
| Reduction of STC efficiency from 1000 W/m² to 200 W/m² | [%] rel. | < 2 |
| Classification range (positive classification) | [W] | 0/+4.99 |

## PERFORMANCE GUARANTEE




**PLEASE CONTACT YOUR AUTHORISED ALEO DEALER**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