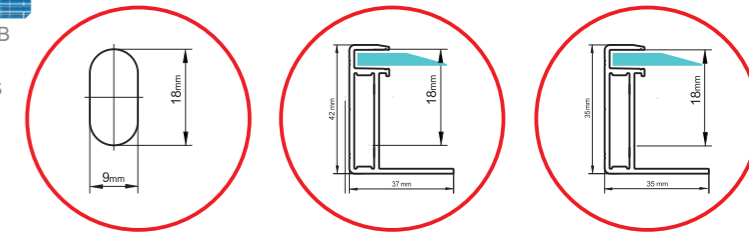


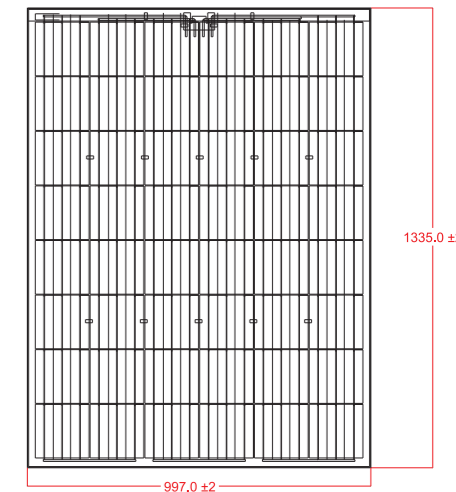
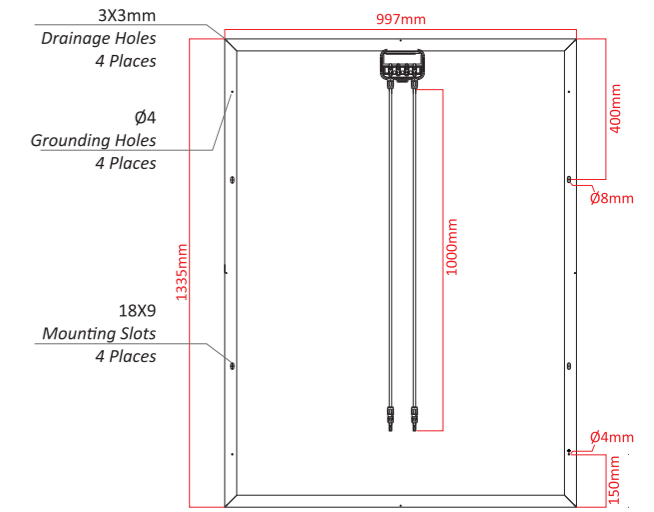
Mounting Slot

Frame

Frame



FRAME CAN BE MANUFACTURED WITH TWO DIFFERENT MEASUREMENT OPTIONS.



### Electrical Data

MODEL	A3S48P 220	A3S48P 225	A3S48P 230	
<b>P<sub>max</sub></b>	Maximum Power	220	225	230
<b>%</b>	Module Efficiency	16,53	16,91	17,28
<b>I<sub>mp</sub> (A)</b>	Maximum Power Current	8,46	8,48	8,52
<b>I<sub>sc</sub> (A)</b>	Short Circuit Current	8,99	9,00	9,02
<b>V<sub>mp</sub> (V)</b>	Maximum Power Voltage	26,10	26,54	26,99
<b>V<sub>oc</sub> (V)</b>	Open Circuit Voltage	30,86	30,91	30,96

### Technical Specifications

### Mechanical Data

Subject	Specification
Dimensions	1335 ± 2 mm (L) x 997 ± 2 mm (W) x 42-35 0,5 mm (D)
Weight	17 Kg
Solar Cell	48 Polycrystalline Tip 6" Silicon Cells (156.75 mm x 156.75 mm)
Front Glass	Tempered / Tempered ARC Glass
Encapsuland	Ethylene Vinyl Acetate (EVA)
Backsheet	Composite Film, Color White
Junction Box	Tyco / Ekinler Certificate
Frame	Aluminium Frame (Eloxal Coating)

### Operating Conditions

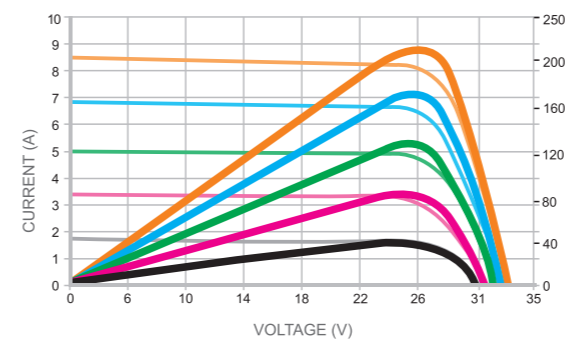
Subject	Specification
Mechanical Strength	5400 Pa (Certified By KIWA MEYER)
Maximum System Voltage	DC 1000 V / 1500 V
Series Fuse Rating	15 A
Operating Temperature	-40 to 85 °C

### Temperature Characteristics

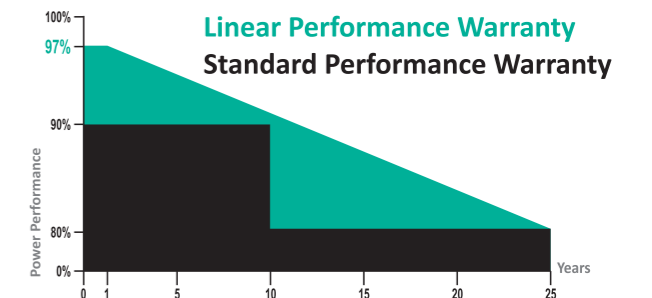
Subject	Specification
Nominal Operating Cell Temperature	44 °C ± 2 °C
Temperature Coefficient of P <sub>mp</sub>	-0,36 % / °C
Temperature Coefficient of I <sub>sc</sub>	+0,07 % / °C
Temperature Coefficient of V <sub>oc</sub>	-0,31 % / °C

### Warranty

Subject	Specification
Product Warranty	10 Years
Linear Performance Warranty	10 Years, over %90 - 25 Years, over %80
JIT Product	Warranty of selling panels that are produced in last on year.
Power Tolerance	Positive (+) 5 Watt
Online Datasheet on the panel	QR Code System



The typical relative change in module efficiency at irradiance of 200 W/m<sup>2</sup> in relation to 1000 W/m<sup>2</sup> (both at 25 °C and AM 1.5 spectrum) is less than 3 %.



**Electroluminescence:** Quality control for small microcracks with infrared radiation.

**+5 Sun Simulator:** 1000 W/m<sup>2</sup> radiation, 25°C temperature, +5 positive power tolerance and classification according to power tolerance.

**Salt Mist Test:** According to IEC 61701 ed.2 Salt Resistance

**Snow Load Test:** Under 5400 Pa snow load resistance according to IEC 61215

**Ammonia Corrosion Test:** Corrosion resistance according to IEC 62716

**PID Potential Induced Degradation:** PID Resistance according to IEC 62804

**2400Pa Wind Load Test:** Under 2400 Pa wind load resistance according to IEC 61215

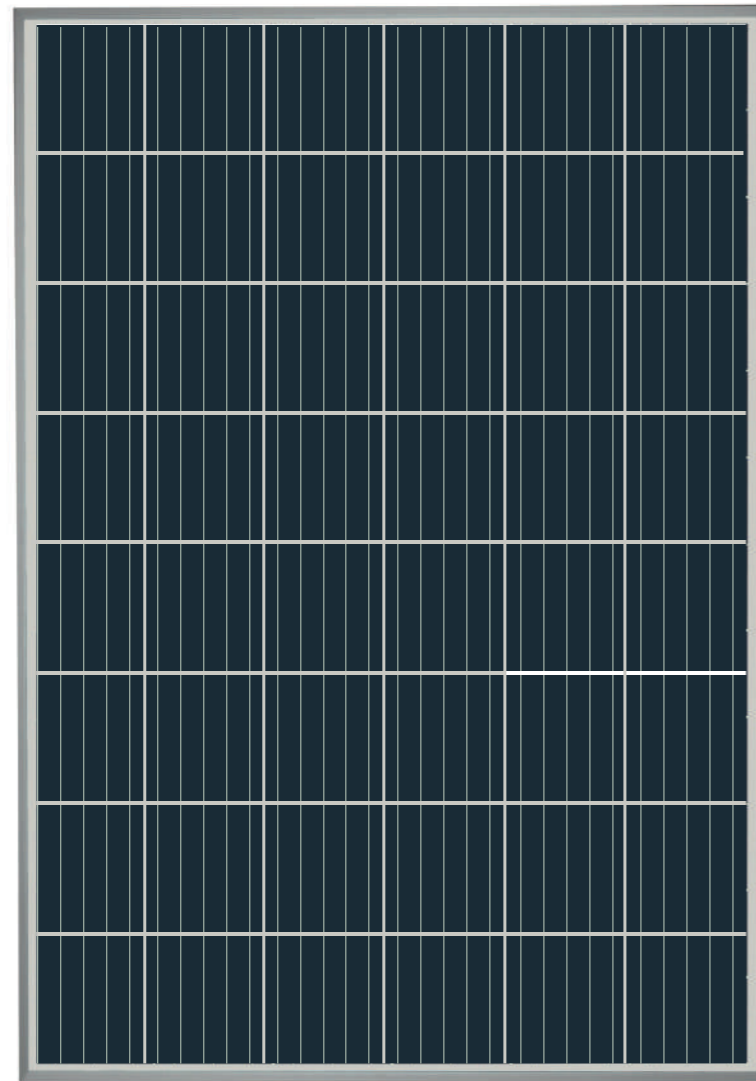
**%200 Thermal Cycles Damp Heat Test:** 1000 hours damp heat and 200 thermal cycles according to IEC 61215

**High Performance in Low Radiation :** On cloudy days, morning and evening over %3 performance (200 w/m<sup>2</sup>)

**FF % Fill Factor:** High Fill Factor value, increased power.  
**Cell Power:** Five bus bar, with high power.

**QR KAREKOD QR Code System:** Real power measurements of modules which have +5 power tolerance ease of viewing with QR Code.

**JIT Just in Time Production:** Production date is in panels glass, unchangeable and warranty of selling production in that are produced in last one year.



- ISO 9001
- ISO 14001
- ISO 18001
- IEC 61215-1
- IEC 61215-1-1
- IEC 61215-2
- IEC 61730-1
- IEC 61730-2
- IEC 61701
- IEC 62804
- IEC 62716
- OHSAS 18001

"LOCAL ITEM" MENTIONED  
IN NUMBER 5346 YEK LAW

Turkey  
Discover the potential

# ELIMINATE OF MICROCRACKS