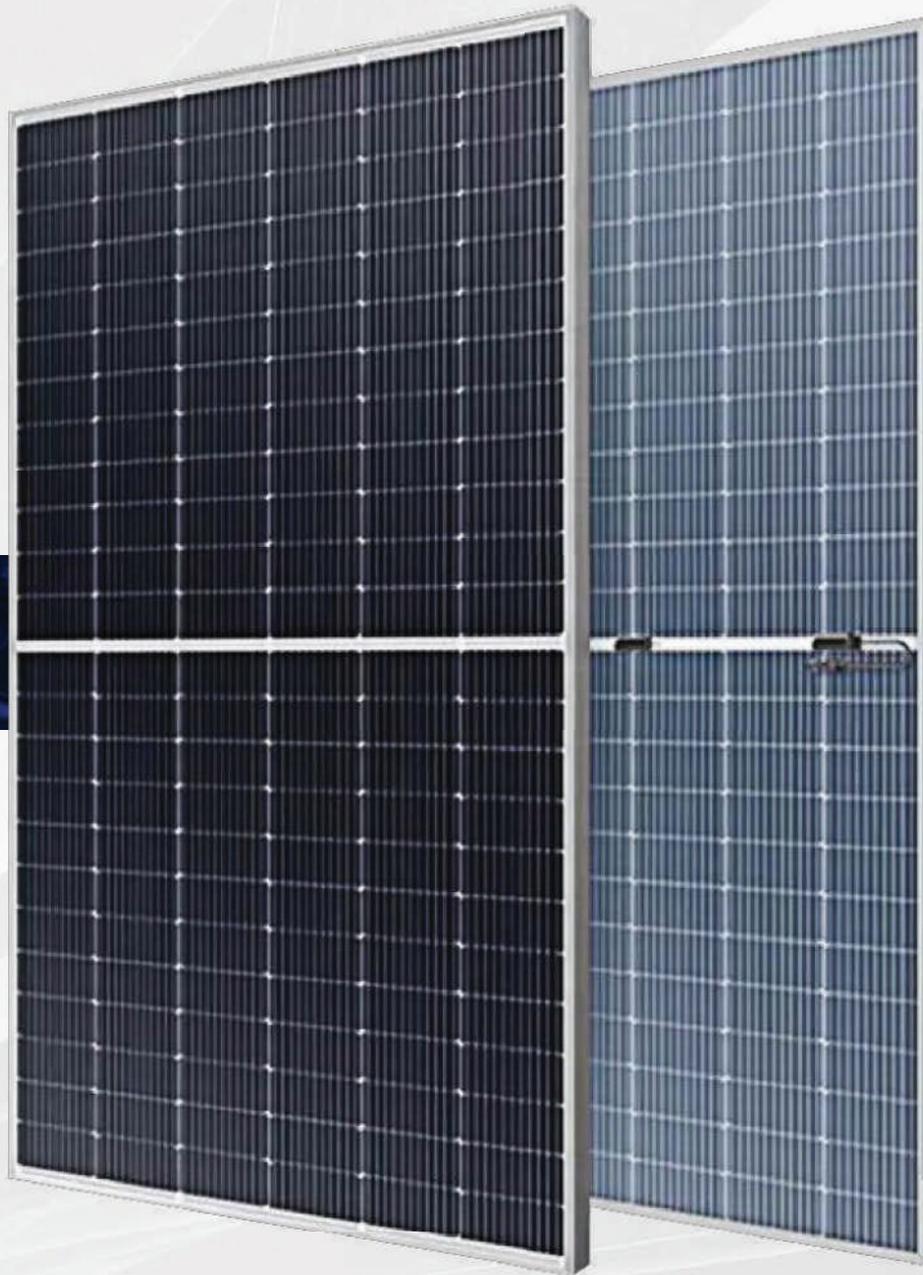


# 144 CELL





TUBITAK UME AAA+ SIMULATOR  
WITH QR CODE ONLINE DATASHEET

**A10S144MBF**



# Technical Specifications



Discover  
the potential

“LOCAL ITEM” MENTIONED  
IN NUMBER 5346 YEK LAW

ISO 9001
IEC 61215-1
IEC 61730-1
IEC 62804
ISO 14001
IEC 61215-1-1
IEC 61730-2
IEC 62716
ISO 45001
IEC 61215-2
IEC 61701
OHSAS 45001

## Electrical Data

Model	A10S144M 545	A10S144M 550	A10S144M 555
<b>P<sub>max</sub></b> Maximum Power	545	550	555
<b>%</b> Module Efficiency	20,98	21,17	21,40
<b>I<sub>mpp</sub> (A)</b> Maximum Power Point Current	12,89	13,00	13,04
<b>I<sub>sc</sub> (A)</b> Short Circuit Current	13,58	13,60	13,61
<b>V<sub>mpp</sub> (V)</b> Maximum Power Point Voltage	42,41	42,62	42,70
<b>V<sub>oc</sub> (V)</b> Open Circuit Voltage	49,68	49,90	49,97

Bifaciality 0,80 ±10%

Bifacial Gain: Additional gain from the rear compared to the power of the front in the standard test condition. It depends on the mounting of the ground (structure, height, slope angle, etc.) and its albedo.

## Electrical Data

STC/NOCT	STC	NOCT	STC	NOCT	SCT	NOCT
<b>P<sub>max</sub></b> Maximum Power	545	417	550	420	555	424
<b>I<sub>mpp</sub> (A)</b> Maximum Power Point Current	12,89	10,45	13,00	10,55	13,04	10,58
<b>I<sub>sc</sub> (A)</b> Short Circuit Current	13,58	10,87	13,06	10,89	13,61	10,90
<b>V<sub>mpp</sub> (V)</b> Maximum Power Point Voltage	42,41	39,73	42,62	39,93	42,70	40,00
<b>V<sub>oc</sub> (V)</b> Open Circuit Voltage	49,68	46,54	49,90	46,80	49,97	46,81

Standard Test Conditions (STC),  
Conditions meant to be under STC are:  
Cell Temperature: 25 °C Irradiance: 1000 W/m<sup>2</sup> Air Mass: 1.5

Nominal Operating Cell Temperature (NOCT)  
Ambient Temperature: 20 °C  
Irradiance: 800 W/m<sup>2</sup> Air Mass: 1.5 Wind Speed: 1 m/s

## Operating Conditions

Subject	Specification
Mechanical Strength	5400 Pa Snow and 2400 Pa Wind Test Load (Safety F. 1.5 Certified TSE)
Maximum System Voltage	DC 1500 V
Series Fuse Rating	25 A
Operating Temperature	-40 to 85 °C

## Temperature Characteristics

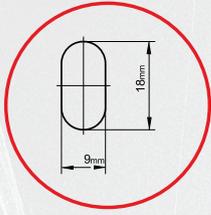
Subject	Specification
Nominal Operating Cell Temperature	41.2°C ± 2°C
Temperature Coefficient of P <sub>mpp</sub>	-0,311 % / °C
Temperature Coefficient of I <sub>sc</sub>	+0,040 % / °C
Temperature Coefficient of V <sub>oc</sub>	-0,237 % / °C

## Warranty

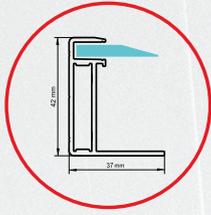
Subject	Specification
Product Warranty	10 Years
Linear Performance Warranty	10 Years , over %90 - 25 Years , over %80
JIT Product	Warranty of selling panels that are produced in last on year.
Power Tolerance	Positive (+) 5 Watt
Online Darasheet on the panel	QR Code System



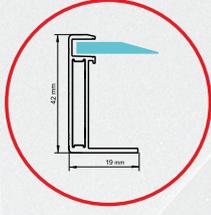
Mounting Slot



Long Frame



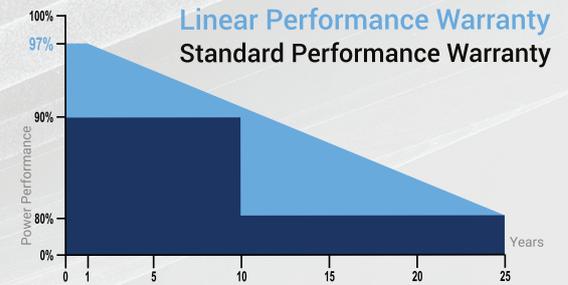
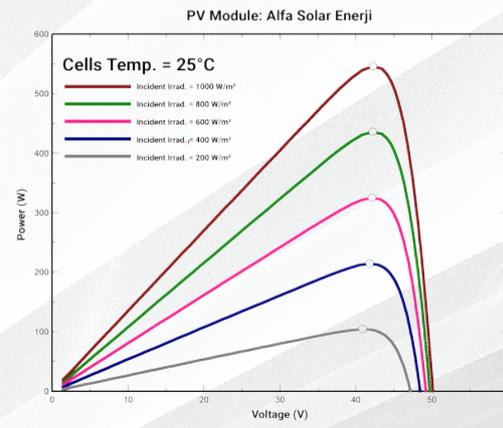
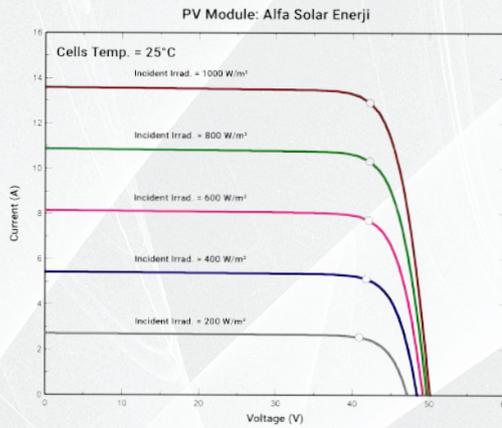
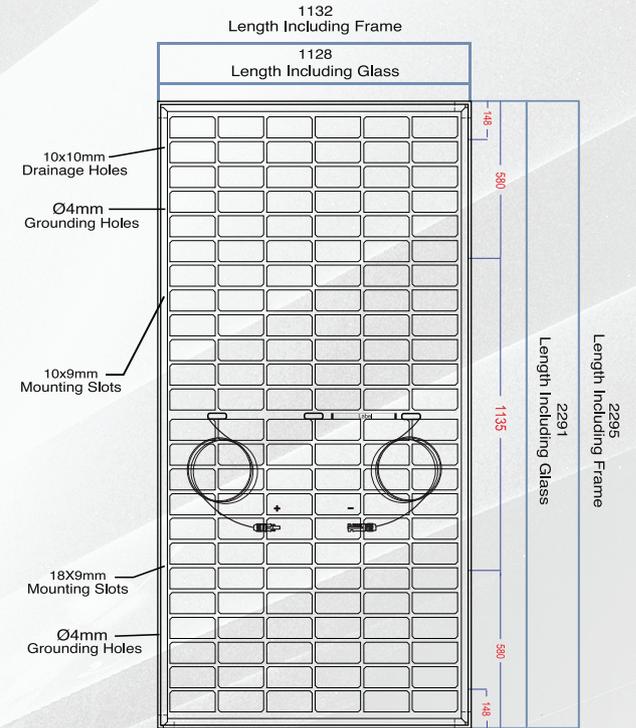
Short Frame



Packaging Type	
Container	40 HC
Pieces Per Pallet	27
Pieces Per Container	540
Pallet Per Container	20

## Mechanical Data

Subject	Specification
Dimensions	2295 ± 2 mm (L) x 1132 ± 2 mm (W) 42 ± 0.5 mm (D)
Weight	29 Kg
Solar Cell	144 Monocrystalline PERC Silicon Cells
Front Glass	Tempered / Tempered ARC Glass
Backsheet	Transparent Film
Junction Box	IP68 3 Bypass Diyot
Cable Length	1.3 Mt
Frame	Aluminium Frame (Eloxal Coating)



**Electroluminescence:** Quality control of the smallest micro-cracks and fractures using infrared radiation.

**Solar Simulator:** Classification based on power tolerance assurance of ±5 watts under 1000W/m² radiation at 25°C.

**Salt Mist Corrosion Test:** Resistance to salt mist according to IEC 61701 ed. 2 standards.

**Snow Load Test:** Resistance to 5400Pa snow load according to IEC 61215 standards.

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

**PID** **Potential Induced Degradation (PID):** PID resistance according to IEC 62804 standards.

**2400Pa** **Wind Load Test:** Resistance to wind load according to IEC 61215 standards.

**%200** **Thermal Cycle Damp Heat Test:** 1000-hour damp heat and 200 thermal cycles according to IEC 61215 standards.

**Cloudy Days:** More than 3% high performance (200W/m²) in the morning and evening hours on cloudy days.

**FF %** **Fill Factor (FF) Value:** High Fill Factor value increased power.  
**Cell Power:** 10 Busbar high-efficiency cells.

**QR** **QR Code System:** Easy QR code scanning of real power measurements tested in solar simulators with a +5 tolerance.

**JIT** **Just-in-Time (JIT) Production:** A panel sales guarantee for panels with embedded production dates and sales within the last year.