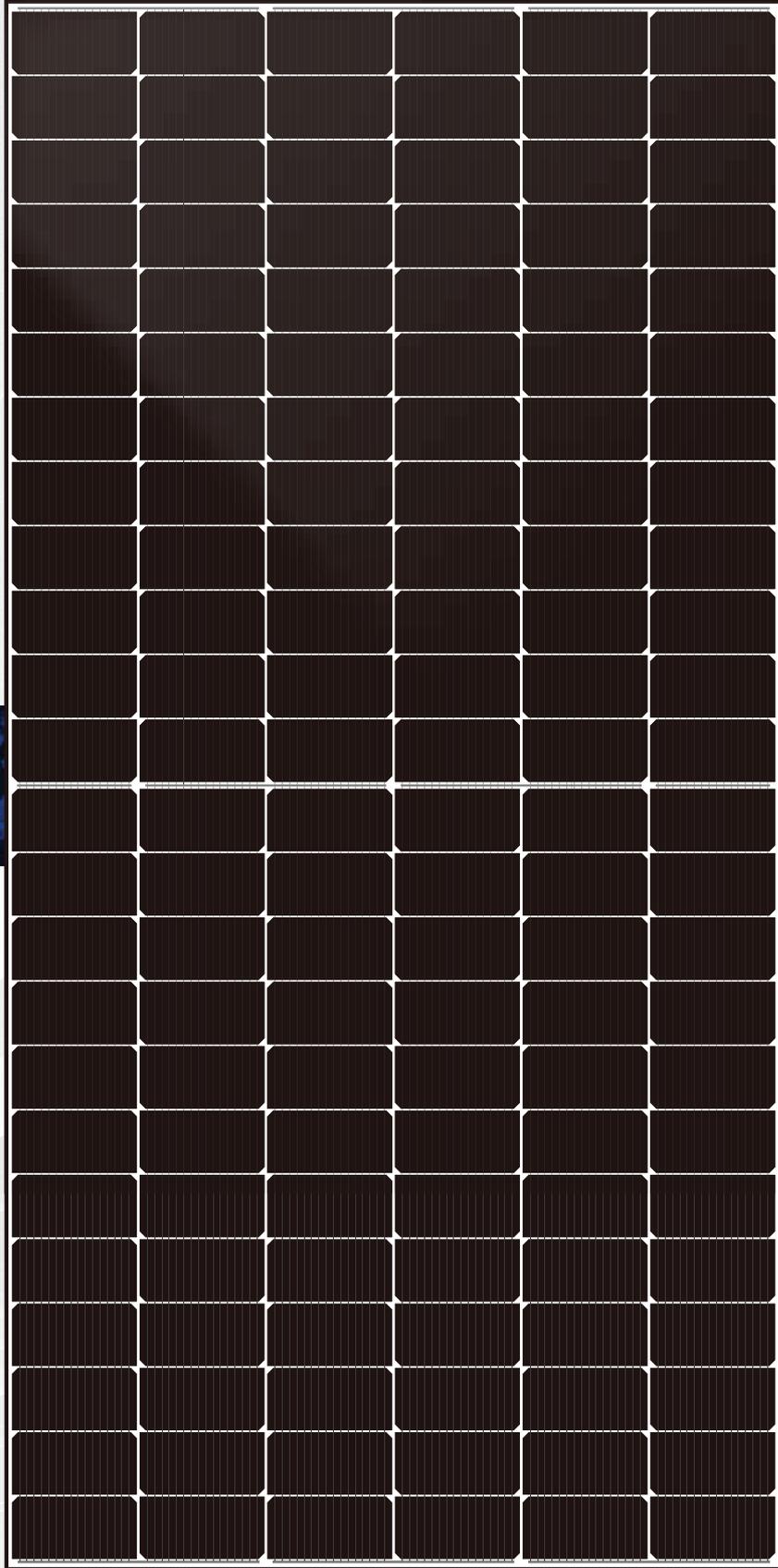


TOPCON
144
CELL





TUBITAK UME AAA+ SIMULATOR
WITH QR CODE ONLINE DATASHEET

A16S144T

TOPCON

144
CELL

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	A16S144T 580	A16S144T 585	A16S144T 590	A16S144T 595	A16S144T 600
P_{max}	580	585	590	595	600
%	22,33	22,52	22,71	22,90	23,09
I_{mpp} (A)	12,91	12,96	12,98	13,00	13,03
I_{sc} (A)	13,58	14,10	14,11	14,11	14,12
V_{mpp} (V)	44,93	45,27	45,53	45,80	46,08
V_{oc} (V)	51,14	51,24	51,29	51,39	51,54

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								
P_{max}	580	444	585	448	590	451	595	455	600	459
I_{mpp} (A)	12,91	10,47	12,96	10,51	12,98	10,53	13,00	10,55	13,03	10,57
I_{sc} (A)	13,58	10,82	14,10	11,29	14,11	11,29	14,11	11,29	14,12	11,30
V_{mpp} (V)	44,93	42,09	45,27	42,41	45,53	42,65	45,80	42,91	46,08	43,17
V_{oc} (V)	51,14	47,95	51,24	48,00	51,29	48,05	51,39	48,14	51,54	48,28

Standard Test Conditions (STC),
Conditions meant to be under STC are:

Cell Temperature: 25 °C Irradiance: 1000 W/m² Air Mass: 1.5

Nominal Operating Cell Temperature (NOCT)
Ambient Temperature: 20 °C

Irradiance: 800 W/m² 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 TÜV Rheinland)
Maximum System Voltage	DC 1500 V
Series Fuse Rating	30 A
Operating Temperature	-40 to 85 °C

Temperature Characteristics

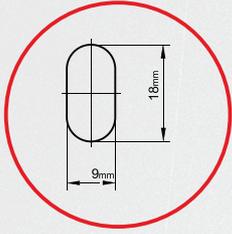
Subject	Specification
Nominal Operating Cell Temperature	41 °C ± 2 °C
Temperature Coefficient of P _{mp}	-0,30 % / °C
Temperature Coefficient of I _{sc}	+0,045 % / °C
Temperature Coefficient of V _{oc}	-0,25 % / °C

Warranty

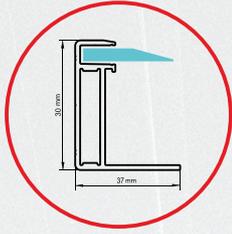
Subject	Specification
Product Warranty	12 Years
Linear Performance Warranty	12 Years over %94.6 - 25 Years over %89.4
JIT Product	Warranty of selling panels that are produced in last on year.
Power Tolerance	Positive (+) 5 Watt
Online Datasheet on the panel	QR Code System

A16S144T

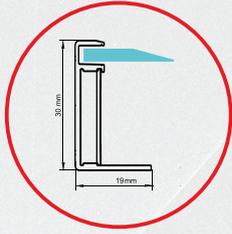
Mounting Slot



Long Frame



Short Frame

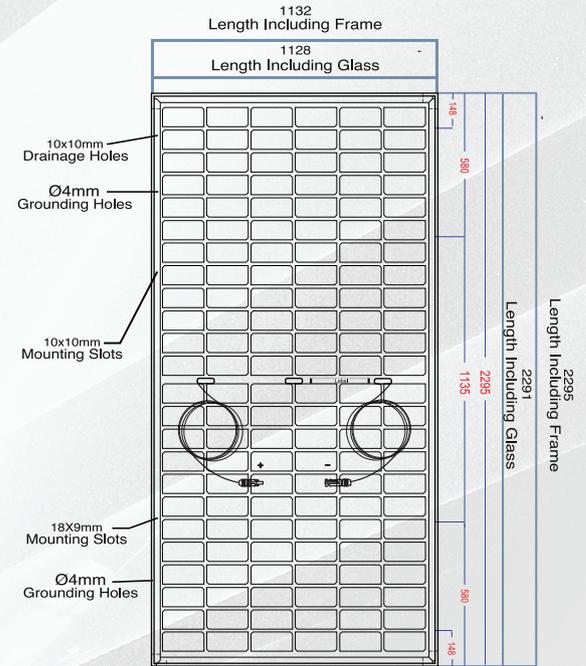


Mechanical Data

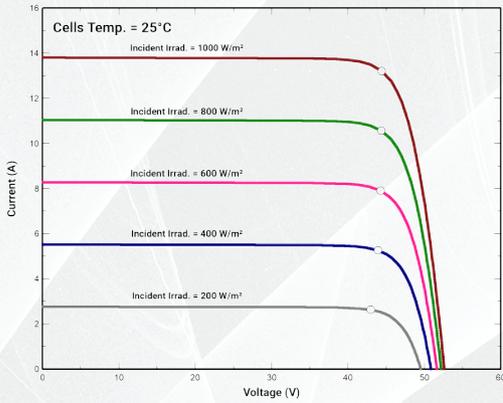
Subject	Specification
Dimensions	2295 ± 2 mm (L) x 1132 ± 2 mm (W) 30 ± 0.5 mm (D)
Weight	29 Kg
Solar Cell	144 Topcon Cells
Front Glass	2 mm Semi Tempered Glass / Tempered ARC Glass
Back Glass	2 mm Semi Tempered Glass
Junction Box	IP68 3 Bypass Diyot
Cable Length	1.3 Mt
Frame	Aluminium Frame (Eloxal Coating)

Packaging Type

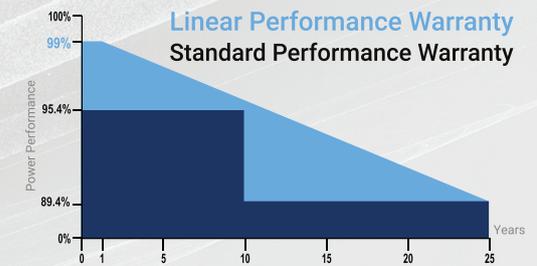
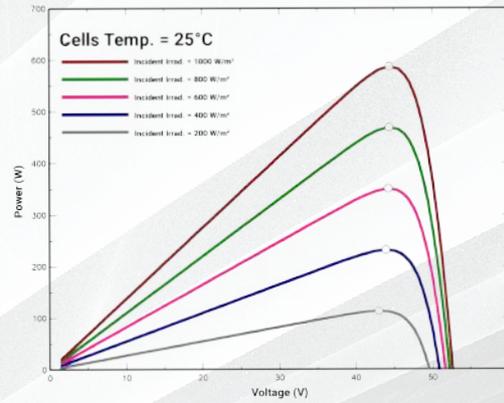
Container	40 HC
Pieces Per Pallet	37
Pieces Per Container	740
Pallet Per Container	20



PV Module: Alfa Solar Enerji



PV Module: Alfa Solar Enerji



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.



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.



Fill Factor (FF) Value: High Fill Factor value increased power.
Cell Power: 16 Busbar high-efficiency cells.



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



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