

PHANTOM

swiss solar

132-TCA BIFACIAL SINGLE GLASS

540W | UP TO 22.74%

► TOPCon ADVANCE TECHNOLOGY

Next-generation cell architecture with enhanced passivation for higher output, reduced LID & PID, and stable performance under high temperatures and low light.

► DuraGlassX™

Ultra-strong tempered glass with advanced anti-reflective coating ensures maximum transparency, impact resistance, and long-term durability in extreme climates.

► Phantom Design

Deep black cells with an elegant black frame deliver a modern, premium look that blends seamlessly into architectural projects.

► AluForce™ Black Frames

Equivalent to up to +32% higher frame strength under front and side load tests.



COMPLETE SYSTEM AND PRODUCT CERTIFICATIONS



PHANTOM

132-TCA BIFACIAL SINGLE GLASS 530-540

up to
22.74%
maximum efficiency

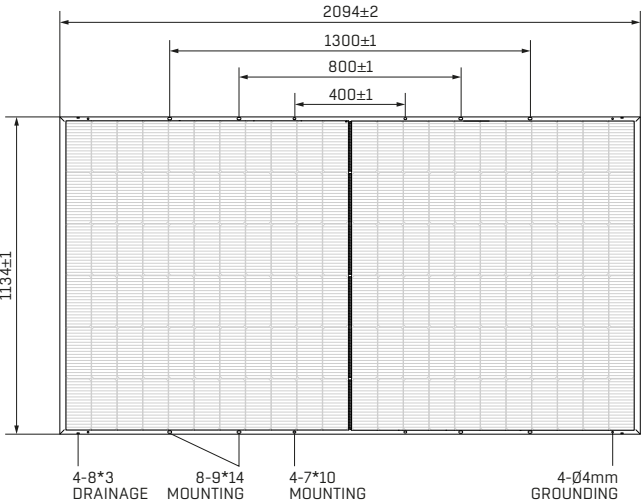
0~3
power
tolerance

<1%
first year
power degradation

0.35%
year 2-30
power degradation

N-TYPE CELL
lower operating
teperature

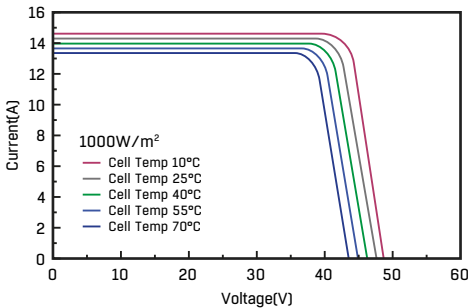
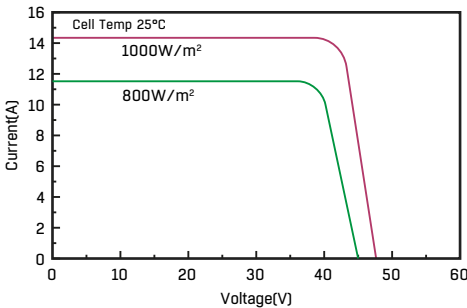
MECHANICAL CHARACTERISTICS	
Solar Cells	N-type Mono
No. of Cells	132 (6x22)
Dimensions	2094x 1134 x 30mm
Weight	25.3kg
Front / Back Glass	2.0mm coated semi-tempered glass
Frame	Anodized aluminium alloy
Junction Box	Ip68 rated (3 by pass diodes)
Output Cables	4.0mm², 250mm (+) / 350mm (-) Length can be customized
Connectors	Mc4 compatible
Mechanical load test	Front 6200Pa / Rear 4200Pa



POWER CLASS	PH132-TCA-530		PH132-TCA-535		PH132-TCA-540	
	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power (Pmax)	530W	399W	535W	403W	540W	407W
Open Circuit Voltage (Voc)	47.41V	45.05V	47.60V	45.21V	47.78V	45.36V
Short Circuit Current (Isc)	14.28A	11.52A	14.35A	11.58A	14.42A	11.64A
Voltage at Maximum power (Vmpp)	39.70V	36.61V	39.87V	36.77V	40.03V	36.93V
Current Maximum Power (Impp)	13.35A	10.90A	13.42A	10.96A	13.49A	11.02V
MODULE EFFICIENCY (%)	22.32%		22.53%		22.74%	

STC: Irradiance 1000W/m², cell temperature 25°C, AM1.5G | NOCT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s, AM1.5G m²

PACKING CONFIGURATION	
Container	40'HQ
Pieces per pallet	36
Pallets per container	22
Pieces per container	792



OPERATING CHARACTERISTICS	
Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500 DC (IEC)
Maximum Series Fuse Rating	30A
Power Tolerance	0/+5W

TEMPERATURE CHARACTERISTICS	
Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.045%/°C