

Monocrystalline 108 cells  
**BIFACIAL - GLASS | GLASS**

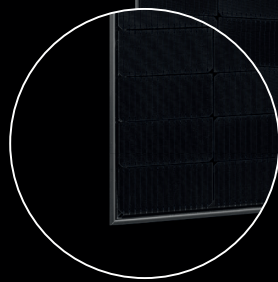
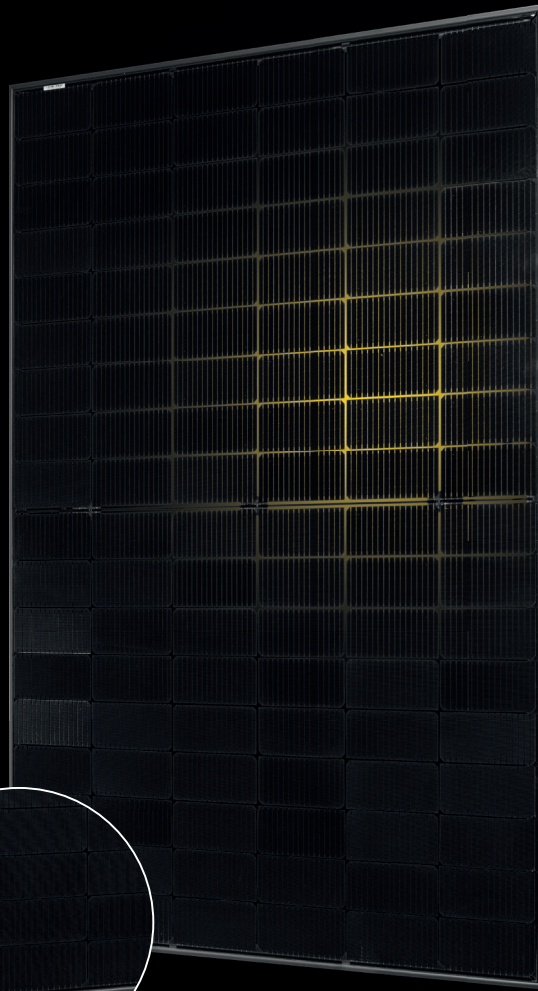
# NEPTUN TOPCON



**N-TYPE M10 182**  
 multibusbar



2 mm front side anti-reflective glass  
 2 mm back side anti-reflective glass



TRANSPARENT



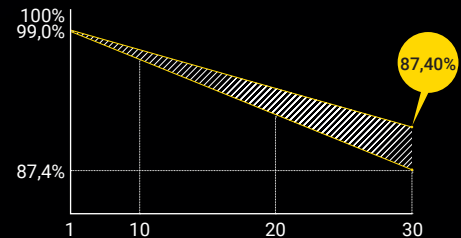
Maximum stability through  
 aluminium soft grip frame



Guaranteed positive output  
 selection 0 ~ +5 Wp  
 by single measuring



25 years manufacturer's warranty  
 30 years linear performance guarantee



## OUTPUT: 430 - 445 WATT

Each module in the new NEPTUN series features 108 monocrystalline TOPCON M10-half cells with multi busbar technology. The cells are divided into two halves to improve output and arranged in two parallel strings in order to better manage shading. Each highly transparent front and back glass layers are 2 mm thick. Each module has a 30 mm anodized aluminium frame in black. The maximum efficiency is 22.3%.



power for a better world

STC	A-HCM430/108-TC/M10-DG	A-HCM440/108-TC/M10-DG	A-HCM445/108-TC/M10-DG
Maximum Power (Pmax) (W)	430	440	445
Open Circuit Voltage (Voc) (V)	38.95	39.38	39.59
Short Circuit Current (Isc) (A)	13.73	13.86	13.93
Voltage at Maximum Power (Vmpp) (V)	32.38	32.81	33.02
Current at Maximum Power (Impp) (A)	13.28	13.41	13.48
Module Efficiency (%)	22.02	22.53	22.78

STC (Standard Testing Condition): Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25 °C, Spectra at AM 1.5; Test uncertainty tolerance for Pmax, Voc and Isc: ±3 %

Electrical Parameters at NOCT	A-HCM430/108-TC/M10-DG	A-HCM440/108-TC/M10-DG	A-HCM445/108-TC/M10-DG
Maximum Power (Pmax) (W)	323	331	335
Open Circuit Voltage (Voc) (V)	37.00	37.41	37.61
Short Circuit Current (Isc) (A)	11.09	11.19	11.25
Voltage at Maximum Power (Vmpp) (V)	30.10	30.56	30.76
Current at Maximum Power (Impp) (A)	10.73	10.83	10.89

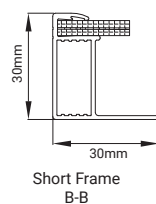
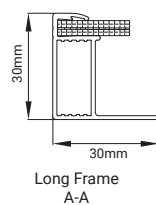
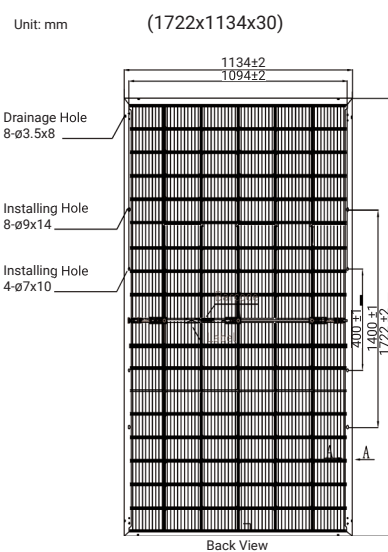
NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m<sup>2</sup>, Ambient Temperature 20 °C, Spectra at AM 1.5, Wind at 1 m/s

Temperature Characteristics	
Pmax Temperature Coefficients (W / °C)	-0.30 % / °C
Voc Temperature Coefficients (V / °C)	-0.25 % / °C
Isc Temperature Coefficients (A / °C)	+0.046 % / °C
NMOT Nominal Operating Cell Temperature (°C)	44 ±2 °C

Operating Conditions	
Operating Module Temperature	-40 °C ~ +85 °C
Maximum System Voltage	1500 V
Maximum Series Fuse Rating	25 A
Selection	0 ~ +5 W
Nominal Front Load	5400 Pa
Nominal Rear Load	2400 Pa
Class of Protection	II

Specifications	
Cell Type	Mono M10 182   N-Type – multibusbar
Weight	24 kg ±3 %
Dimensions	1722x1134x30 mm (±0.7 %)
Cable Cross Section Size	4 mm <sup>2</sup> , cable approx 110 cm, QC4/MC4
No. of cells	108 (6x18)
Junction Box	IP68, 3 diodes
Frame	Black, anodized aluminium
Front glass	2.0 mm high transparency solar glass
Back glass	2.0 mm high transparency solar glass

Packing Details	
Container Type	40'HC
No. of Pallets	26
Pieces per Pallet	36
Total quantity of modules	936



A-HCM430/108-TC/M10-DG

