



400~420W

## 182 HalfCell -Double Glass Black Module

Topsola TPS\*\*\*N(BL)-108H1-DG series modules, using the best quality N-type Mono cell with professional manufacturing technology to provide reliable quality assurance for the system power generation



## **Higher Durability**

More reliable materials ensure the durability of the products.



# Half cell design

The half-cut technology reduced the outdoor operating and hot spot temperature, which decrease the loss under the shade



## High power Output

The new generation of TPS Mono series products can achieve high power output by reducing resistance loss.



## All Black Design

The component as a whole uses black aluminous frame, black usbar . Presents the pure black integration aesthetic effec

Topsolar enters the photovoltaic industry very first in China. It is a modern high-tech photovoltaic enterprise integrating research and development, sales, production and service, Companys brand "
Topsola" founded in 2002 by the leading team, senior managers and technicians of the photovoltaic industry and registed in 16 different countires. Topsolar will adhere to the Chinese and worldwide market combining with the characteristics of open innovation, excellent operation management, first-class service, technology and products to fully build the company's core competitiveness, in order to achieve excellent industry reputation by provide valuable services to all clients

# **TPS 108**

# CELL

HalfCell -Double Glass Black Module (182 N-Type CELL)

## **Electrical parameters at Standard Test Conditions (STC)**

Outputs	Pmax [W]	400	405	410	415	420
Maximum power voltage	Vmp [V]	31.03	31.23	31.42	31.61	31.8
Maximum power current	lmp[A]	12.89	12.97	13.05	13.13	13.21
Open circuit voltage	Voc[V]	37.09	37.22	37.35	37.49	37.63
Short circuit current	Isc[A]	13.79	13.87	13.95	14.03	14.11
Module efficiency	%	20.5%	20.7%	21.0%	21.3%	21.5%
Power of tolerance	[W]			0~+5		

<sup>\*</sup>Standard test conditions:(air mass AM1.5, irradiance 1000W/m², cell temperature 25°C)

#### **Thermal Characteristics**

Nominal operating cell temperature	NOCT	°C	45±2
Temperature coefficient of Pmax	γ	%/°C	-0.345
Temperature coefficient of Voc	β	%/°C	-0.263
Temperature coefficient of Isc	α	%/°C	0.049

### **Operating conditions**

Maximum system voltage	1500VDC
Maximum fuse rating	25 A
Operating temperature	-40°C to 85°C
Maximum front static load (snow load)	5400Pa
Maximum back static load (wind load)	2400Pa
Max.hailstone impact (diameter/velocity)	25 mm/ 23m/s

<sup>\*</sup>Do not parallel two modules in the same box fuse

#### **Construction materials**

Front Glass(thickness)	2.0mm	
Back Glass(thickness)	2.0mm	
Cell (quantit y /type)	108/Mono	
Aluminum frame	Anodic alumina	
Junction box (protection class)	≥ IP68	
Cable (length / conductor cross- sectional area)	300mm/4mm²	

#### **General features**

Size (length/ width/height)	1722 mm / 1134 mm / 30 mm
Weight	25kg







Qualification and certification IEC 61215, IEC 61730, CE, MCS, GB/T19001:2016, GB/T24001:2016, ISO45001:2018

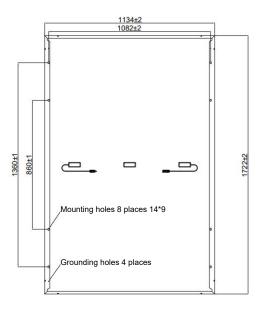
### **Packing specification**

The mode of transportation	Total per container	Numbers per palle
Container 40HQ	936	36

•Due to continuous innovation, research and product upgrades. The contents of specification can be changed slightly without prior notice.

•These data are not specific to a single module, but used to compare different models.

#### **Engineering Drawings**





Warning: read the component installation instructions carefully before operating, installing, and running the Topsola modules.

