



# SOLI ASTRA

570 Wp - 610 Wp

Bi-Facial Module with Dual Glass

N-Type  
TOPCon

M10

SOLITECH



## 2.0 GW<sup>\*\*\*</sup> GIGA FACTORY

WITH ADVANCED AI

## 30 Years

Warranty for Linear Performance

## 12 Years

Product Warranty on Workmanship

### APPLICATIONS

UTILITY

INDUSTRIAL

AGRICULTURE

RESIDENTIAL

### Salient Features



#### N-type Technology

For reduced light-induced degradation (LID/LeTID)



#### Dual-Sided Power Generation

To boost power output and lower the levelized cost of energy (LCOE).



#### SMBB Technology

Enhanced light absorption and efficient current extraction



#### Mechanical Load Enhanced

Certified to withstand:  
5400 Pa front & 2400 Pa rear max static test load



#### Anti-PID

Minimizes the occurrence of Potential Induced Degradation (PID)



#### High Efficiency

Enhanced module conversion efficiency of upto 23.61%

# Model Type : SGE - M10144T16G - AAA\*

\*AAA denotes Module Wattage

## Electrical Characteristics (STC)

	610	605	600	595	590	585	580	575	570
Nominal Maximum Power (Pmax)	610	605	600	595	590	585	580	575	570
Optimum Operating Voltage (Vmp)	45.54	45.5	45.42	45.33	45.21	45.15	45.06	44.97	44.89
Optimum Operating Current (Imp)	13.41	13.31	13.23	13.14	13.07	12.97	12.88	12.80	12.71
Open Circuit Voltage (Voc)	54.27	54.16	54.05	53.94	53.83	53.72	53.61	53.50	53.39
Short Circuit Current (Isc)	14.09	14.00	13.91	13.82	13.73	13.64	13.55	13.46	13.38
Module Efficiency (%)	23.61	23.42	23.23	23.03	22.84	22.65	22.45	22.26	22.07

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM = 1.5

## Electrical Characteristics (NOMT)

	465	461	457	453	449.5	445.5	441.5	437.9	434.0
Nominal Maximum Power (Pmax)	465	461	457	453	449.5	445.5	441.5	437.9	434.0
Optimum Operating Voltage (Vmp)	43.26	43.23	43.15	43.06	42.95	42.89	42.81	42.72	42.65
Optimum Operating Current (Imp)	10.74	10.66	10.59	10.52	10.47	10.39	10.31	10.25	10.18
Open Circuit Voltage (Voc)	51.56	51.45	51.35	51.24	51.14	51.03	50.93	50.83	50.72
Short Circuit Current (Isc)	11.28	11.21	11.14	11.07	10.99	10.92	10.85	10.78	10.71

NOMT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM = 1.5 Wind Speed 1m/s

## Bi-Facial Output – Backside Power Gain @ STC\*\*

Nominal Maximum Power (Pmax)	5% }	641	635	630	625	620	614	609	604	599
Module Efficiency (%)		24.79	24.59	24.39	24.18	23.98	23.78	23.57	23.37	23.17
Nominal Maximum Power (Pmax)	10% }	671	666	660	655	649	644	638	633	627
Module Efficiency (%)		25.98	25.76	25.55	25.34	25.12	24.91	24.70	24.48	24.27
Nominal Maximum Power (Pmax)	15% }	702	696	690	684	679	673	667	661	656
Module Efficiency (%)		27.16	26.93	26.71	26.49	26.27	26.04	25.82	25.60	25.37
Nominal Maximum Power (Pmax)	20% }	732	726	720	714	708	702	696	690	684
Module Efficiency (%)		28.34	28.10	27.87	27.64	27.41	27.18	26.94	26.71	26.48

\*\* Additional power gain from the rear side, relative to the front side's power at STC, is influenced by the mounting structure (such as height and tilt angle) and the ground's reflectivity. Bi-Faciality Factor: 70 ± 5%.

## Mechanical Specifications

Cell Type	M10 Half-Cut N-type TOPCon Bifacial Solar Cells
No. of cells	144 (72×2)
Dimensions	2278 × 1134 × 35 mm
Weight	32.0 kg
Front Cover	2 mm Low Iron Semi-Tempered AR Coated Glass
Back Cover	2 mm Low Iron Semi-Tempered AR Coated Glass
Frame	Anodized Aluminium Alloy
Junction Box	30A Split Junction Box - IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	MC4 Compatible
Output Cables	4.0 mm <sup>2</sup> (+): 300 mm, (-): 300 mm or Customized Length

## Maximum Operating Conditions

Operating Temperature	-40°C to +85°C
Maximum System Voltage	1500V
Maximum Series Fuse Rating	30 A / 35 A

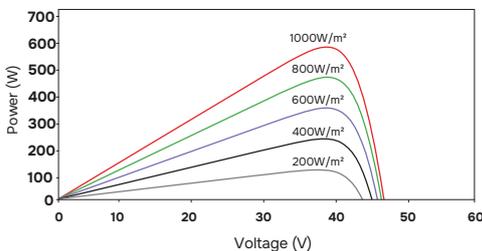
## Temperature Coefficients

Current α (Isc)	0.0265 %/°C
Voltage β (Voc)	-0.2261 %/°C
Power γ (Pmax)	-0.29 %/°C

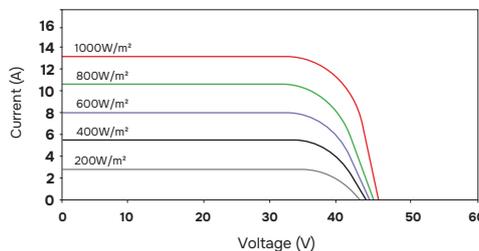
## Packing Configuration#

	20 FT	40 FT
No. of Modules per Pallet	31 Nos	31 Nos
No. of Pallets per Container	10 Pallets	20 Pallets
No. of Modules per Container	310 Nos	620 Nos

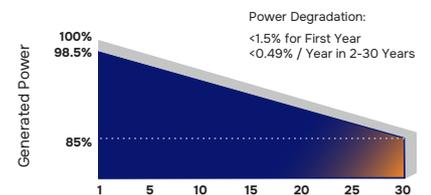
Power-Voltage Curves (SGE - M10144T16G - 590)



Current-Voltage Curves (SGE - M10144T16G - 590)



Linear Graph



#Quantity of modules/container may get changed without prior notice.

- For handling & installation instructions, refer to Solitech Solar's installation manual available on the company website
- Before placing an order, confirm your requirements with our sales representative
- The electrical data provided is for reference purposes only
- PV modules need to be disposed of as per government regulations after their life cycle
- Refer to Solitech Solar's warranty document for terms and conditions
- Due to constant product modifications, Solitech Solar reserves the right to amend the above specifications without prior notice
- Images in the datasheet are for representation purposes only

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