

# SOLI FUSION

**610 Wp - 650 Wp**

Bi-Facial Module with Dual Glass

**N-Type  
TOPCon**

**G12R**

## Wattage

610Wp - 650Wp

## Junction Box

Split Junction Box  
(3 nos. with individual Bypass Diodes)

## Cell

132 Half-cut  
N-Type Solar cell

## Dimensions (LxWxT in mm)

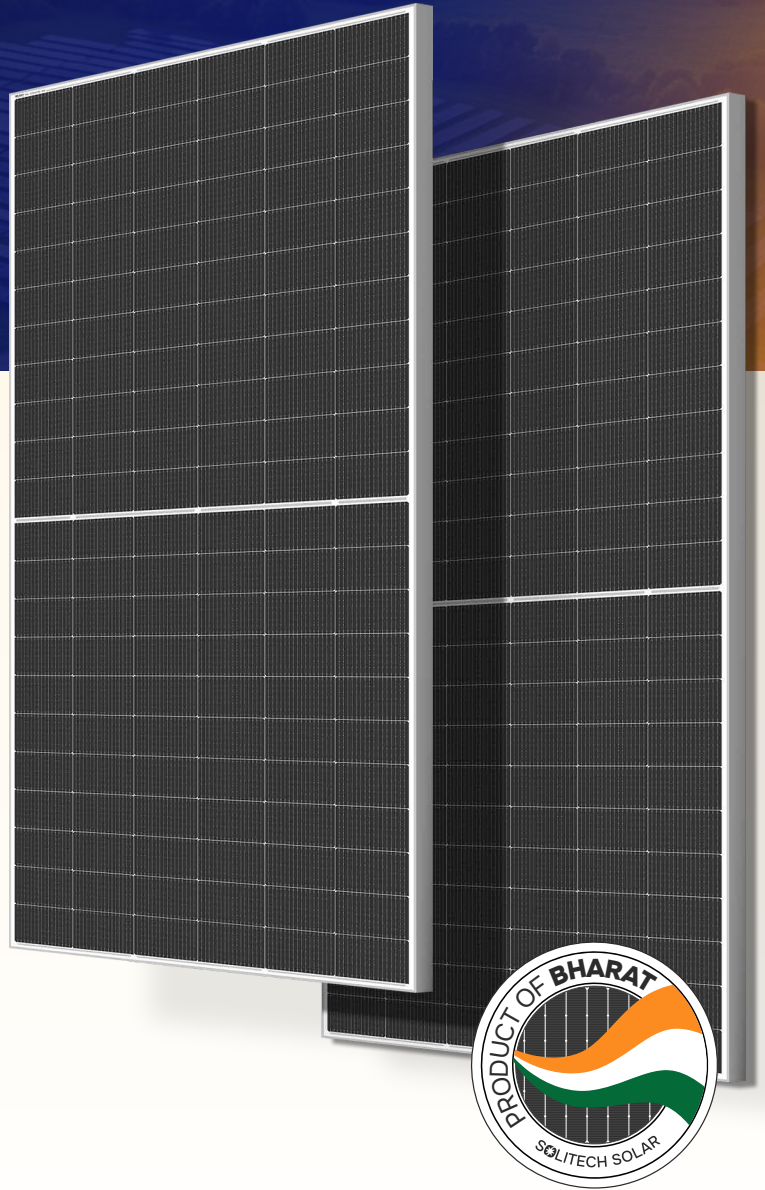
2382 × 1134 × 30 mm

## Weight (kg)

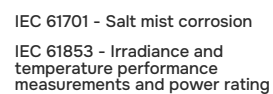
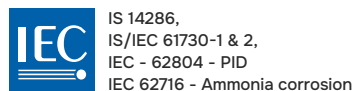
32.4

## Design

Silver Anodized Aluminum Alloy Frame and Semi Tempered Glass on Front and back, AR coating on Front Glass



## Certifications



Scan to know more



# Model Type : SGE - G12R132T16G - AAA\*

\*AAA denotes Module Wattage

Electrical Characteristics (STC)	650	645	640	635	630	625	620	615	610
Nominal Maximum Power (Pmax)	650	645	640	635	630	625	620	615	610
Optimum Operating Voltage (Vmp)	41.98	41.90	41.82	41.72	41.64	41.57	41.49	41.4	41.31
Optimum Operating Current (Imp)	15.49	15.4	15.31	15.225	15.136	15.04	14.95	14.86	14.77
Open Circuit Voltage (Voc)	49.66	49.56	49.48	49.39	49.3	49.21	49.12	49.03	48.94
Short Circuit Current (Isc)	16.39	16.305	16.22	16.135	16.05	15.96	15.87	15.78	15.69
Module Efficiency (%)	24.04	23.86	23.67	23.49	23.30	23.12	22.93	22.75	22.56

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

Electrical Characteristics (NOMT)	495	491	487	483	479.5	475.6	471.9	467.9	464.2
Nominal Maximum Power (Pmax)	495	491	487	483	479.5	475.6	471.9	467.9	464.2
Optimum Operating Voltage (Vmp)	39.88	39.81	39.73	39.63	39.56	39.49	39.42	39.33	39.25
Optimum Operating Current (Imp)	12.40	12.33	12.26	12.19	12.12	12.04	11.97	11.90	11.83
Open Circuit Voltage (Voc)	47.18	47.10	47.01	46.92	46.84	46.75	46.66	46.58	46.49
Short Circuit Current (Isc)	13.12	13.06	12.99	12.92	12.85	12.78	12.71	12.64	12.56

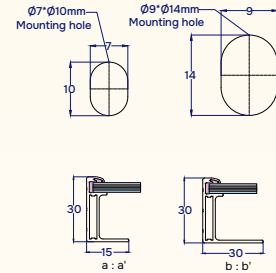
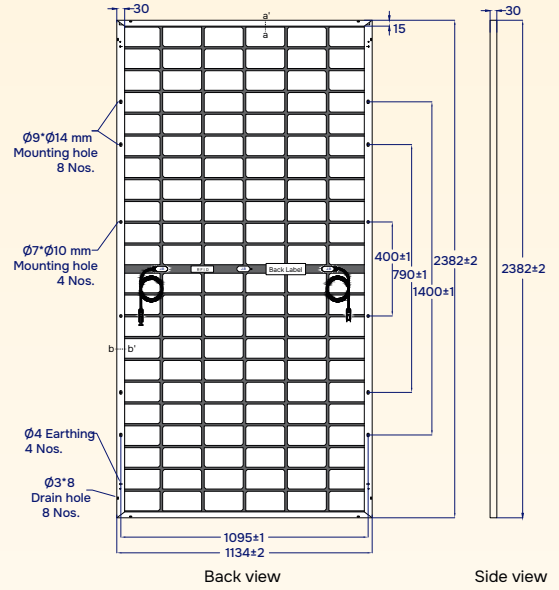
NOMT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM = 1.5 Wind Speed 1m/s

Bi-Facial Output – Backside Power Gain @ STC**		681	675	670	665	660	654	649	644	641
Nominal Maximum Power (Pmax)	5%	25.17	24.98	24.78	24.59	24.39	24.20	24.01	23.81	23.69
Module Efficiency (%)		26.30	26.10	25.89	25.69	25.49	25.28	25.08	24.88	24.82
Nominal Maximum Power (Pmax)	10%	27.43	27.22	27.00	26.79	26.58	26.36	26.15	25.94	25.95
Module Efficiency (%)		28.56	28.33	28.11	27.89	27.67	27.45	27.22	27.00	27.08
Nominal Maximum Power (Pmax)	15%	28.56	28.33	28.11	27.89	27.67	27.45	27.22	27.00	27.08
Module Efficiency (%)		28.56	28.33	28.11	27.89	27.67	27.45	27.22	27.00	27.08
Nominal Maximum Power (Pmax)	20%	28.56	28.33	28.11	27.89	27.67	27.45	27.22	27.00	27.08
Module Efficiency (%)		28.56	28.33	28.11	27.89	27.67	27.45	27.22	27.00	27.08

\*\* 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	G12R Half-Cut N-type TOPCon Bifacial Solar Cells
No. of cells	132 (66×2)
Dimensions	2382 × 1134 × 30 mm
Weight	32.4 kg
Front Cover	2 mm Low Iron Semi-Tempered AR Coated Glass
Back Cover	2 mm Low Iron Semi-Tempered 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> (+): 200 mm, (-): 400 mm or Customized Length



All dimensions are in mm.

## Maximum Operating Conditions

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

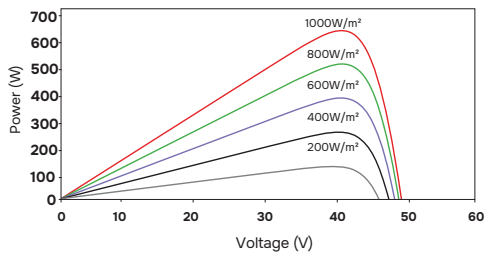
## Temperature Coefficients

Current α (Isc)	0.045 %/°C
Voltage β (Voc)	-0.25 %/°C
Power γ (Pmax)	-0.29 %/°C

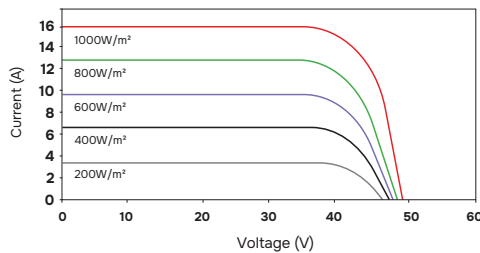
## Packing Configuration#

	20FT	40FT
No. of Modules per Pallet	36 Nos	36 Nos
No. of Pallets per Container	10 Pallets	20 Pallets
No. of Modules per Container	360 Nos	720 Nos

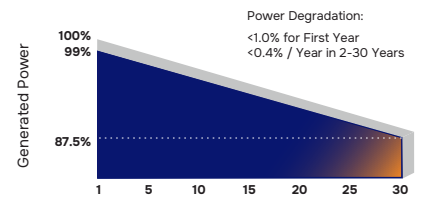
## Power-Voltage Curves (SGE - G12R132T16G - 630)



## Current-Voltage Curves (SGE - G12R132T16G - 630)



## 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