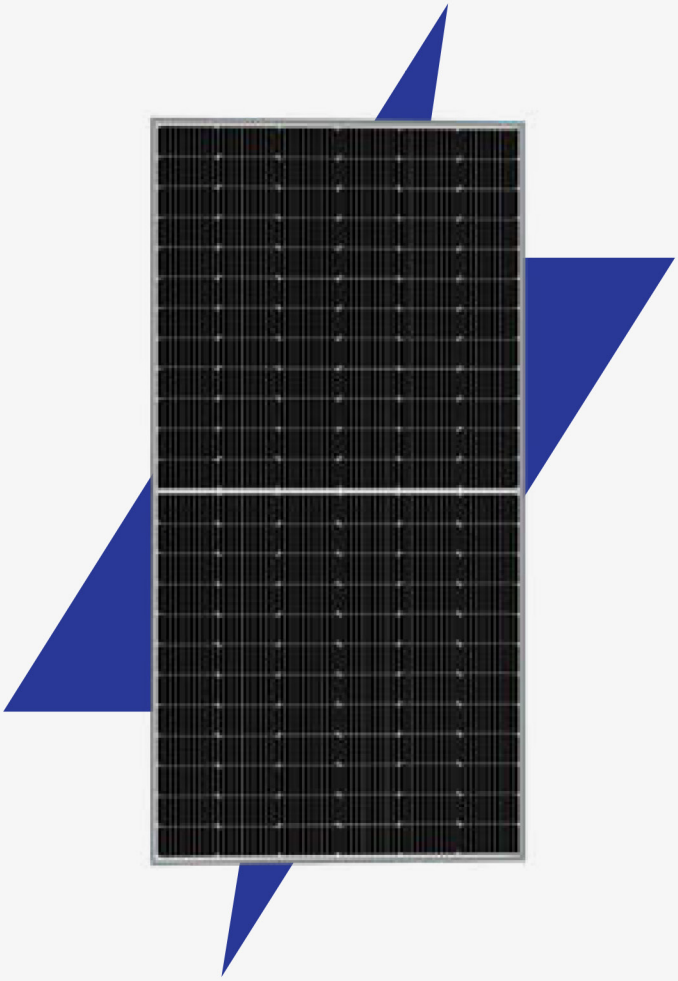
ZAP91
A SOLAR JV BY ZETWERK & PENNAR

ZAP - G12TG - 132

TOPCon Technology
Dual Glass Bifacial Module



- Excellent PID resistance
- Excellent LeTID resistance
- Power tolerance of 0 to +4.99W
- Sustain heavy snows and wind loads (5400Pa & 2400Pa)

SUITABLE FOR

Residential | Utility | Commercial | Off- grid

CERTIFICATES *

Plant

- EN ISO 9001: 2015 Quality Management System
- EN ISO 14001: 2015 Environmental Management System
- EN ISO 45001: 2018 Occupational health and safety management systems

12 YEAR WARRANTY
12 YEARS PRODUCT WARRANTY

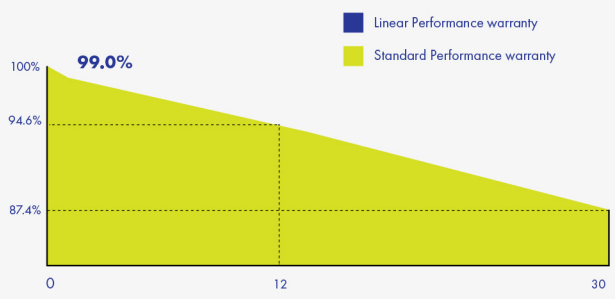
30 YEAR WARRANTY
30 YEARS POWER OUTPUT WARRANTY

0.40%
ANNUAL POWER DEGRADATION FROM 2ND YEAR

1%
LID LOSS IN THE FIRST YEAR

720W
MAXIMUM POWER OUTPUT

Scan to Visit
Zap91.com



1% First year degradation **0.40%** Annual degradation

The Graphs are for reference purpose only. Please contact Zap91 technical team for further clarifications.

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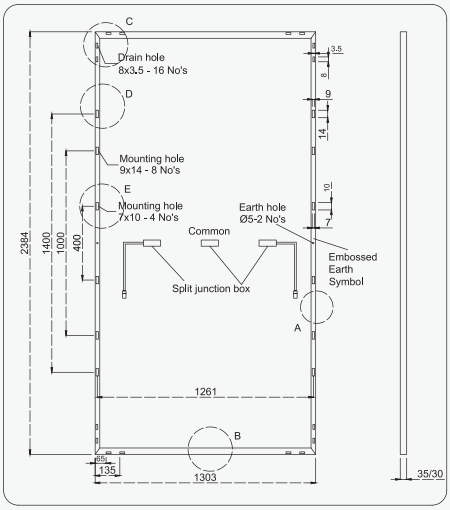
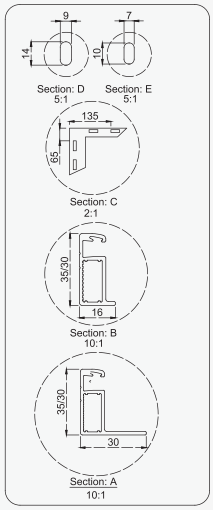




PACKING CONFIGURATION

Container	40' HQ
Pieces per Pallet	31/36
Pallet per Container	20
Pieces per Container	620

ZAP-G12TG-132

ELECTRICAL CHARACTERSTICS (STC)	M2, Module Temperature 25 Deg C and AM-1.5, Irradiance 1000 W/m2						
Peak power, P Max(Wp)	690	695	700	705	710	715	720
Maximum voltage, Vmp(V)	40.45	40.55	40.63	40.78	40.93	41.14	41.36
Maximum Current, Imp(A)	17.06	17.14	17.23	17.29	17.35	17.38	17.41
Open Circuit Voltage, Voc(V)	48.17	48.33	48.5	48.65	48.85	48.99	49.16
Short Circuit current, Isc(A)	17.98	18.07	18.15	18.24	18.31	18.36	18.41
Module Efficiency(%)	22.21	22.37	22.53	22.70	22.86	23.02	23.18
Power Tolerence	0 to +4.99 W						
Maximum System Voltage	1500 V						
Maximum Series Fuse Rating	35 A						
Measurement Tolerance +/-3%							

Bifacial gain	690	695	700	705	710	715	720
5% Maximum Power (P max)	724.5	729.75	735	740.25	745.5	750.75	756
10% Maximum Power (P max)	759	764.5	770	775.5	781	786.5	792
20% Maximum Power (P max)	828	834	840	846	852	858	864
30% Maximum Power (P max)	897	903.5	910	916.5	923	929.5	936

NOCT	690	695	700	705	710	715	720
Maximum Power (P max)	513.52	517.24	520.96	524.68	528.40	532.13	535.85
Maximum Power Voltage (Vmp)	36.99	37.09	37.16	37.30	37.43	37.63	37.83
Maximum Power Current (Imp)	13.89	13.95	14.02	14.07	14.12	14.15	14.17
Open Circuit Voltage (Voc)	44.79	44.94	45.10	45.24	45.42	45.55	45.71
Short Circuit Current (Isc)	14.69	14.76	14.83	14.90	14.96	15.00	15.04

MECHANICAL SPECIFICATIONS

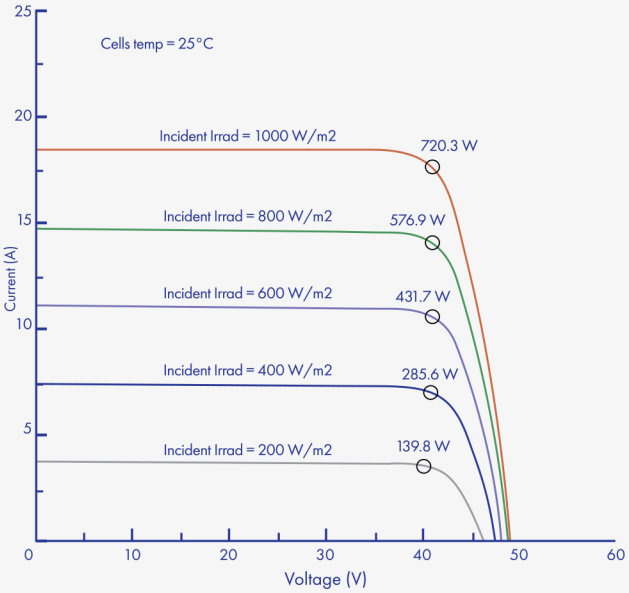
External Dimensions	2384 (±2mm) X 1303 (±2mm) X 35/30 (±1mm)
Weight	38 Kg
No of Cells	132-16 BB, 105 x 210 mm
Front Glass	2.0 mm ARC Heat Strengthened
Rear Cover	2.0 mm Heat Strengthened
Frame	Anodized Aluminium Alloy (Silver)
Junction Box	3 Split, IP 68 Rated
Connector	MC4 Compatible Connector
Output Cable	4.0 mm² / 400 mm Cable Length

TEMPERATURE CHARASTERISTICS

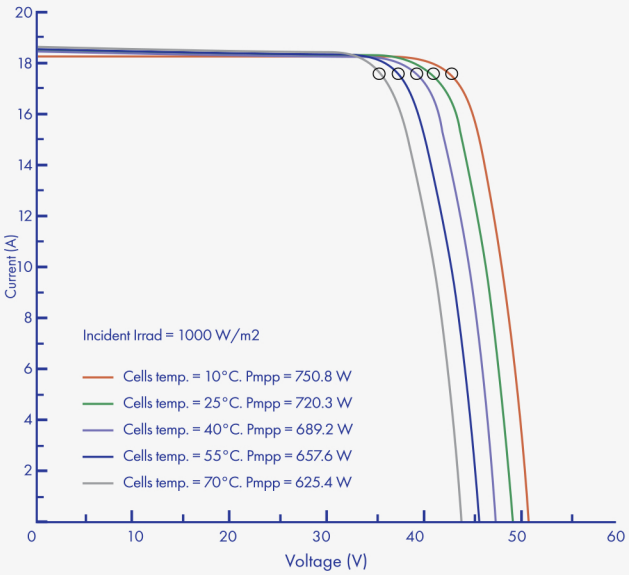
Pmax Temp. Coefficient (%/°C)	-0.29
Voc Temp. Coefficient (%/°C)	-0.24
Isc Temp. Coefficient (%/°C)	0.042
Operating Temp. (°C)	-40°C to + 85°C
Nominal Operating Cell Temp. (°C)	45±2°C

Bifaciality Factor	80 ± 10%

I-V VARIATION WITH IRRADIANCE



I-V VARIATION WITH TEMPERATURE



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