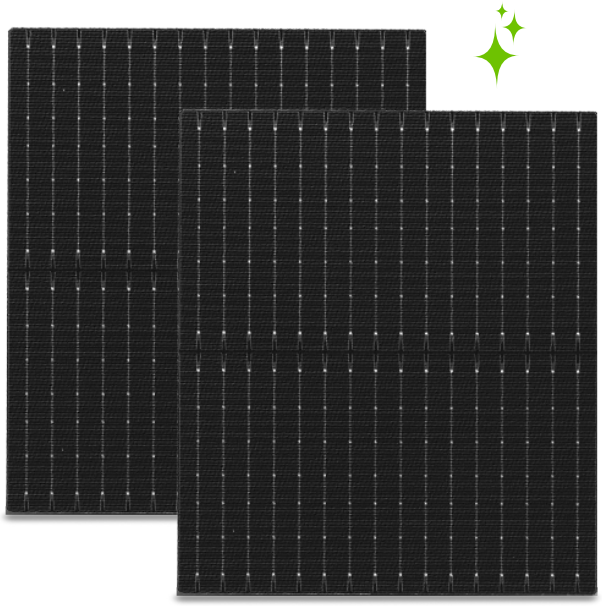
G12R MONO TOPCon SOLAR CELL
BLUE SHARK N-Type G12R Bifacial



Front side of the solar cell

Rear side of the solar cell

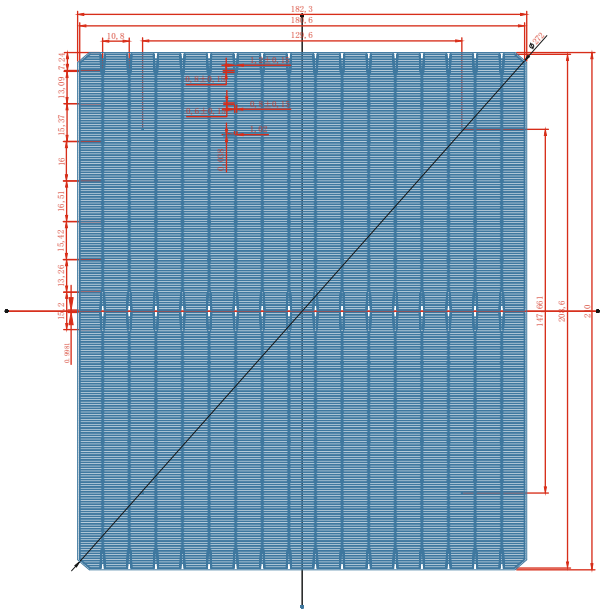
- Excellent LeTID and LID resistance, ensuring long-term stability and reliability.
- Enhanced passivation and reduced recombination losses via advanced tunnel ox.ide layer
- Fine-line screen printing and advance firing technology for lower series resistance for higher fill factor (FF).
- Better temperature coefficient compared to PERC cells, ensuring higher output in hot climate.

MECHANICAL DATA AND DESIGN

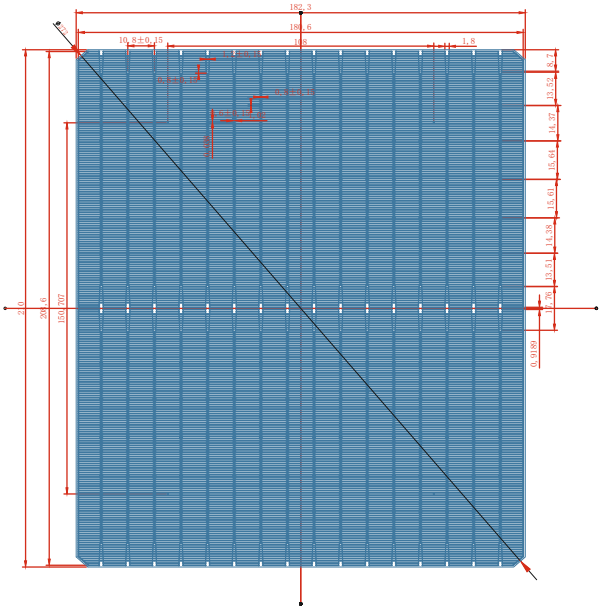
Model	PE_BLUE SHARK_N TYPE_TOPCON 16BB
Product	G12R_16BB_Bifacial TOPCON Solar Cell
Code	PE_G12R_16BB-TOPCON
Format	182.3 mm×210.0 mm ±1mm
Thickness	130 µm ± 13 (including Matel pattern)
Diagonal	272.0 mm ± 0.5 mm

Front side (+)	16 busbars, 14 pads, 210 fingers 1.2 x 0.8 / 0.8 x 0.6 ± 0.3mm Silicon Oxide + Silicon Nitride compound anti-reflection coating (PID-free)
Back side (-)	16 busbars, 14 pads, 228 fingers 1.2 x 0.8 / 0.8 x 0.6 ± 0.3mm Passivated Layer (Doped Poly + SiON & SiNx)
Center to center Bus-bar distance	10.8±0.15 mm

Solar Cell Structure



Front Electrode Pattern

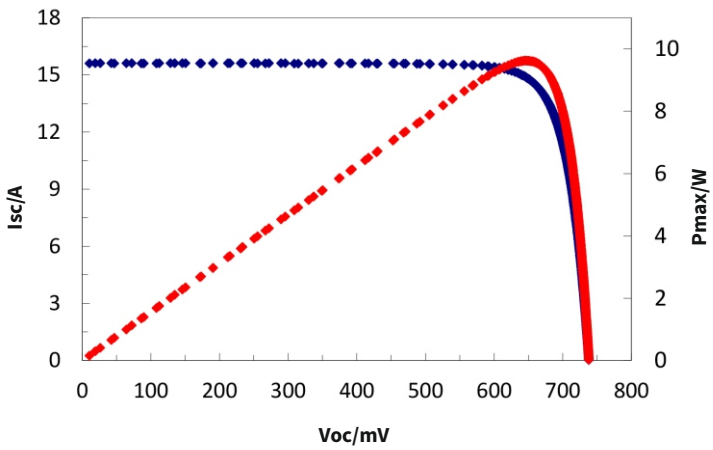


Back Electrode Pattern

ELECTRICAL CHARACTERISTICS (STC*)

Eff	Pmpp	Umpp(V)	Impp(A)	Voc(V)	Isc(A)	FF(%)
25.70	9.82	0.6259	15.699	0.7259	15.799	85.67
25.60	9.79	0.6249	15.665	0.7249	15.787	85.55
25.50	9.75	0.6241	15.615	0.7238	15.764	85.44
25.40	9.71	0.6232	15.573	0.7229	15.755	85.16
25.30	9.67	0.6224	15.554	0.7225	15.742	85.11
25.20	9.63	0.622	15.501	0.722	15.732	84.9
25.10	9.60	0.6211	15.459	0.721	15.725	84.66
25.00	9.56	0.6206	15.397	0.7192	15.718	84.55
24.90	9.52	0.6193	15.377	0.7184	15.717	84.35
24.80	9.48	0.6188	15.312	0.717	15.706	84.22
24.70	9.44	0.6178	15.293	0.7167	15.699	83.95
24.60	9.40	0.6172	15.251	0.7159	15.687	83.75
24.50	9.37	0.6165	15.199	0.7151	15.678	83.55
24.40	9.33	0.6158	15.151	0.7144	15.661	83.35
24.30	9.29	0.6151	15.099	0.7135	15.658	83.15
24.20	9.25	0.6147	15.059	0.7129	15.651	82.95
24.10	9.21	0.6141	15.015	0.7124	15.632	82.75
24.00	9.18	0.6129	14.975	0.7117	15.612	82.58
23.90	9.14	0.6122	14.926	0.7105	15.592	82.46

IV-Curve



Temperature Coefficients of Pmax	-0.302%/K
Temperature Coefficients of Voc	-0.256%/K
Temperature Coefficients of Isc	+0.044%/K

***Standard Testing Condition**

Light Intensity: -1000 ±5 W/m², Light Spectrum: AM1.5, Temperature: 25± 2º C

Color Classification:

3Color shades, Denim Blue, Medium Blue & Navy Blue

LIGHT INTENSITY DEPENDENCE

Ratio of Vmpp (Impp) at reduced intensity to Impp (Vmpp) at 1000 W/m²

INTENSITY(W/M²)	VMPP	IMPP
1000	1.00	1.00
800	0.99	0.80
600	0.98	0.60
200	0.92	0.20

PROCESS RECOMMENDATION

Solder joint	Copper ribbons coated with 60%Sn and 40%Pb
Solderability	Peel strength Min> 1.0N/mm

For more details, please contact:

PREMIER ENERGIES

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The specification and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement, Premier Energies reserves the right to make necessary adjustment to the information described herein at any time without further notice.

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