









G12R N-Type TOPCon Bifacial Solar Cell

Model No: ISBTD2M16BN2967

KEY HIGHLIGHTS

-  HIGH CONVERSION EFFICIENCY UP TO 25.5%
-  LOW DEGRADATION (NO LID / LeTID RESISTANT)
-  STATE-OF-THE-ART POLY-FINGER TECHNOLOGY OPTIMISED TO REDUCE PARASITIC ABSORPTION
-  BIFACIAL ENERGY GENERATION
-  ADVANCED SURFACE AND EDGE PASSIVATION
-  LOW TEMPERATURE COEFFICIENT

Surface & Optical Structure

Front Surface Texture	Random pyramid texture (alkaline texturing)
Front ARC Coating	Silicon Nitride (SiNx:H)
Front Surface Reflectance	< 2% (optimized refractive index)
Rear Passivation Structure	Tunnel oxide (SiO ₂) + doped poly-Si (TOPCon)
Edge Passivation	Aluminium Oxide (Al ₂ O ₃)
Rear Surface Coating	Dielectric stack for enhanced reflectivity

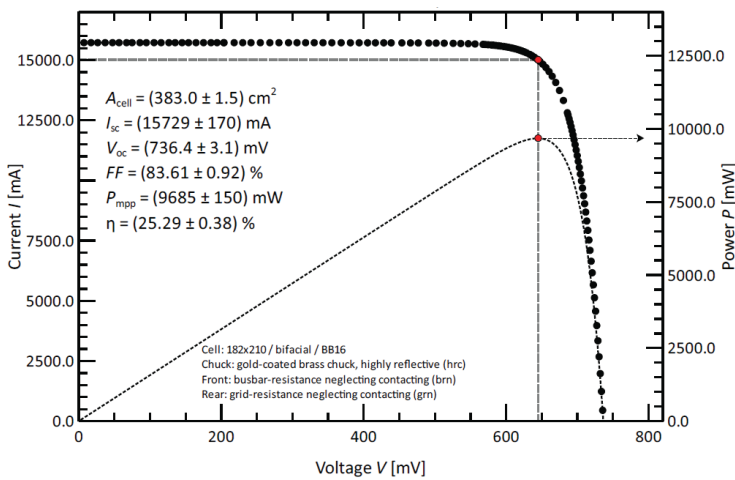
Temperature Coefficient

Parameters	Value	Recommended Tolerance
Voc Temperature Coefficient	-0.256 % / K	±0.010 % / K
Isc Temperature Coefficient	+0.045 % / K	±0.005 % / K
Pmax Temperature Coefficient	-0.30 % / K	±0.015 % / K

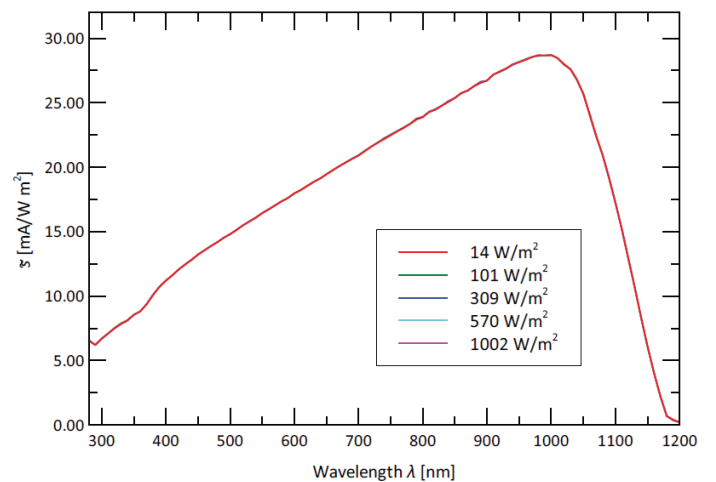
Process Recommendation

Item	Specification
Solder Ribbon	Copper ribbon coated with 60% Sn / 40% Pb
Solderability	Peel strength ≥ 0.5 N/mm

IV Curve



Spectral Response



Electrical Characteristics (STC*)

Efficiency (%)	Pmpp (W)	Vmpp (V)	Impp (A)	Voc (V)	Isc (A)	FF (%)
25.5	9.77	0.6537	14.947	0.7393	15.612	84.66
25.4	9.73	0.6521	14.921	0.7386	15.601	84.44
25.3	9.70	0.6504	14.908	0.7371	15.596	84.36
25.2	9.66	0.6490	14.879	0.7377	15.594	83.93

*STC: Irradiance: 1000 W/m², AM: 1.5 Spectrum, Cell Temperature: 25 ± 2°C.
 Specifications are subject to change due to continuous product improvement.

Version: CG12R042026



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