ABS-108GGS-G12R
510W – 530W
TOPCon Half-Cut PV Module
Glass/Glass-Silver Frame

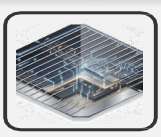


530W MAXIMUM POWER OUTPUT

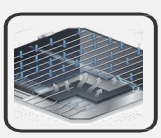
0 to+5W POSITIVE POWER SORTING

23.85% MAXIMUM EFFICIENCY

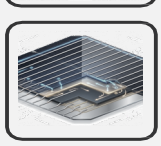
KEY FEATURES



HIGH POWER DENSITY
Module efficiency up to 23.85% at STC



MECHANICAL TEST LOADS
Front: 5,400 Pa. Rear: 2,400 Pa.
Subject to specified mounting configuration.



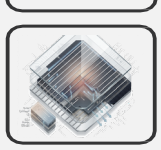
TOPCon CELL TECHNOLOGY
Half-cut cells with 16-busbar interconnection



BIFACIAL POWER GENERATION
Rear irradiance can increase output.

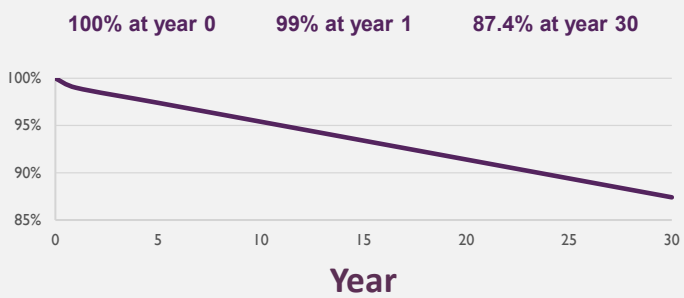


TEMPERATURE PERFORMANCE
Pmax temperature coefficient: −0.30%/°C.



GLASS / GLASS CONSTRUCTION
2.0 mm front glass and 2.0 mm rear glass.

30-YEAR LINEAR POWER WARRANTY



30-year linear power warranty
99% at year 1 · 87.4% at year 30

Maximum degradation: 1% in year 1, then 0.40 percentage points/year. Subject to limited warranty terms.

15-year product warranty
Covers defects in materials and workmanship.

THE IDEAL SOLUTION FOR



STANDARDS and CERTIFICATIONS

IEC 61215 | IEC 61730 | IEC 61701 | IEC 62716 | IEC 60068-2-68

UL 61730 | MCS | CEC | ISO 9001 | ISO 14001 | ISO 45001

ADVANTAGES

MADE IN UAE
Manufactured in Abu Dhabi, United Arab Emirates.

A RELIABLE INVESTMENT
Products up to 530Wp, 30 years of warranty.

ENCOURAGING INNOVATION
European production technology

Address: Abundance Solar Panels Industries – L .L .C Plot No 7-8, KHIA5, KEZAD, Abu Dhabi, UAE
Website: www. bronzesolar.com

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ABS-108GGS-G12R-510-530W

ENGINEERING DRAWINGS & TECHNICAL PARAMETERS

BRONZE SOLAR

ELECTRICAL CHARACTERISTICS (STC/NMOT/BNPI)

Models	Maximum Rating Power (Pmax) (W)			Open Circuit Voltage (Voc) (V)			Maximum Power Voltage (Vmp) (V)			Short Circuit Current (Isc) (A)			Maximum Power Current (Imp) (A)			Module Efficiency
	STC	NMOT	BNPI	STC	NMOT	BNPI	STC	NMOT	BNPI	STC	NMOT	BNPI	STC	NMOT	BNPI	%
ABS-108GGS-G12R-510	510	381.2	565	40.18	37.78	40.39	33.69	31.43	33.69	15.75	12.71	17.73	15.19	12.16	16.78	22.95%
ABS-108GGS-G12R-515	515	385.0	570	40.28	37.87	40.50	33.82	31.55	33.82	15.80	12.75	17.77	15.28	12.24	16.86	23.17%
ABS-108GGS-G12R-520	520	388.7	575	40.39	37.98	40.59	34.02	31.74	34.02	15.83	12.77	17.83	15.34	12.28	16.91	23.40%
ABS-108GGS-G12R-525	525	392.4	580	40.50	38.08	40.68	34.21	31.92	34.21	15.87	12.81	17.88	15.40	12.33	16.96	23.62%
ABS-108GGS-G12R-530	530	396.2	585	40.59	38.16	40.78	34.42	32.11	34.42	15.92	12.85	17.96	15.45	12.37	17.01	23.85%

STC: 1,000 W/m² front, cell temperature 25 °C, AM1.5. BNPI: 1,000 W/m² front + 135 W/m² rear; other conditions require confirmation.

NMOT: 800 W/m², ambient 20 °C, wind 1 m/s, module operating near maximum power.

Electrical measurement uncertainty: ±3% for Pmax, Voc, Vmp, Isc and Imp at STC and NMOT. Pmax is the nominal power class. Power-class assignment and numerical rounding may cause slight differences between nominal Pmax and Vmp × Imp. Positive sorting applies to measured STC power.

ILLUSTRATIVE BIFACIAL POWER GAIN

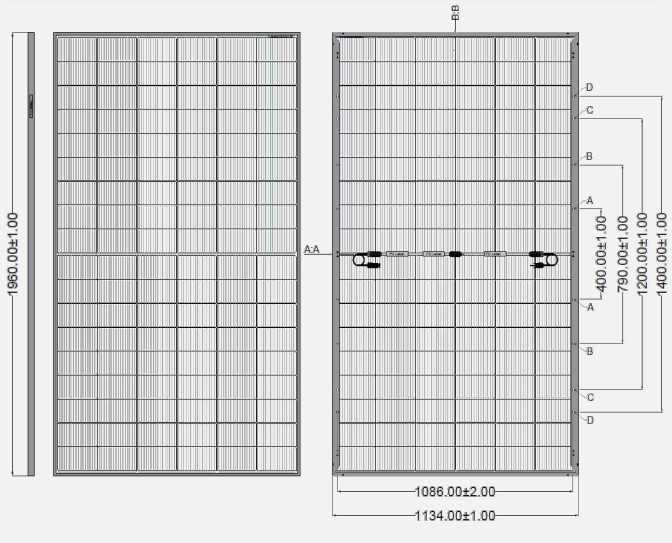
Models		510 W	515 W	520 W	525 W	530 W
10%	Power (W)	561	567	572	578	583
15%	Power (W)	587	592	598	604	610
20%	Power (W)	612	618	624	630	636
25%	Power (W)	638	644	650	656	663

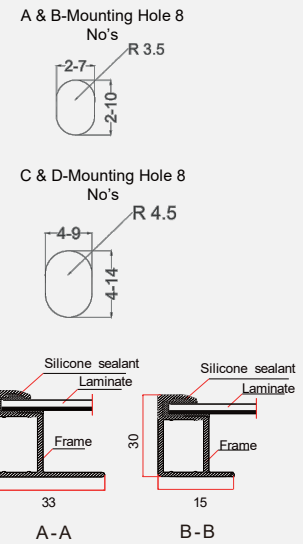
Assumed power gain relative to front-side STC rating. Calculated output = nominal power × (1 + Power gain). Actual gain depends on rear irradiance, albedo, mounting height, spacing and shading. These figures are not guaranteed site yields.

MECHANICAL DATA

Solar cell	TOPCon half-cut, 182.2 × 105 mm, 16BB
Number of half-cells	108 (6 × 18)
Dimensions	1,960 × 1,134 × 30 mm (77.16 × 44.65 × 1.18 in)
Weight	27 kg (±3%)
Front Glass	2.0 mm, High Transmission, Low Iron, Tempered ARC Glass
Encapsulant	Front: EPE multilayer film / Rear: EVA
Back Glass	2.0 mm Semi Tempered Glass with Glaze
Frame	Silver-anodized aluminium alloy, 6005-T6
Junction box	Dhash JB 12Y, 30 A; IP68; 1,500 V DC; 3 bypass diodes
Connectors	Dhash DS01
Output cable	4 mm²; 400 mm or 1,300 mm, per order
Packaging	36 modules/pallet; 864 modules/40-foot HC container

DIMENSIONS OF PV MODULE (mm)





OPERATING CONDITION

Front test load	5,400 Pa
Rear test load	2,400 Pa
Maximum system voltage	1,500 V DC
Maximum series fuse	30 A
Operating temperature	−40 to +85 °C
Protection class	Class II
Fire classification	Class C

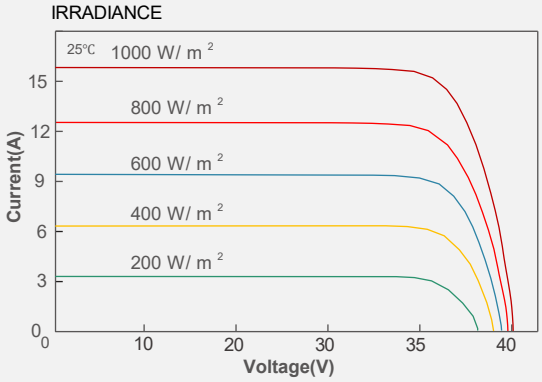
TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature	43°C ± 2°C
Temperature Coefficient of Isc	+0.05 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Pmax	-0.30 % / °C

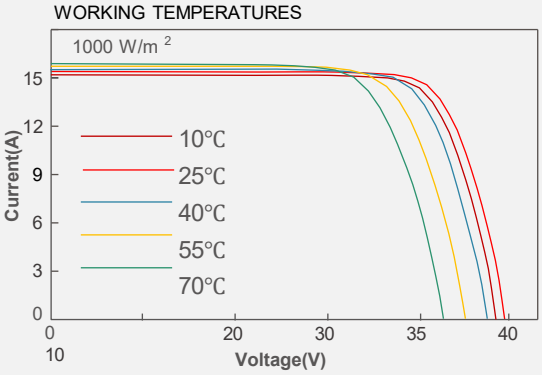
Loads apply to the specified mounting configurations. Test loads are not allowable design loads.

IV-CURVES

CURRENT-VOLTAGE CURVE UNDER DIFFERENT IRRADIANCE



CURRENT-VOLTAGE CURVE UNDER DIFFERENT WORKING TEMPERATURES



Typical I–V characteristics are presented for reference purpose only.

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