

ABU-N78HL-DG

Bifacial Series

625~650W



SMBB Design

Half-cut cells brings lower cell connection loss and lower thermal coefficients to ensures higher power output



Excellent Low-light Performance

Advanced solar cell surface texturing technology allows for excellent performance in low-light environments



Highly Strengthened Design

Certified to withstand: 5400Pa snow load and 2400Pa wind load

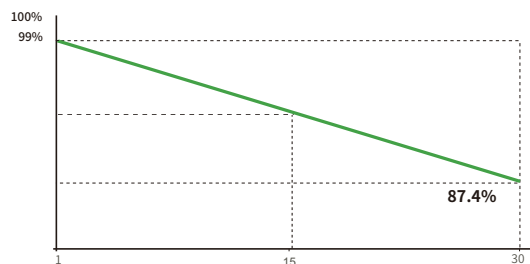


Highly Strengthened Design

Certified to withstand: 5400Pa snow load and 2400Pa wind load

Warranty

15 15-year Product Warranty **30** 30-year Linear Power Warranty

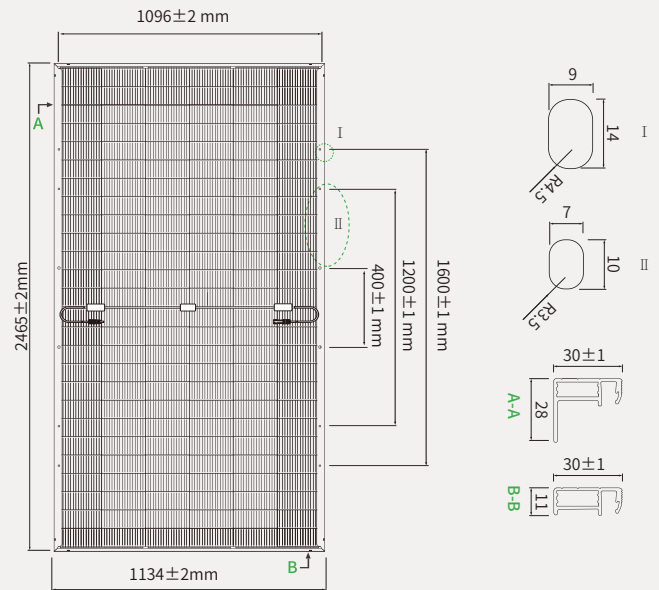


ISO9001:2015: Quality Management System
 ISO14001:2015: Environmental Management System
 ISO45001:2018: Occupational Health and Safety Management System

ABU-N78HL-DG 625~650W

Mechanical Specifications

Outer dimensions (L x W x H)	2465x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	156
Frame	Aluminum, silver anodized
Front / Back glass	2.0+2.0 mm
Junction box	IP68 (Three junction boxes)
Cable specification	+ 300 mm, - 300 mm(4.0mm ²); Customized length
Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Module weight	35kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1310kg
Modules per 40' HQ container	576 pcs (Subject to sales contract)



Electrical Specifications (STC)

	625	630	635	640	645	650
Rated output (P _{mpp} / Wp)	625	630	635	640	645	650
Rated voltage (V _{mpp} / V)	48.68	48.84	49.00	49.16	49.32	49.47
Rated current (I _{mpp} / A)	12.84	12.90	12.96	13.02	13.08	13.14
Open circuit voltage (V _{oc} / V)	56.99	57.15	57.36	57.52	57.68	57.86
Short circuit current (I _{sc} / A)	13.54	13.59	13.65	13.71	13.77	13.83
Module efficiency	22.4%	22.5%	22.7%	22.9%	23.1%	23.3%
Output power tolerance	0 ~ + 3%					
Temperature coefficient (P _{mpp})	-0.29%/°C					
Temperature coefficient (V _{oc})	-0.25%/°C					
Temperature coefficient (I _{sc})	+0.045%/°C					

STC: Irradiance 1000W/m², Cell Temperature 25° C, AM=1.5

Electrical Specifications (BNPI)

	690	695	670	675	680	685
Rated output (P _{mpp} / Wp)	690	695	670	675	680	685
Rated voltage (V _{mpp} / V)	49.50	49.61	49.76	49.86	50.00	50.11
Rated current (I _{mpp} / A)	13.94	14.01	14.07	14.14	14.20	14.27
Open circuit voltage (V _{oc} / V)	57.93	57.40	57.53	57.67	57.80	57.93
Short circuit current (I _{sc} / A)	14.66	14.71	14.77	14.82	14.88	14.93

BNPI: Irradiance: front 1000W/m², rear 135W/m², Cell Temperature 25° C, AM=1.5

Application Requirements

Operating Temperature	-40°C ~ +85°C
Max. system voltage (IEC/UL)	1500V _{DC}
Max. series fuse rating	30 A
Double-sided coefficient	φV _{oc} : 98±5 %, φI _{sc} : 80±5 %, φP _{max} : 80±5 %

Curve

