

DHN-48Z20/DG(BB)

425~455W

High Efficiency Double Glass PV Module

Comprehensive Products & System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO
ISO 45001
2018/International standards for occupational health & safety
ISO 14001
2015/Standards for environmental management system
ISO 9001
2015/Quality management system

 25 Material & technology warranty

 30 Linear power output warranty



No-Busbar(NBB) Technology, shorten 40% of the transmission distance.
Reduces losses & improving conversion efficiency



TOPCon cells double-sided rate up to 85% and
more back power generation by 5-25%



Double-glass Technology, higher encapsulation
blocking and mechanical strength



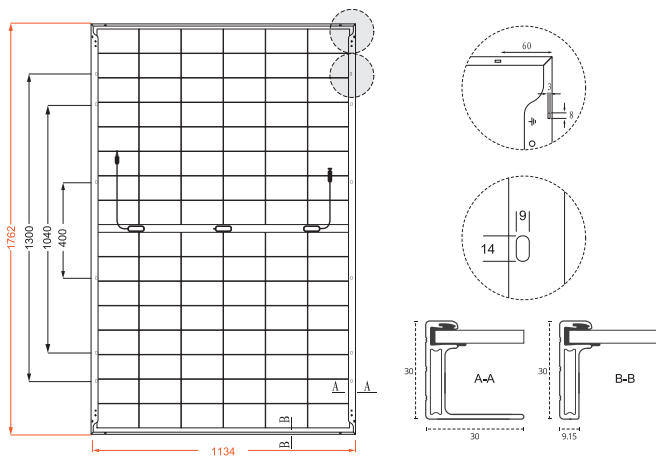
Higher power, longer service life, linear power warranty for 30 years



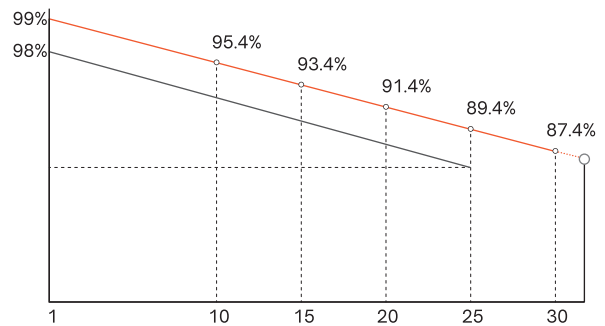
TOPCon cells, lower attenuation,
better temperature coefficient & dim light performance

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Design



30-Year Linear Power Output Warranty



— DAH Solar linear power output guarantee
— Standard linear power output guarantee

Mechanical Specification

No. of Cells	96 (6×16)
Weight	23.9kg
Cells Type	N-type 182×105mm
Dimension (L×W×T)	1762×1134×30mm
Packing	36pcs/Pallet, 936pcs/40HQ

Cable(Including connector)	4.0mm ² , 300/200mm in length, length can be customized
Glass	2.0mm High Transmission, Antireflection Coating
Junction Box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible

Electrical Characteristics

Module Type	DHN-48Z20/DG(BB)															
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (P _{max} /W)	425	320	430	323	435	327	440	331	445	335	450	338	455	342		
Open-circuit Voltage (V _{oc} /V)	35.0	33.3	35.2	33.4	35.4	33.6	35.6	33.8	35.8	34.0	36.0	34.2	36.2	34.4		
Maximum Power Voltage (V _{mp} /V)	29.6	28.1	29.8	28.3	30.0	28.5	30.2	28.7	30.4	28.9	30.6	29.1	30.8	29.3		
Short-circuit Current (I _{sc} /A)	15.34	12.38	15.40	12.43	15.46	12.48	15.52	12.53	15.58	12.58	15.64	12.63	15.70	12.68		
Maximum Power Current (I _{mp} /A)	14.36	11.37	14.43	11.42	14.50	11.48	14.57	11.53	14.64	11.59	14.71	11.64	14.77	11.69		
Module Efficiency (STC)	21.27		21.52		21.77		22.02		22.27		22.52		22.77			
Refer Bifacial Factor	80±5%															

STC-Standard Test Environment: Irradiance 1000W/m², Cell temperature 25°C, Spectrum AM1.5

NOCT-Standard Test Environment: Irradiance 800W/m², Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s

Double-Sided Power Generation Parameters (Rear gain)

5%	Maximum Power (P _{max})	446	452	457	462	467	473	478
	Module Efficiency (%)	22.3	22.6	22.9	23.1	23.4	23.6	23.9
15%	Maximum Power (P _{max})	488.8	494.5	500.3	506.0	511.8	517.5	523.3
	Module Efficiency (%)	24.5	24.7	25.0	25.3	25.6	25.9	26.2
25%	Maximum Power (P _{max})	531.3	537.5	543.8	550.0	556.3	562.5	568.8
	Module Efficiency (%)	26.6	26.9	27.2	27.5	27.8	28.2	28.5

Operating Parameters

Maximum System Voltage	1500V DC
Operating Temperature	-40 ~ +85°C
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45°C±2°C
Application Level	Class A

Temperature Coefficient

Temperature Coefficient of I _{sc} (ΔI _{sc})	0.046%/°C
Temperature Coefficient of V _{oc} (βV _{oc})	-0.25%/°C
Temperature Coefficient of P _{max} (γP _{mp})	-0.29%/°C
Snow load, frontside / Wind load, backside	5400Pa/2400Pa