

DBB

DHN-54R20/DG(BW)

450~465W

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



Material & technology warranty



Linear power output warranty



No-Busbar(OBB) 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%



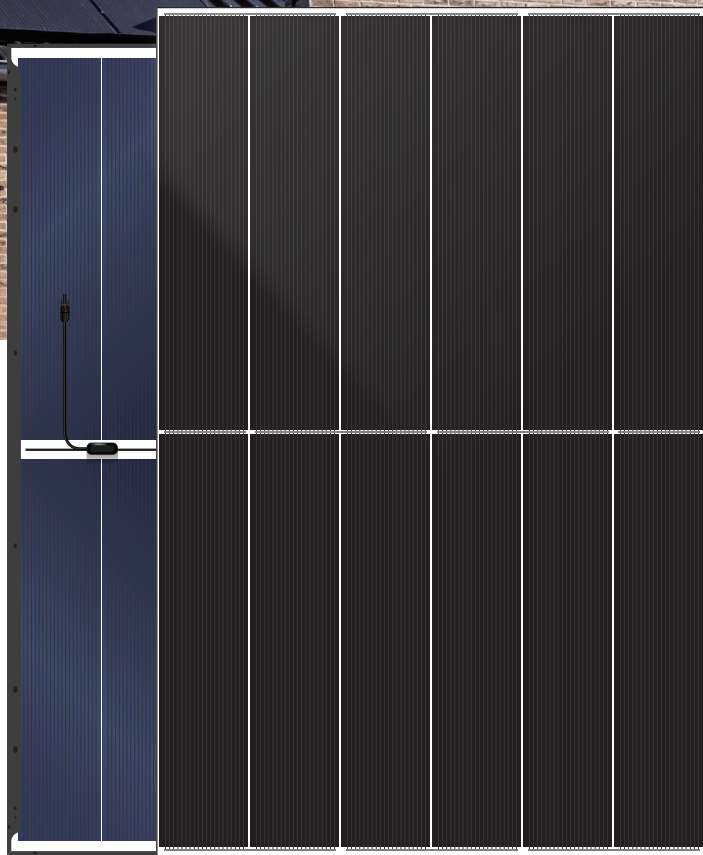
Double-glass Technology, higher encapsulation
blocking and mechanical strength



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

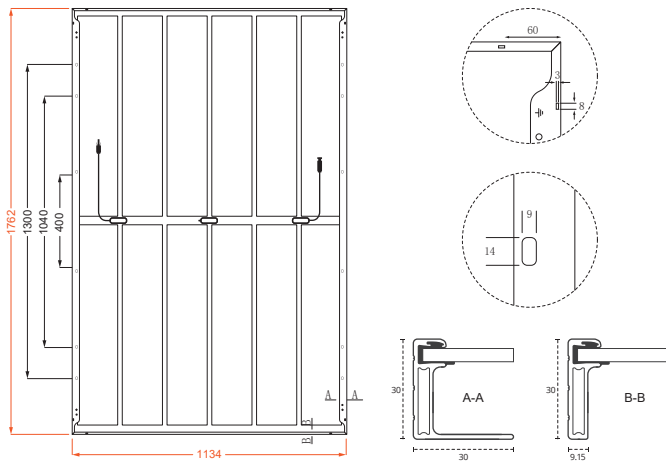


TOPCon cells, lower attenuation,
better temperature coefficient & dim light performance

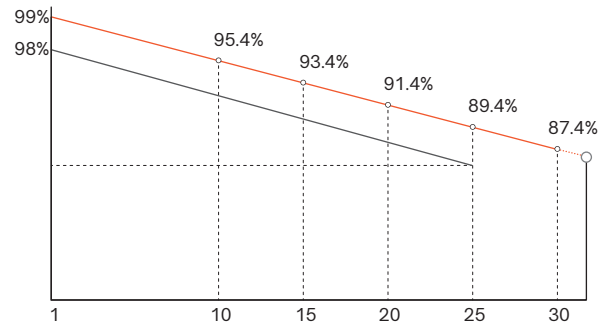


DHN-54R20/DG(BW) 450~465W

Design



30-Year Linear Power Output Warranty



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

Mechanical Specification

No. of Cells	108 (6×18)
Weight	23.9kg
Cells Type	N-type 182×95.8mm
Dimension (L×W×T)	1762×1134×30mm
Packing	36pcs/Pallet, 936pcs/40HQ

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

Electrical Characteristics

Module Type	DHN-54R20/DG(BW)							
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	450	338	455	342	460	346	465	350
Open-circuit Voltage (Voc/V)	39.4	37.4	39.6	37.6	39.8	37.8	40.0	38.0
Maximum Power Voltage (Vmp/V)	33.5	31.8	33.7	32.0	33.9	32.2	34.1	32.4
Short-circuit Current (Isc/A)	14.42	11.64	14.48	11.69	14.54	11.74	14.60	11.79
Maximum Power Current (Imp/A)	13.43	10.63	13.50	10.69	13.57	10.74	13.64	10.79
Module Efficiency (STC)	22.52%		22.77%		23.02%		23.27%	
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})	473	478	483	488
	Module Efficiency (%)	23.6	23.9	24.2	24.4
15%	Maximum Power (P _{max})	517.5	523.3	529.0	534.8
	Module Efficiency (%)	25.9	26.2	26.5	26.8
25%	Maximum Power (P _{max})	562.5	568.8	575.0	581.3
	Module Efficiency (%)	28.2	28.5	28.8	29.1

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} (α _{Isc})	0.046%/°C
Temperature Coefficient of V _{oc} (β _{Voc})	-0.25%/°C
Temperature Coefficient of P _{max} (γ _{Pmp})	-0.29%/°C
Snow load, frontside / Wind load, backside	5400Pa/2400Pa