

DBB

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

Full-Screen 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



Frameless design, installable both vertically & horizontally,
No water, no dust, snow slide fast, power generation increased by 6-15%



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



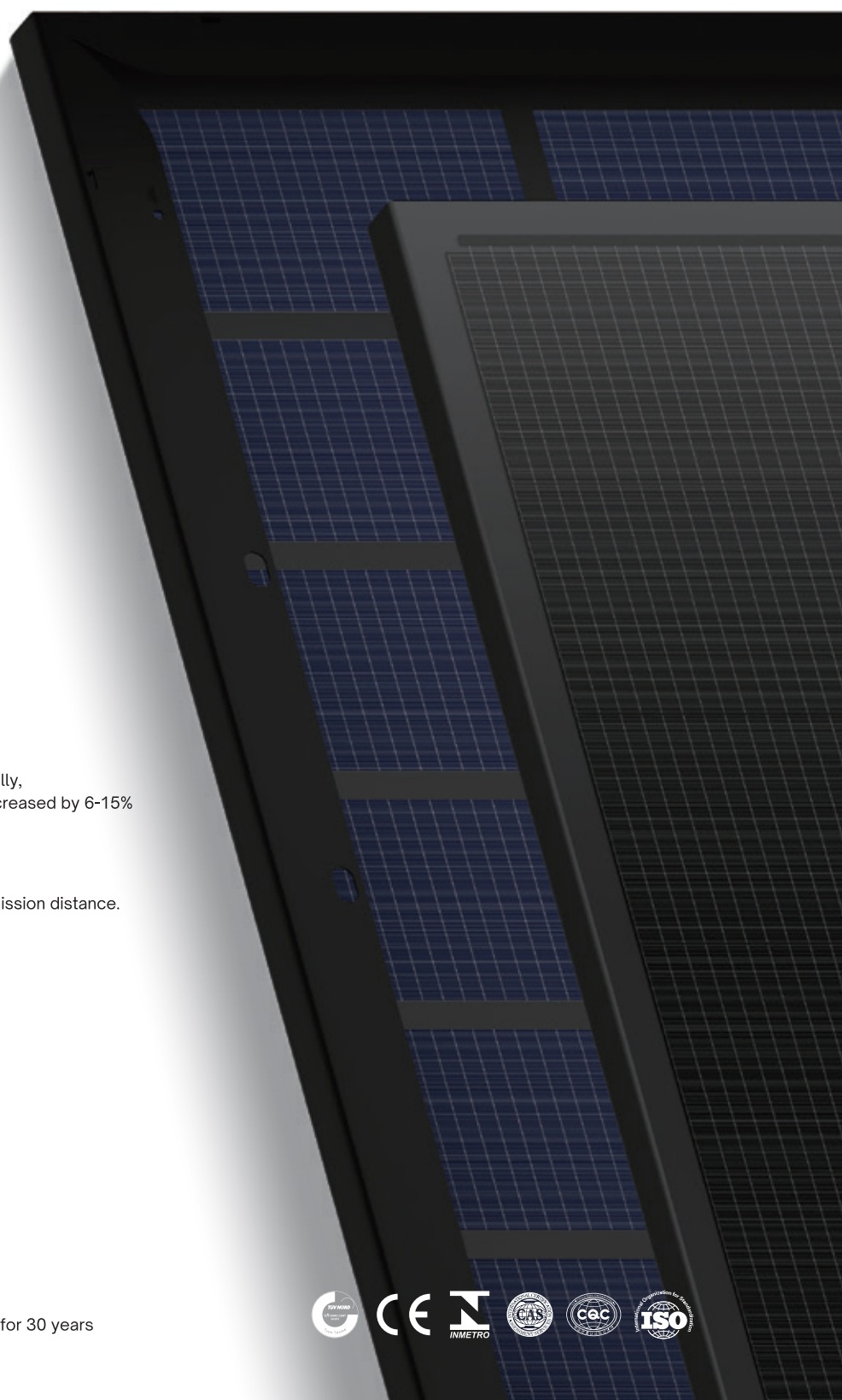
TOPCon cells double-sided rate up to 85% and
more back power generation by 5-25%



Double-glass Technology,
higher encapsulation blocking and mechanical strength

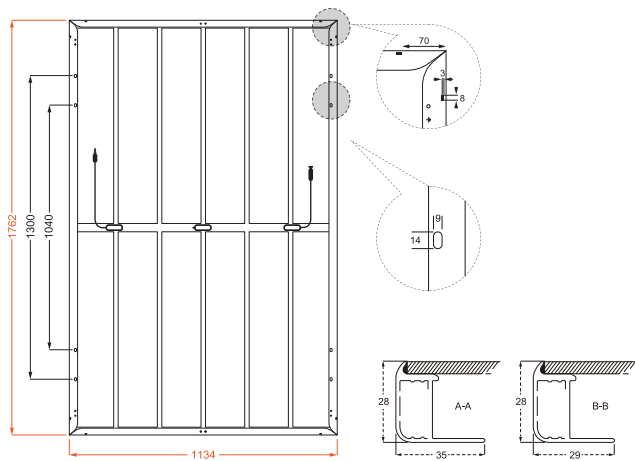


Higher power, longer service life, linear power warranty for 30 years

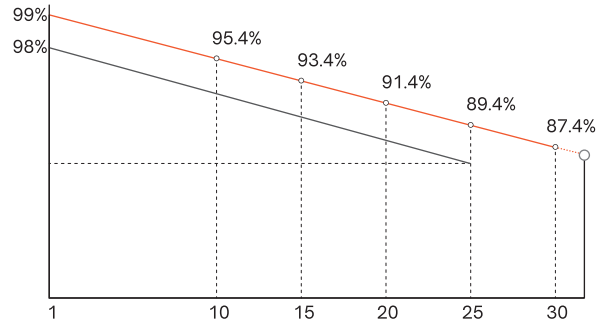


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Design



30-Year Linear Power Output Warranty



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

Mechanical Specification

No. of Cells	108 (6×18)
Weight	24.1kg
Cells Type	N-type 182×95.8mm
Dimension (L×W×T)	1762×1134×28mm
Packing	37pcs/pallet, 962pcs/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-54R20/DG/FS(BB)							
	STC		NOCT		STC		NOCT	
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (P _{max} /W)	450	338	455	342	460	346	465	350
Open-circuit Voltage (V _{oc} /V)	39.4	37.4	39.6	37.6	39.8	37.8	40.0	38.0
Maximum Power Voltage (V _{mp} /V)	33.5	31.8	33.7	32.0	33.9	32.2	34.1	32.4
Short-circuit Current (I _{sc} /A)	14.42	11.64	14.48	11.69	14.54	11.74	14.60	11.79
Maximum Power Current (I _{mp} /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} (ΔI _{sc})	0.046%/°C
Temperature Coefficient of V _{oc} (ΔV _{oc})	-0.25%/°C
Temperature Coefficient of P _{max} (ΔP _{mp})	-0.29%/°C
Snow load, frontside / Wind load, backside	5400Pa/2400Pa