

DHN-48Z16/DG(BW) 430~460W

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



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 performance in anti hidden cracking, acid
and alkali, salt spray, water vapor, UV, PID



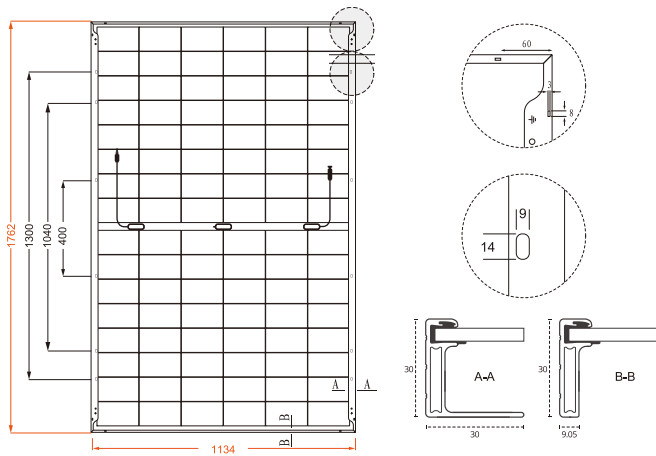
TOPCon cells, lower attenuation,
better temperature coefficient & dim light performance



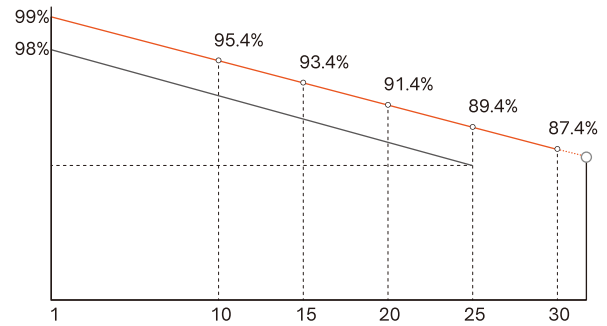
LECO laser assisted sintering technology,
reduces contact resistance and improves efficiency by 0.2% -0.5%

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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-48Z16/DG(BW)													
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Test conditions	430	323	435	327	440	331	445	335	450	338	455	342	460	346
Maximum Power (P _{max} /W)	430	323	435	327	440	331	445	335	450	338	455	342	460	346
Open-circuit Voltage (V _{oc} /V)	35.2	33.4	35.4	33.6	35.6	33.8	35.8	34.0	36.0	34.2	36.2	34.4	36.4	34.6
Maximum Power Voltage (V _{mp} /V)	29.8	28.3	30.0	28.5	30.2	28.7	30.4	28.9	30.6	29.1	30.8	29.3	31.0	29.5
Short-circuit Current (I _{sc} /A)	15.40	12.43	15.46	12.48	15.52	12.53	15.58	12.58	15.64	12.63	15.70	12.68	15.76	12.72
Maximum Power Current (I _{mp} /A)	14.43	11.42	14.50	11.48	14.57	11.53	14.64	11.59	14.71	11.64	14.77	11.69	14.84	11.75
Module Efficiency (STC)	21.52		21.77		22.02		22.27		22.52		22.77		23.02	
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})	452	457	462	467	473	478	483
	Module Efficiency (%)	22.6	22.9	23.1	23.4	23.6	23.9	24.2
15%	Maximum Power (P _{max})	494.5	500.3	506.0	511.8	517.5	523.3	529.0
	Module Efficiency (%)	24.7	25.0	25.3	25.6	25.9	26.2	26.5
25%	Maximum Power (P _{max})	537.5	543.8	550.0	556.3	562.5	568.8	575.0
	Module Efficiency (%)	26.9	27.2	27.5	27.8	28.2	28.5	28.8

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