

# DHN-48Z16/DG(BW) 425~460W


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


 25 Material & technology warranty

 30 Linear power output warranty

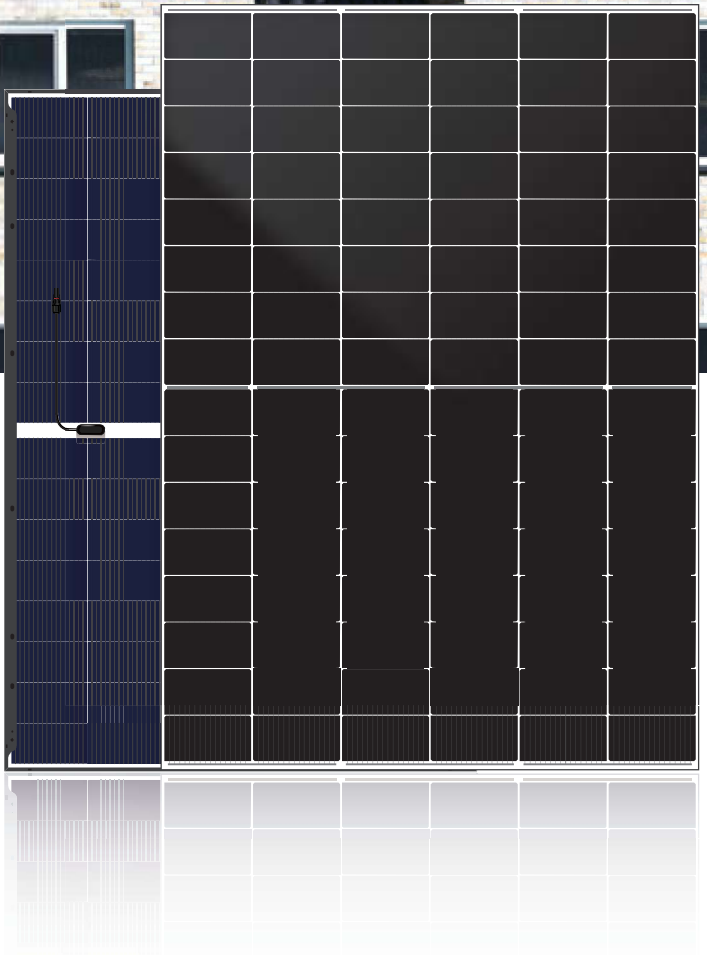
  
TOPCon cells double-sided rate up to 85% and more back power generation by 5-25%

  
Double-glass Technology, higher encapsulation blocking and mechanical strength

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

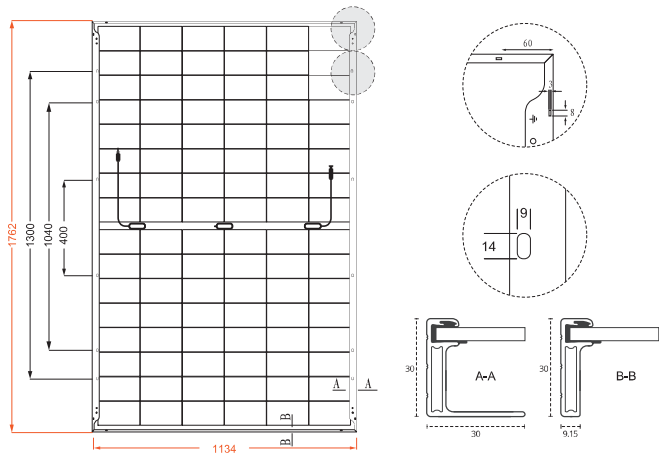
  
TOPCon cells, lower attenuation, better temperature coefficient & dim light performance

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

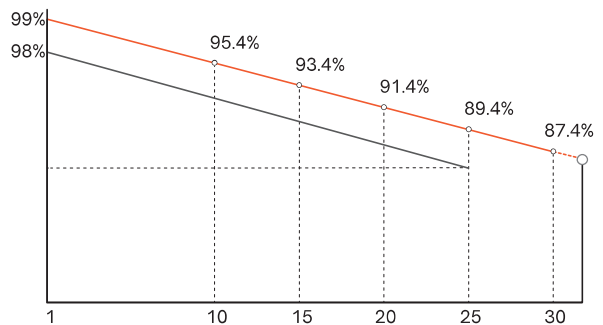


# DHN-48Z16/DG(BW) 425~460W

## 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 <sup>2</sup> , 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	
Test conditions	425	320	430	323	435	327	440	331	445	335	450	338	455	342	460	346
Maximum Power (Pmax/W)	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	36.4	34.6
Open-circuit Voltage (Voc/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	31.0	29.5
Maximum Power Voltage (Vmp/V)	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	15.76	12.72
Short-circuit Current (Isc/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	14.84	11.75
Maximum Power Current (Imp/A)	21.27		21.52		21.77		22.02		22.27		22.52		22.77		23.02	
Module Efficiency (STC)	80±5%															
Refer Bifacial Factor																

STC-Standard Test Environment: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, Spectrum AM1.5

NOCT-Standard Test Environment: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s

## Double-Sided Power Generation Parameters (Rear gain)

%	Parameter	425W		435W		445W		455W		460W	
		Pmax	Efficiency (%)	Pmax	Efficiency (%)	Pmax	Efficiency (%)	Pmax	Efficiency (%)	Pmax	Efficiency (%)
5%	Maximum Power (Pmax)	446	22.3	452	22.6	457	22.9	462	23.1	467	23.4
	Module Efficiency (%)	22.3	22.6	22.9	23.1	23.4	23.6	23.9	24.2		
15%	Maximum Power (Pmax)	488.8	24.5	494.5	24.7	500.3	25.0	506.0	25.3	511.8	25.6
	Module Efficiency (%)	24.5	24.7	25.0	25.3	25.6	25.9	26.2	26.5		
25%	Maximum Power (Pmax)	531.3	26.6	537.5	26.9	543.8	27.2	550.0	27.5	556.3	27.8
	Module Efficiency (%)	26.6	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 Isc (ΔIsc)	0.046%/°C
Temperature Coefficient of Voc (ΔVoc)	-0.25%/°C
Temperature Coefficient of Pmax (ΔPmp)	-0.29%/°C
Snow load, frontside / Wind load, backside	5400Pa/2400Pa