

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



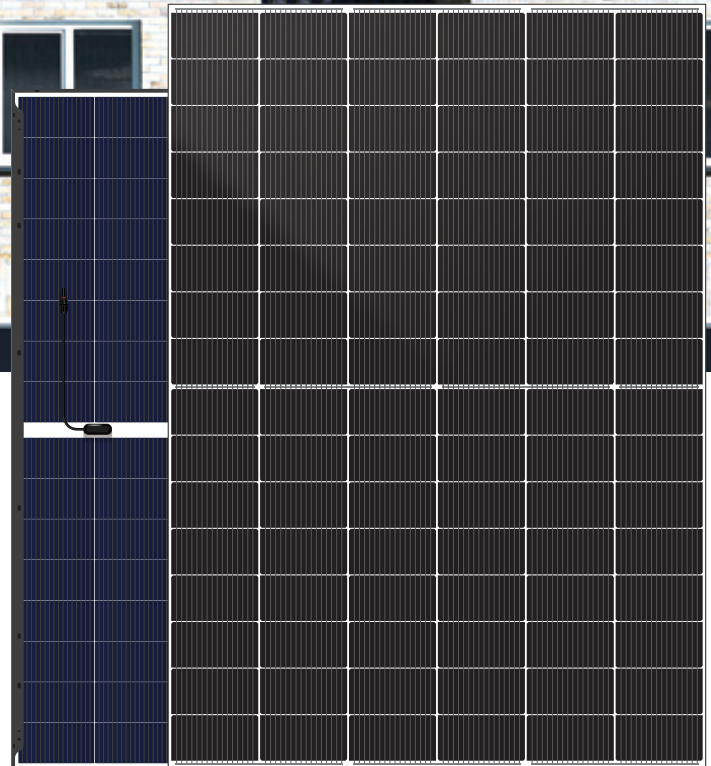
Higher performance in anti hidden cracking, acid and alkali, salt spray, water vapor, UV, PID



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

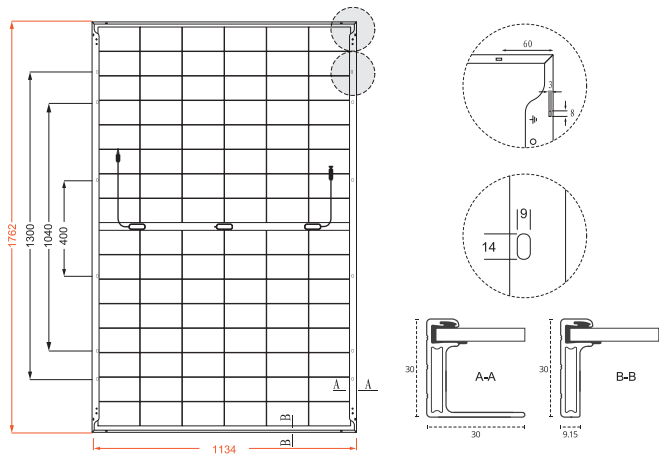


LECO laser assisted sintering technology, reduces contact resistance and improves efficiency by 0.2% -0.5%

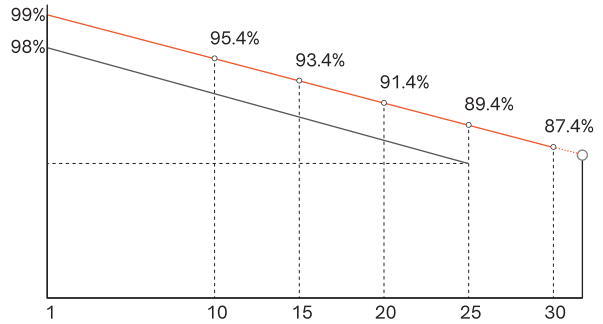


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Design



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 | |
| Test conditions | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT |
| Maximum Power (Pmax/W) | 425 | 320 | 430 | 323 | 435 | 327 | 440 | 331 | 445 | 335 | 450 | 338 | 455 | 342 | 460 | 346 |
| Open-circuit Voltage (Voc/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 | 36.4 | 34.6 |
| Maximum Power Voltage (Vmp/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 |
| Short-circuit Current (Isc/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 | 15.76 | 12.72 |
| Maximum Power Current (Imp/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 |
| Module Efficiency (STC) | 21.27 | | 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)

| Gain | Parameter | 446 | 452 | 457 | 462 | 467 | 473 | 478 | 483 |
|------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5% | Maximum Power (Pmax) | 446 | 452 | 457 | 462 | 467 | 473 | 478 | 483 |
| | Module Efficiency (%) | 22.3 | 22.6 | 22.9 | 23.1 | 23.4 | 23.6 | 23.9 | 24.2 |
| 15% | Maximum Power (Pmax) | 488.8 | 494.5 | 500.3 | 506.0 | 511.8 | 517.5 | 523.3 | 529.0 |
| | Module Efficiency (%) | 24.5 | 24.7 | 25.0 | 25.3 | 25.6 | 25.9 | 26.2 | 26.5 |
| 25% | Maximum Power (Pmax) | 531.3 | 537.5 | 543.8 | 550.0 | 556.3 | 562.5 | 568.8 | 575.0 |
| | 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 (dIsc) | 0.046%/°C |
| Temperature Coefficient of Voc (βVoc) | -0.25%/°C |
| Temperature Coefficient of Pmax (γPmp) | -0.29%/°C |
| Snow load, frontside / Wind load, backside | 5400Pa/2400Pa |