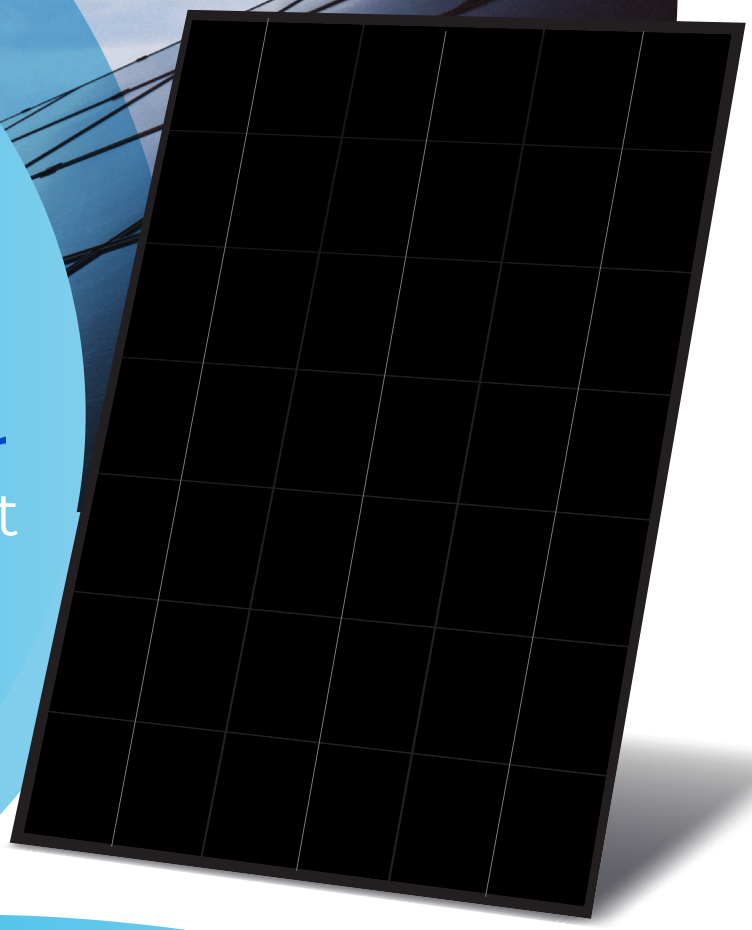
SolarQuantum
PERFORMANCE ENERGY



SolarQuantum
BEST CHOICE: DAH Solar
PV Module 420~430 Watt

ARTIKEL-NR.: SQ003ZE430DA
Hersteller: DAH Solar, Hefei City, Anhui, China
Original Datenblatt: https://drive.google.com/file/d/1qh2LIcVaKuBhVOLNPuHcJ-7XOZnnvgrW/view

SolarQuantum
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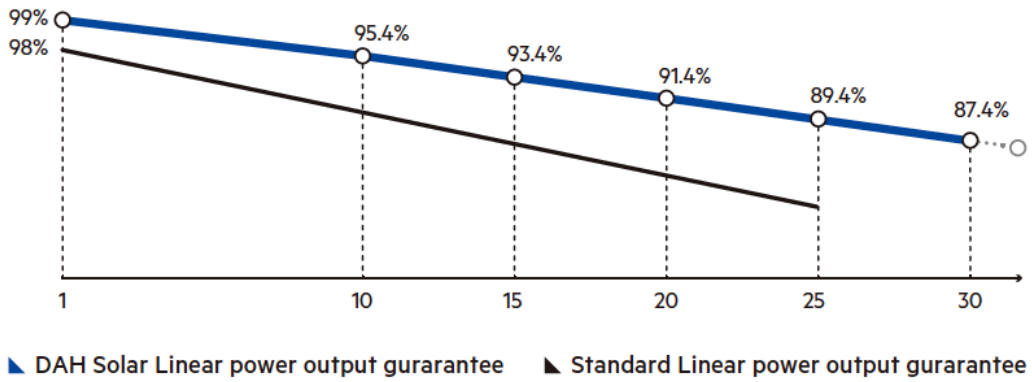
QUALITY GUARANTEE

15-YEAR Material & technology warranty
30-YEAR Linear power output warranty



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

Higher Power Generation Efficiency
N-type TOPCon module could increase power generation by 3%+ per watt compared with PERC module

Higher Power Output
Bifacial module back-side power increases 5-25%

Lower Degradation Rate
First-year ≤1%, 2-30 year ≤0.4%

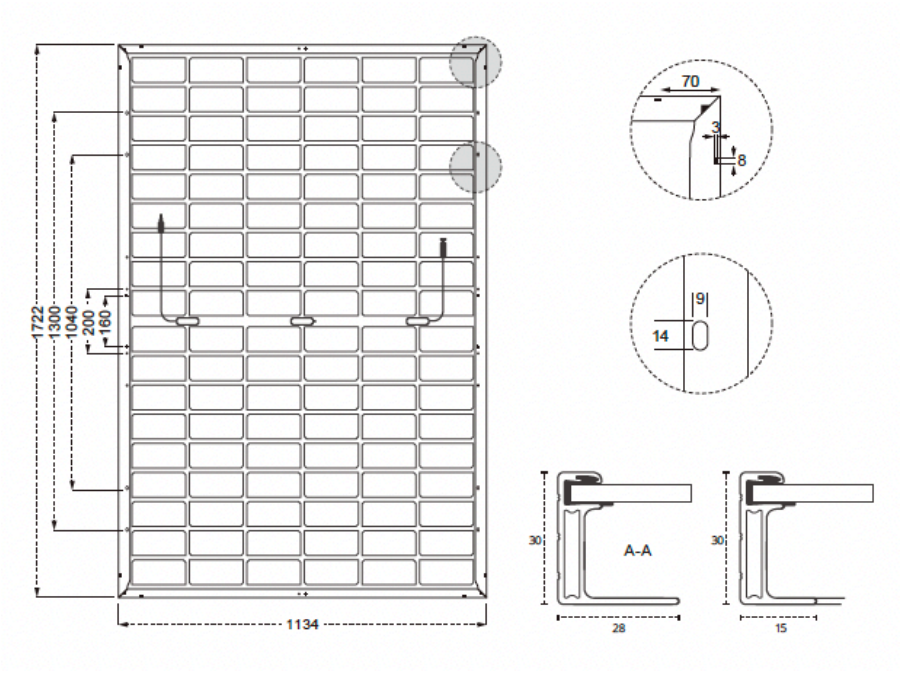
Lower Temp. Coefficient
More power generation under high-temperature

Better Dim Light Performance
Excellent performance under dim light

ARTIKEL-NR.: SQ003ZE410DA
Hersteller: DAH Solar, Hefei City, Anhui, China

DHN-54X16/DG(BB)

DESIGN



MECHANICAL SPECIFICATION

Cable	4.0mm², 350/250mm in length,
(Including Connector)	length can be customized
No.of Cells	108 (6×18)
Glass	2.0mm High Transmission, Antireflection Coating
Junction Box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible
Weight	24kg
Cells Type	N-type 182×91mm
Dimension (L×W×T)	1722×1134×30mm
Packing	36pcs/Pallet, 936pcs/40HQ

ARTIKEL-NR.: SQ003ZE410DA

Hersteller: DAH Solar, Hefei City, Anhui, China

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Electrical Characteristics

Module Type	DHN-54X16/DG(BB)					
	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	420	316	425	320	430	323
Open-circuit Voltage (Voc)	37.6	35.72	37.8	35.91	38.0	36.10
Maximum Power Voltage (Vmp)	32.1	30.50	32.3	30.69	32.5	30.88
Short-Circuit Current (Isc)	13.72	11.08	13.78	11.13	13.84	11.17
Maximum Power Current (Imp)	13.08	10.36	13.16	10.42	13.23	10.47
Module Efficiency (STC)	21.51		21.76		22.02	
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 (Pmax)	441	446	452
	Module Efficiency (%)	22.58	22.85	23.12
15%	Maximum Power (Pmax)	483	489	495
	Module Efficiency (%)	24.73	25.03	25.32
25%	Maximum Power (Pmax)	525	531	538
	Module Efficiency (%)	26.89	27.21	27.53

SolarQuantum
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Operating Parameters

Maximum System Voltage	1500V DC
Power Tolerance	0~+5W
Operating Temperature	-40 ~ +85°C
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45°C±2°C
Application Level	Class A

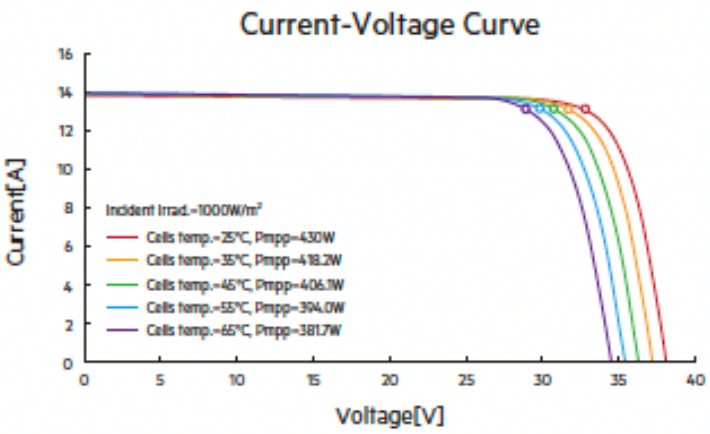
Temperature Coeicient

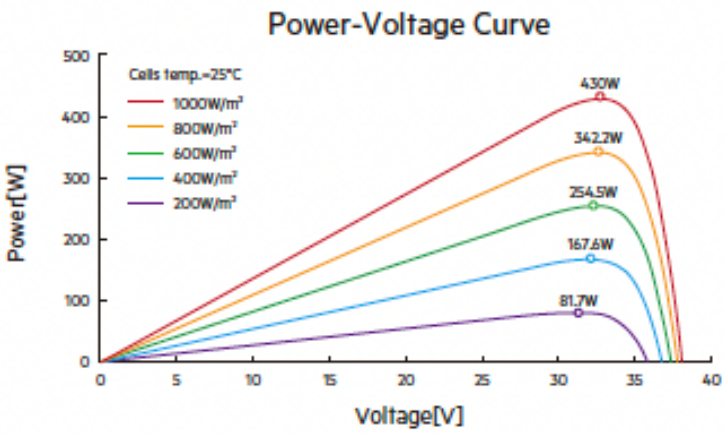
Temperature Coefficient of Isc (α Isc)	0.046%/°C
Temperature Coefficient of Voc (β Voc)	-0.25%/°C
Temperature Coefficient of Pmax (γ Pmp)	-0.30%/°C

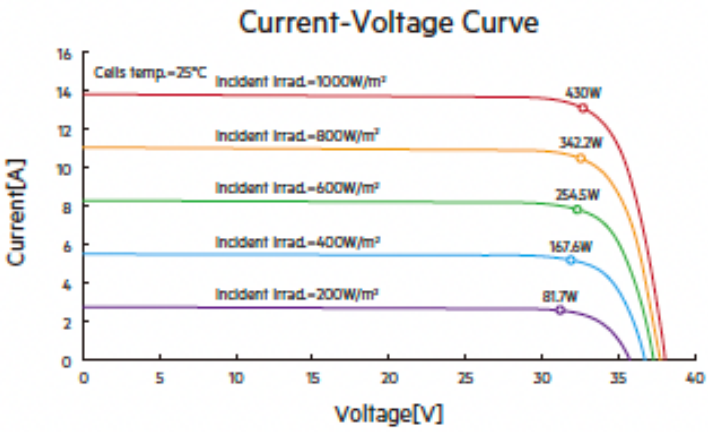
Mechanical Loads

Snow load, frontside / Wind load, backside	5400Pa/2400Pa

I-V Curve


Current-Voltage Curve
Current[A]
Voltage[V]
Incident Irrad.=1000W/m²
Cells temp.=25°C, Pmpp=430W
Cells temp.=35°C, Pmpp=418.2W
Cells temp.=45°C, Pmpp=406.1W
Cells temp.=55°C, Pmpp=394.0W
Cells temp.=65°C, Pmpp=381.7W


Power-Voltage Curve
Power[W]
Voltage[V]
Cells temp.=25°C
1000W/m²
800W/m²
600W/m²
400W/m²
200W/m²
430W
342.2W
254.5W
167.6W
81.7W


Current-Voltage Curve
Current[A]
Voltage[V]
Cells temp.=25°C
Incident Irrad.=1000W/m²
Incident Irrad.=800W/m²
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