قُـدرة
Qudra

Qudra-S144/M10H-xxx

530W-550W
MONO-CRYSTALLINE PV MODULES
HALF-CUT CELLS

30 years
Performance Guarantee

15 years
Product Warranty

550W
Highest power output

21.31%
Module Efficiency

144 HALF CELLS

182 mm CELL SIZE

LID RESISTANT

PID RESISTANT

SALT CORROSION RESISTANT

NH_3 S AMMONIA RESISTANT

SAND RESISTANT

HIGHLY STABLE AND TOUGH

ISO 9001 : 2105
ISO 14001
ISO 45001 : 2018
TÜVRheinland ZERTIFIZIERT

IEC 61215
IEC 61730
Regular Production Surveillance
Type Tested and Monitored

IEC 62716 (Ammonia corrosion)
IEC 61701 (Salt mist corrosion)
IEC 60068 (Sand and dust)
IEC 62804 (PID resistance)

CE

Qudra Renewable Energy Solutions, Ramallah, Palestine

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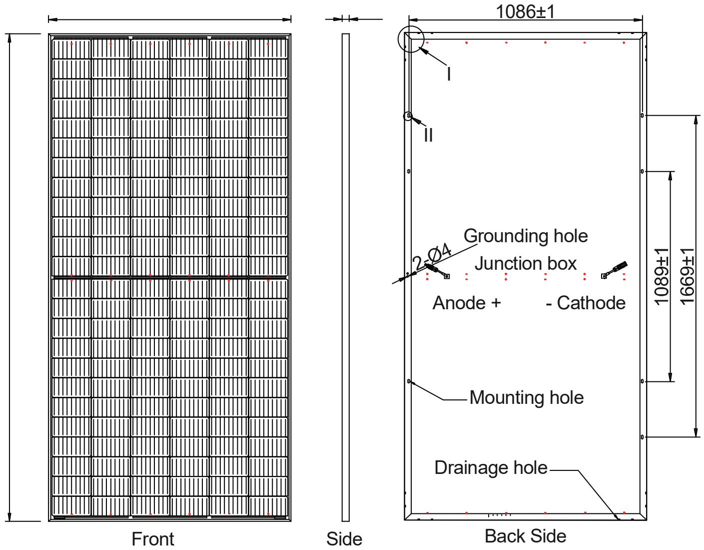
Qudra

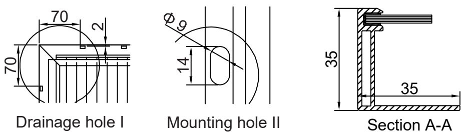
MONO - CRYSTALLINE PV MODULES
HALF - CUT CELLS MONOFACIAL

Qudra - S144 / M10H

Mechanical and design specification

Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 182 mm
No. of cells	144
Glass	3.2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	White Backsheet
Junction box	IP 68 rated
Frame	35 mm anodized Aluminium alloy
Cable	1 x 4 mm², 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2278 mm x 1133 mm x 35 mm
Weight	27 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa/ 244 kg/ m²
Mechanical load	5400 Pa/ 550 kg/ m²



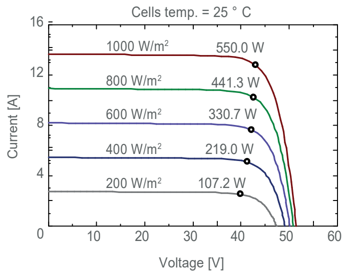


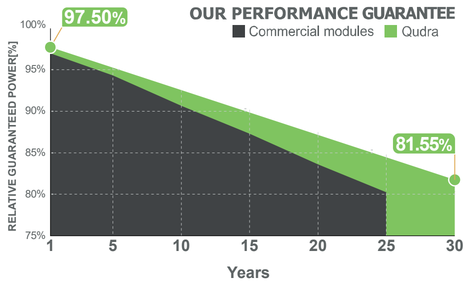
Packaging information

Packaging configuration	62 pcs / double pallet
Loading capacity	620 pcs / 40 HQ
Size / Pallet	2310 mm x 1140 mm x 2490 mm
Weight	1804 kg / double pallets

Temperature ratings

Operating temperature	(°C)	-40 to +85
Temp.coefficient of P_{max}	(%/°C)	-0.35
Temp.coefficient of V_{oc}	(%/°C)	-0.275
Temp.coefficient of I_{sc}	(%/°C)	0.045
Nom. operating temp. NOCT	(°C)	45 ± 2





Electrical specifications (STC*): Qudra - S144 / M10H

Nominal Max. Power	P_{max} (Wp)	530	535	540	545	550
Maximum operating voltage	V_{MPP} (V)	41.70	41.93	42.15	42.38	42.57
Maximum operating current	I_{MPP} (A)	12.71	12.76	12.81	12.86	12.92
Open-circuit voltage	V_{oc} (V)	49.65	49.78	49.90	50.01	51.44
Short-circuit current	I_{sc} (A)	13.47	13.52	13.57	13.62	13.67
Module efficiency	η (%)	20.53	20.73	20.92	21.12	21.31
Power tolerance	(W)			0~+5		
Maximum system Voltage	(V)			1500		
Maximum series fuse rating	(A)			25		

*STC: Standard test conditions (Irradiance 1000 W/m², Cell temperature 25°C and air mass of AM1.5)

Electrical specifications (NMOT*): Qudra - S144 / M10H

Nominal Max. Power	P_{max} (Wp)	400	403	407	410	414
Maximum operating voltage	V_{MPP} (V)	39.30	39.50	39.70	39.90	40.10
Maximum operating current	I_{MPP} (A)	10.17	10.21	10.25	10.29	10.34
Open-circuit voltage	V_{oc} (V)	47.00	47.20	47.40	47.60	47.80
Short-circuit current	I_{sc} (A)	10.78	10.82	10.86	10.90	10.94

*NMOT: Normal Module Operating Temperature (Irradiance 800 W/m², Ambient temperature 20°C, air mass of AM1.5 and wind speed of 1 m/s)

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