ROVON POWER / SOLAR MODULE

Rove N1

RN1 78BD

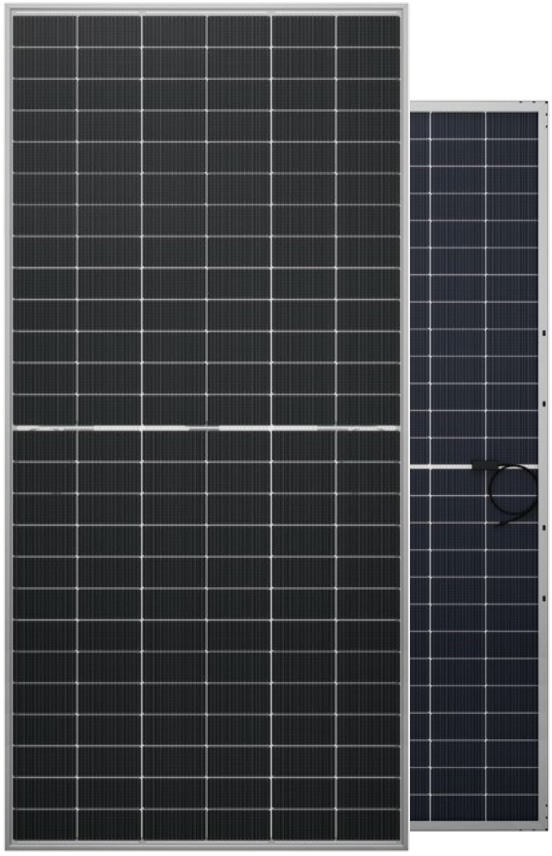
620-640W

N-Type TOPCon Bifacial
Dual Glass Solar Module

22.90%
MAX. MODULE EFFICIENCY

156
HALF-CELLS

2.0 mm front glass / 2.0 mm rear glass
1500 V DC maximum system voltage



FRONT REAR

Product performance

10-30% additional generation

Over a 30-year lifespan, energy generation can be 10-30% higher than conventional P-type modules.

Zero light-induced degradation

N-type cells have no LID naturally, helping retain power generation.

Higher reliability

TOPCon contacts; no polysilicon wrap-around; full electrical isolation.

Low-light response

Designed for improved output under low-irradiance conditions.

Temperature performance

Pmax temperature coefficient: -0.28%/°C.

Quality & Certification

PRODUCT TEST STANDARDS

IEC 61215 / 61730 · IEC 62804 (PID)
IEC 61701 (salt) · IEC 62716 (ammonia)
IEC 60068-2-68 (sand)

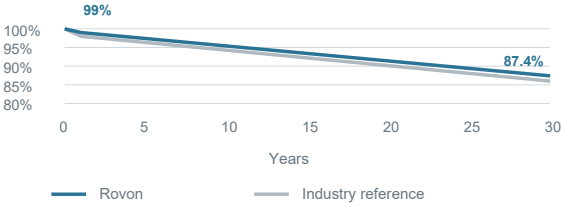
MANAGEMENT SYSTEM STANDARDS

ISO 9001:2015 · ISO 14001:2015
ISO 45001:2018 · ISO 50001:2011
IEC TS 62941-2016

Warranty

15 YEARS
Materials

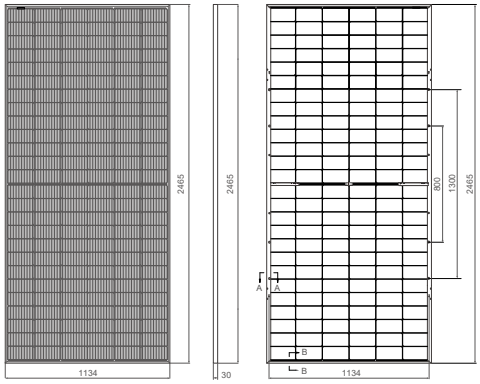
30 YEARS
Power output



ROVE N1 / RN1 78BD 620-640W

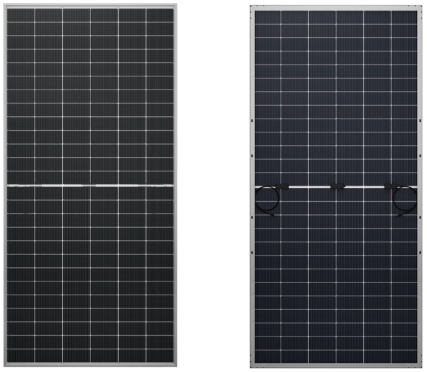
Technical specifications

Drawings





Front / Rear



Mechanical characteristics

PARAMETER	VALUE
Solar cells	TNC (N-type monocrystalline cell)
No. of cells	156 (6 × 26)
Dimensions	2465 ±2 × 1134 ±2 × 30 mm
Weight	33.8 kg
Front / rear glass	Front: 2.0 mm AR coated heat-strengthened glass / Rear: 2.0 mm heat-strengthened glass
Frame	Anodized aluminum alloy frame
Junction box	IP68; 3 diodes
Output cables	4 mm²
Cable length	+400 mm / -200 mm; customizable
Wind / snow load	2400 Pa / 5400 Pa
Packaging	36 pcs / pallet; 576 pcs / 40'HC

Operating characteristics

PARAMETER	VALUE
Module temperature	-40°C to +85°C
Max. system voltage	1500 V DC (IEC)
Max. series fuse	30 A
Power tolerance	0 to +5 W
Bifaciality	80% ±5%

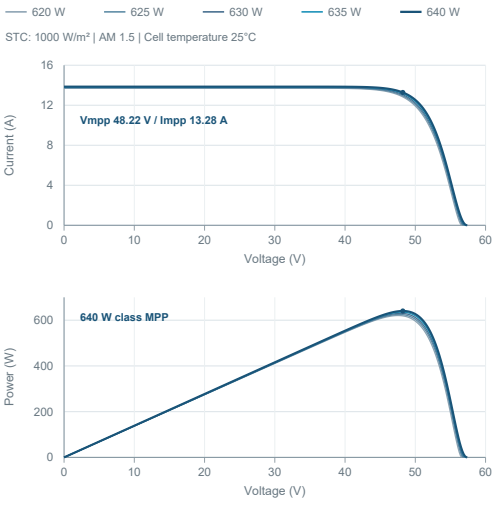
Temperature characteristics

PARAMETER	VALUE
NMOT	45 ±2°C
Pmax coefficient	-0.28%/°C
Voc coefficient	-0.24%/°C
Isc coefficient	+0.046%/°C

Electrical parameters / STC

POWER CLASS	620	625	630	635	640
Pmax (W)	620	625	630	635	640
Vmpp (V)	47.54	47.71	47.88	48.05	48.22
Impp (A)	13.05	13.10	13.16	13.22	13.28
Voc (V)	56.60	56.80	57.00	57.20	57.40
Isc (A)	13.70	13.74	13.78	13.82	13.86
Efficiency (%)	22.20	22.40	22.50	22.70	22.90

I–V / P–V curves



Typical curves fitted to tabulated STC ratings.

Bifacial output / Rear-side gain

POWER CLASS	620	625	630	635	640
5% / Pmax (W)	651.0	656.3	661.5	666.8	672.0
5% / Efficiency (%)	23.30	23.50	23.70	23.90	24.00
15% / Pmax (W)	713.0	718.8	724.5	730.3	736.0
15% / Efficiency (%)	25.50	25.70	25.90	26.10	26.30
25% / Pmax (W)	775.0	781.3	787.5	793.8	800.0
25% / Efficiency (%)	27.70	27.90	28.20	28.40	28.60

1. STC: 1000 W/m²; AM 1.5; 25°C; EN 60904-3.
2. Pmax tolerance: 0 to +5 W; power measuring uncertainty: ±3%.
3. Performance deviation of Voc, Isc, Vmpp and Impp: ±3%.