

MADE IN GERMANY

German engineering for consistently high energy yields.

PRELIMINARY DATA SHEET


APOLLON 2.0

Bifacial shingle matrix module
450–460 Wp

- ✓ Designed by Fraunhofer ISE
- ✓ Optimal shading behaviour
- ✓ Robust modular architecture
- ✓ Bifacial glass-glass-module
- ✓ Sustainable materials
- ✓ Free from toxic lead and PFAS



Designed, manufactured
and tested in Germany.



30
Years product-
warranty

30
Years performance-
warranty

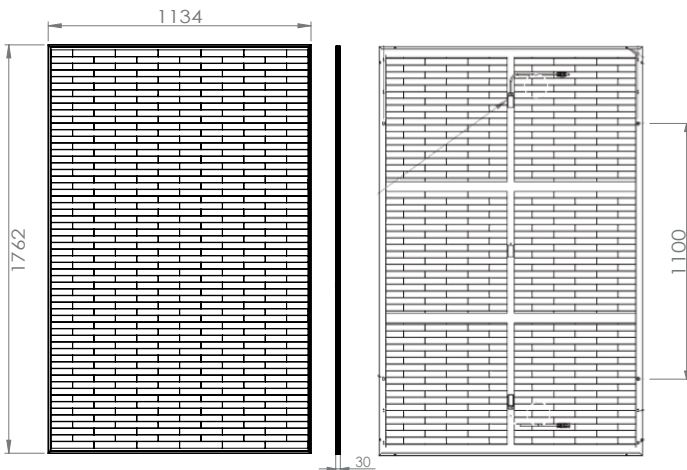
25
Years of Trust
in quality

APOLLON 2.0 450-460Wp

PRELIMINARY DATA SHEET



DIMENSIONS IN : MM



MODULE SPECIFICATIONS

Cell Technology	N-type TOPCon, bifacial
Cells	390 Shingle cells, matrix-technology
Dimensions	1762×1134×30 mm
Weight	23,5 kg
Front Glass	2mm semi-tempered AR-glass
Rear Glass	2mm semi-tempered glass
Frame	30mm black anodized aluminium frame
Junction Box	3 diodes, IP68, according to IEC 62790
Cable/ Connector	4mm ² Stäubli MC4-EVO 2 connector
Cable Length	2 x 1200mm
Max. Test-Load, push/pull	+5400Pa / -2400Pa
Max. Design-Load, push/pull	+3600Pa / -1600Pa

ELECTRICAL SPECIFICATIONS¹ (STC²)

Rated Power P_{MPP} (Wp)	450	455	460
Max. Power Current I_{MPP} (A)	13,12	13,17	13,23
Max. Power Voltage V_{MPP} (V)	33,41	34,54	34,77
Short-circuit Current I_{SC} (A)	13,64	13,69	13,74
Open-circuit Voltage V_{OC} (V)	40,61	40,89	41,18
Module Efficiency (%)	22,5	22,8	23,0

TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature ³	42 ± 2°C
Temperature Coefficient P_{MAX} (%/°C)	- 0,29
Temperature Coefficient V_{OC} (%/°C)	- 0,23
Temperature Coefficient I_{SC} (%/°C)	+ 0,031

OPERATING CONDITIONS

Operating Temperature Range	-40 ~ +85°C
Max. System Voltage (VDC)	1500
Reverse Current Feed I_R (A)	25
Power Performance Tolerance (Wp)	0 / +4,99

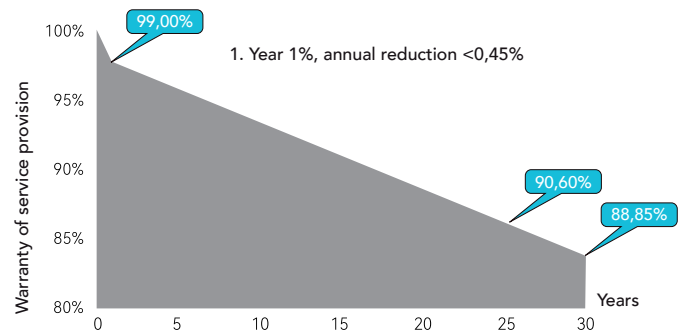
CERTIFICATES & WARRANTIES

IEC 61215, IEC 61730
 IEC 62716: Ammonia Corrosion*
 IEC 61701: Salt Mist Corrosion*
 Fire Protection Class: IEC Class A
 Product warranty: 30 Years
 Performance warranty: 30 Years
 WEEE-Reg.-No.: DE 42676826
 30 Modules/Palettes

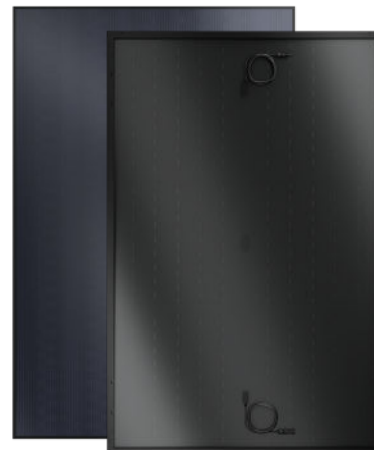
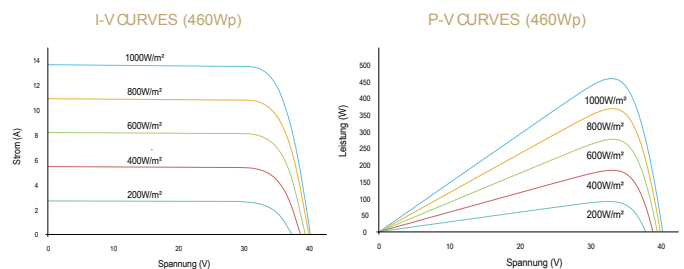
*under certification

¹Measurements according to IEC 60904-3, measurements tolerance: $I_{SC} \pm 5\%$, $V_{OC} \pm 5\%$, $PMPP \pm 4\%$, ²Standard Test Conditions STC: irradiation 1.000 W/m² with a spectrum of AM 1,5 at a cell temperature of 25°C. ³NMOT-Data: Nominal Module Operating Temperature= Nominal Module Operating Temperature at irradiation of 800W/m² and an ambient temperature of 20 °C. Technical specifications subject to change. All information is provided without guarantee. Design load = rated load, test load = test load. Please refer to our installation instructions.

LINEAR PERFORMANCE WARRANTY



CURRENTY-VOLTAGE-CHARACTERISTICS



TÜVRheinland®
 Genau. Richtig.

