



Heckert Solar

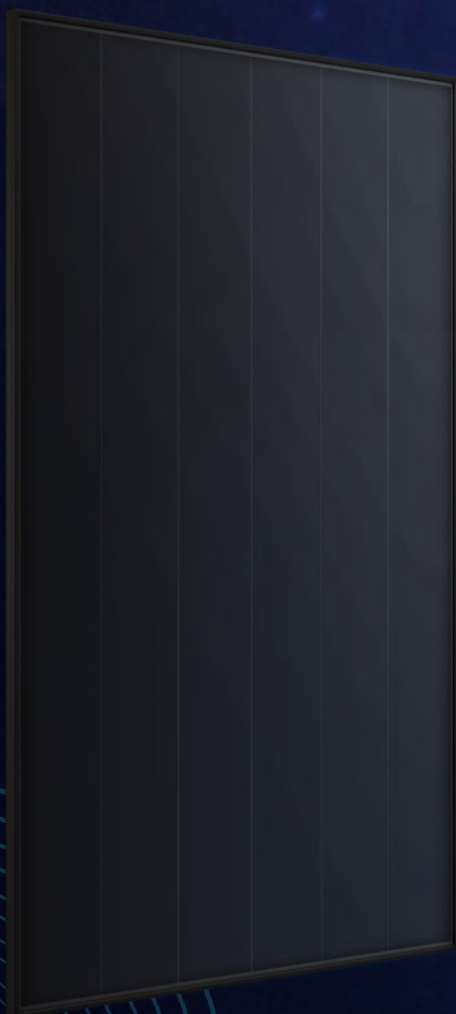
FUTURE STARTS IN GERMANY



Bifacial Back-Contact-Module

ZEUS 3.0⁺ Full Black

480-485WP



OPTIMAL SHADING BEHAVIOUR



BETTER TEMPERATURE BEHAVIOUR



MODULE EFFICIENCY UP TO 24.3%



HIGH MODULE POWER UP TO 485WP



BRILLANT FULL BLACK DESIGN

DE

GERMAN
WARRANTOR



DIRECT
SERVICE

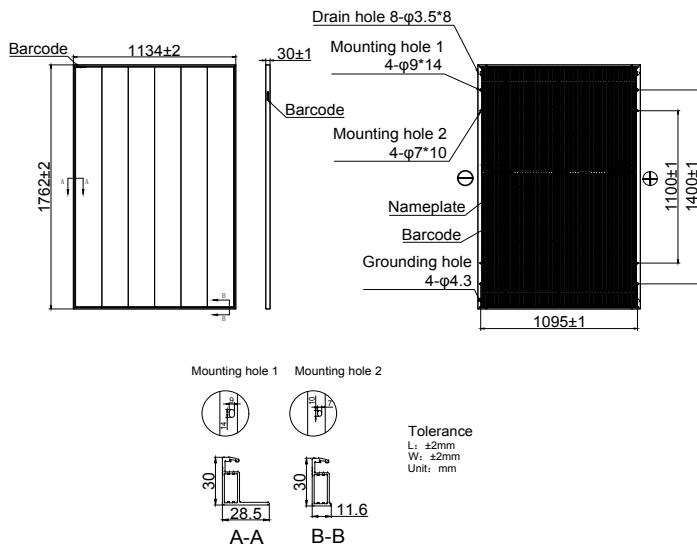
**30
YEARS**

PRODUCT-
WARRANTY

**30
YEARS**

PERFORMANCE-
WARRANTY

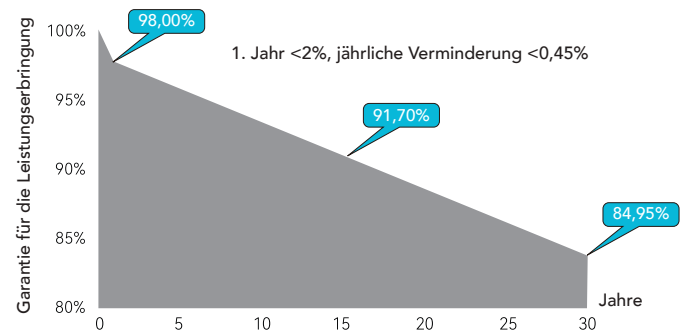
DIMENSIONS IN MM



MODULE SPECIFICATIONS

Cell Technology	N-type ABC Back Contact
Cells	108 half cut cells (6x18)
Dimensions	1762 x 1134 x 30mm
Weight	24,2 kg
Front Glass	2mm partially heated strengthened AR-glass
Rear Glass	2mm partially heat strengthened glass
Frame	30mm black anodized aluminium frame
Junction Box	3 diodes, IP68, according to IEC 62790
Connecting Cable	4mm ² Stäubli MC4-EVO 2A plug +/- (1500V)
Cable Length	2 x 1200mm
Max. Test-Load, push/pull	+5400Pa / -2400Pa
Max. Design-Load, push/pull	+3600Pa / -1600Pa

LINEAR POWER OUTPUT WARRANTY



ELECTRICAL SPECIFICATIONS¹ (STC²)

Rated Power P_{MPP} (Wp)	480	485
Max. Power Current I_{MPP} (A)	13,92	14,02
Max. Power Voltage V_{MPP} (V)	34,50	34,60
Short-circuit Current I_{SC} (A)	14,80	14,84
Open-circuit Voltage V_{OC} (V)	40,90	41,00
Module Efficiency (%)	24,0	24,3

ELECTRICAL SPECIFICATIONS¹ (NOCT)

Rated Power P_{MPP} (Wp)	364	367
Max. Power Current I_{MPP} (A)	11,13	11,21
Max. Power Voltage V_{MPP} (V)	32,73	32,83
Short-circuit Current I_{SC} (A)	11,96	11,99
Open-circuit Voltage V_{OC} (V)	38,80	38,90

TEMPERATURE CHARACTERISTICS

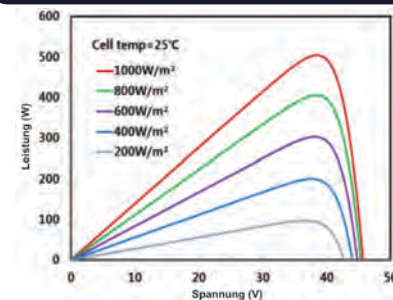
Nominal Module Operating Temperature ³	45 ± 2°C
Temperature Coefficient P_{MAX} (%/°C)	- 0,26
Temperature Coefficient V_{OC} (%/°C)	- 0,22
Temperature Coefficient I_{SC} (%/°C)	+ 0,05

OPERATING CONDITIONS

Operating Temperature Range	-40 ~ +70°C
Max. System Voltage (VDC)	1500
Reverse Current Feed I_R (A)	30
Power Performance Tolerance (Wp)	0 / +4,99
Max. Bifaciality (%)	42 ± 5

¹Measurements according to IEC 60904-3, measurements tolerance: I_{SC} ±5%, V_{OC} ±5%, P_{MPP} ±4%, bifaciality: ± 5% ²Standard Test Conditions STC: irradiation 1.000 W/m² with a spectrum of AM 1,5 at a cell temperature of 25°C. Maximum reduction in efficiency at 200W/m²: 2%. ³NMOT-Wert: Nominal Module Operating Temperature at irradiation of 800W/m² and an ambient temperature of 20 °C. Operation temperature range between -40°C and +85°C. Dimensions +/-3mm. Technical specifications are subject to change without notice. All information is provided without guarantee. Design load = rated load, tst load = test load. Please refer to our installation instructions

I-V CURVES



CERTIFICATES & WARRANTIES

IEC 61215, IEC 61730*
 IEC 62716: Ammonia Corrosion*
 IEC 60068 Sand & Dust*
 IEC 61701 Salt Mist Corrosion
 2PfG2387: PID
 2PfG2689: LeTID
 Fire Protection Class: IEC Class A
 Hail Resistance Class: HW3
 Product Warranty: 30 Years
 Performance Warranty: 30 Years
 WEEE-Reg.-No.: DE 42676826
 37 Modules/Palettes, 962 Modules/40'HC

