

ESPSA (BK)

Monocrystalline Solar Module-Black

SPECIFICATIONS

Dimensions	1580 x 808 x 35 mm 1580 x 808 x 40 mm 1580 x 808 x 45 mm
Weight	13.5 kg
Frame	Aluminium hollow-chamber frame on each side
Glass	Low-iron and tempered glass 3.2 mm
Cells	72 pcs monocrystalline Si-cells (125 x 125 mm)
Cell Embedding	EVA
Back-Foil	FEVE / PET / FEVE
Junction Box	TÜV certified
Cable	4 mm ² solar cable 2 x 900 mm
Temperature Range	-40°C ... +85°C
Load Capacity	2400 Pa(IEC 61215),35mm 5400 Pa(IEC 61215),45mm
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C
Product Warranty	10 years
Power Guarantee	10 years 90% 25 years 80%

CHARACTERISTICS

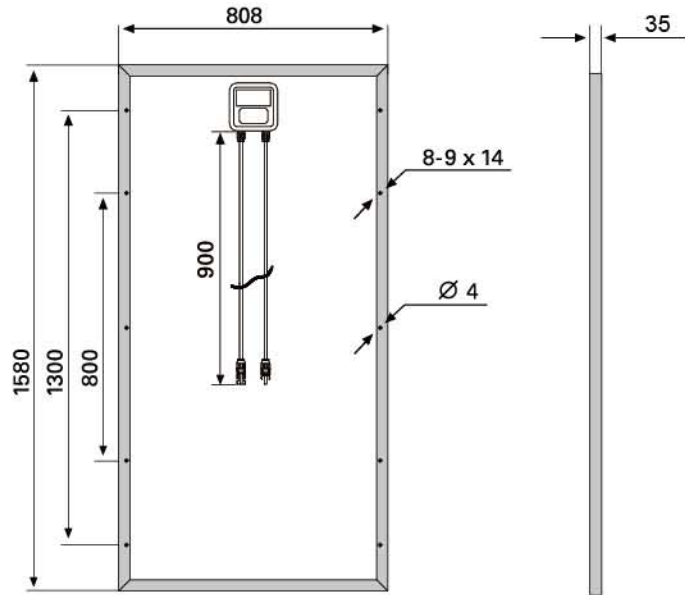
Max. System Voltage	1000V/DC
Temperature-Coefficient I_{SC}	+0.07%/°K
Temperature-Coefficient V_{OC}	-0.36%/°K
Temperature-Coefficient P_{MPP}	-0.43%/°K
NOCT***	45°C

CERTIFICATES

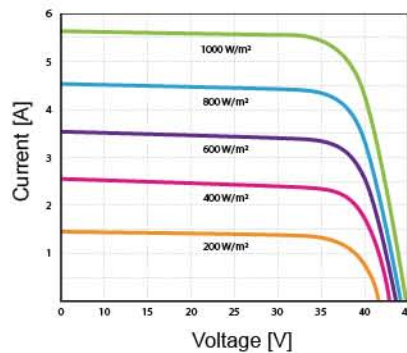
IEC 61215 edition 2 (TÜV Nord)
IEC 61730 MCS INMETRO
CE CEC SALT-MIST
UL1703 CSA
PID Resistant

INSURANCE

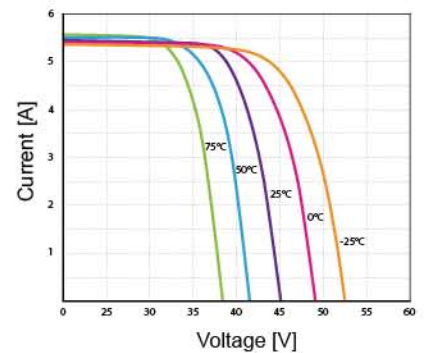
Chubb



CURRENT-VOLTAGE CURVES



Module characteristics at constant module temperatures (25°C) and different levels of irradiance.



Module characteristics at different module temperatures and constant module irradiance (1.000 W/m²).

ESPSA TYPE	190	195	200
Power Class	190W	195W	200W
Max. Power Voltage (V_{MPP})* at STC**	36.2V	36.45V	36.7V
Max. Power Current (I_{MPP}) at STC	5.25A	5.35A	5.45A
Open Circuit Voltage (V_{OC}) at STC	44.8V	45.1V	45.4V
Short Circuit Current (I_{SC}) at STC	5.6A	5.7A	5.8A
Module Efficiency	14.9 %	15.3 %	15.7 %

* MPP: Maximum Power Point

** STC (Standard Test Conditions): 1000W/m², 25°C, AM 1.5

*** Normal Operating Cell Temperature



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