



HELIENE

PHOTOVOLTAIC
MODULES

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HEE215M

SOLAR MODULE

The HELIENE HEE215M solar modules series are made using the latest generation of mono-crystalline solar cells, designed and manufactured by leading European and North American suppliers. The absorption surface, and 3 bus bar design provide an aesthetic look and world class power output. The different power classes allow flexibility for the designers to adjust power needs to any project.

HELIENE modules only incorporate high efficiency solar cells, making it possible to obtain maximum solar yield. 4mm thick transparent and textured solar glass, and 40mm aluminium frame guarantee the best resistance and reliability. High power modules with maximum efficiency and tight tolerance are able to obtain optimum energy production in any project.

PRODUCT DESCRIPTION

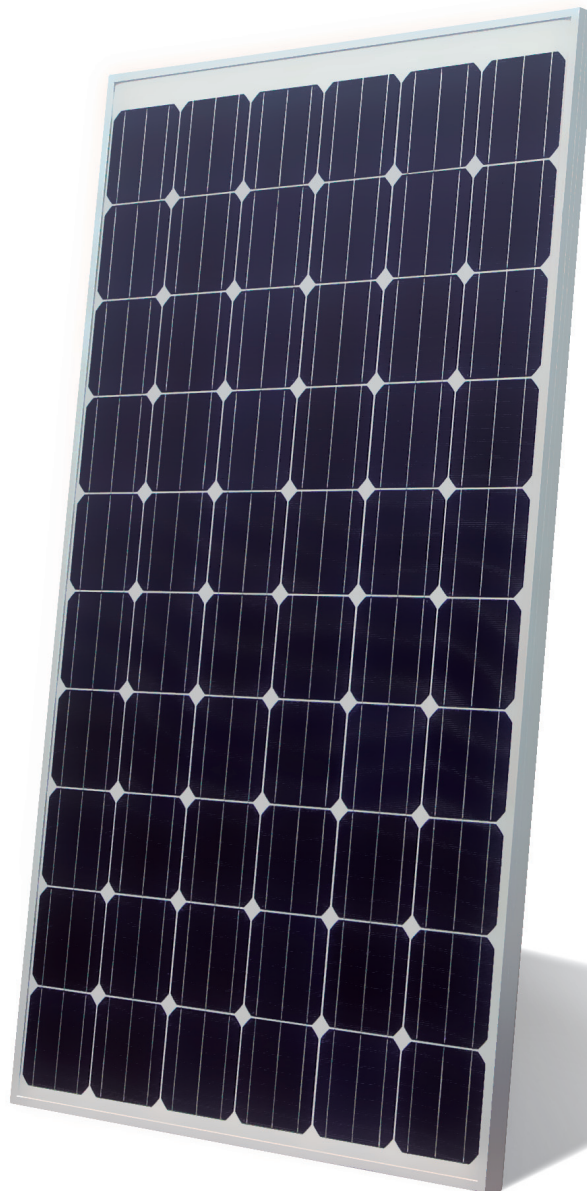
Category: Monocrystalline textured
Cell Qty: 60 cells

MODULE SIZE

Length x Width: 1.68 m x 0.99 m
Area: 1.66 m²
Thickness: 40 mm
Weight: 24 Kg

OUTPUT CLASSES

HEE215M A68:	250 Wp
HEE215M A67:	245 Wp
HEE215M A66:	240 Wp
HEE215M A65:	235 Wp
HEE215M A64:	230 Wp
HEE215M A63:	225 Wp



ARCHITECTURAL INTEGRATION DESIGNS AVAILABLE:



- White Backsheet
- Black Frame

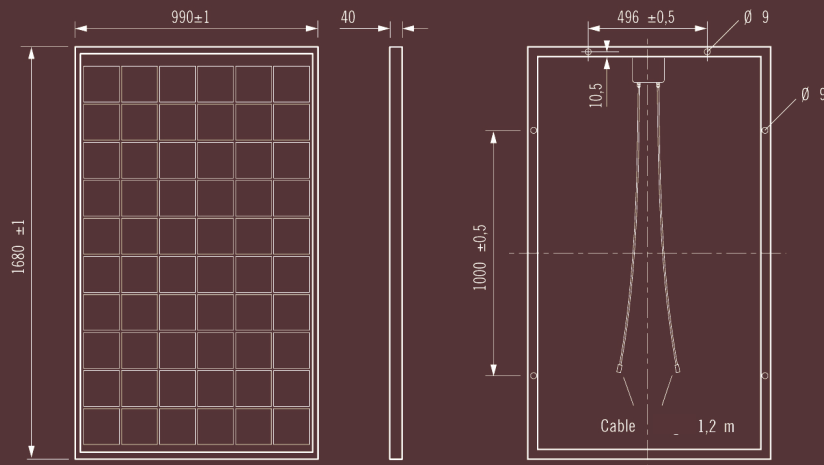


- Black Backsheet
- Black Frame



HEE215M

SOLAR MODULE



*All units are in mm, unless otherwise noted

ARTICLE REF	HEE215MA68	HEE215MA67	HEE215MA66	HEE215MA65	HEE215MA64	HEE215MA63
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OUTPUT CLASSES	250	245	240	235	230	225
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ELECTRICAL DATA STC

Rated output PMPP (W)	250	245	240	235	230	225
MPP voltage (V)	30.30	30.03	30.00	29.75	29.50	29.20
MPP current (A)	8.22	8.18	8.00	7.90	7.80	7.70
Open-circuit voltage (V)	37.40	37.26	36.80	36.70	36.60	36.60
Short-circuit current (A)	8.72	8.71	8.70	8.69	8.60	8.45

STC - Standard Test Conditions: Irradiation 1000 W/m² - Air mass AM 1.5 - Cell temperature 25 °C

ELECTRICAL DATA NOCT

Rated output PMPP (W)	183	179	175	171	168	164
MPP voltage (V)	27.30	27.10	27.00	26.80	26.60	26.40
MPP current (A)	6.70	6.60	6.50	6.40	6.30	6.20
Open-circuit voltage (V)	34.50	34.40	34.30	34.20	34.10	34.10
Short-circuit current (A)	7.25	7.20	7.15	7.05	6.98	6.85

The NOCT values are typical values. NOCT: Nominal Operating Cell Temperature (45 °C)

Typical cell temperature with: Irradiation 800 W/m² - Ambient temperature 20 °C - Wind speed 1 m/s

OTHER ELECTRICAL PARAMETERS

System voltage (V)	600	Temperature coefficient PMPP (%/°C)	-0.44
Temperature coefficient ISC (%/°C)	0.07	Temperature coefficient UOC (%/°C)	-0.34

LIMIT VALUES

Permissible module temperature: -40 °C + 80 °C

DESIGN

Cells	60 monocrystalline solar cells, 3 Bus Bars
Cell dimensions	156 mm x 156 mm
Frontside	4 mm solar glass, highly transparent and anti-reflective
Encapsulation	EVA - Solar Cells - EVA
Backside	Multilayer sheet
Frame	Anodized aluminium
Connection	2 x 1.2 m solar cables with Multicontact connectors
Bypass diodes	3 pieces

QUALIFICATIONS AND CERTIFICATES	IEC 61215, IEC 61730, UL1703, ULC/ORD-C1703-01
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WARRANTIES	10 years for manufacturing faults, 90% of nominal output up to 10 years, and 80% of nominal output up to 25 years
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OUTPUT TOLERANCE	+/- 3 Wp
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