



# HELIENE

PHOTOVOLTAIC  
MODULES

HELIOS ENERGY EUROPE S.L.

Pza. del Xarol, 13-15  
Pol. Ind. Les Guixeres  
08915 BADALONA (Barcelona)  
Tel. 93 313 61 62  
info@heliosenergy.es  
www.heliosenergy.es

## HELIOS ENERGY EUROPE

### SOLAR MODULE HEE215M

The new HELIENE HEE215M solar modules series assemble last generation monocrystalline solar cells designed and manufactured in Germany by Sunways, as well as other sector's top manufacturers. Their absorber surface and the innovative 3 BUS BARS provide an aesthetic good look and higher power output. Different power rates class allow designers to adjust power needs in every project with the highest flexibility.

The modules manufactured by Helios Energy Europe, HELIENE®, only incorporate integrated high efficiency solar cells making possible to obtain a solar maximum yield. A 4 mm solar transparent glass and a 40 mm aluminium frame guarantee the best resistance and reliability. High power modules with maximum efficiency and differential positive tolerance allow to obtain the highest energy production in any project.



#### PRODUCT DESCRIPTION

**Category:** monocrystalline

#### MODULE SIZE

**Length x width:** 1680mm. X 990 mm.  
**Area:** 1,66 m<sup>2</sup>.  
**Thickness:** 40 mm.  
**Weight:** 24 Kg.

#### OUTPUT CLASSES

**SM 215M:** 250 Wp.  
**SM 215M:** 245 Wp.  
**SM 215M:** 240 Wp.  
**SM 215M:** 235 Wp.  
**SM 215M:** 230 Wp.  
**SM 215M:** 225 Wp.  
**SM 215M:** 220 Wp.

#### INTEGRATION VARIANTS:

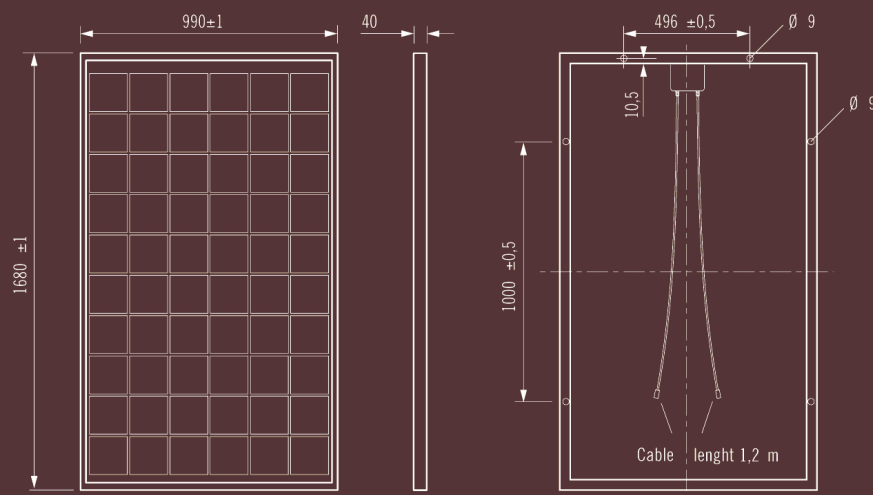


White Tedlar



Black Tedlar

# SOLAR MODULE HEE215M



ARTICLE REF.	HEE215MA68	HEE215MA67	HEE215MA66	HEE215MA65	HEE215MA64	HEE215MA63
--------------	------------	------------	------------	------------	------------	------------

<b>OUTPUT CLASSES</b>	250	245	240	235	230	225
-----------------------	-----	-----	-----	-----	-----	-----

#### 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: Air mass AM 1.5 - irradiation 1000 W/m<sup>2</sup> - 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)	6,7	6,6	6,50	6,40	6,30	6,20
Open-circuit voltage (V)	34,5	34,4	34,30	34,20	34,10	34,10
Short-circuit current (A)	7,25	7,2	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/m<sup>2</sup> - Ambient temperature 20 °C - Wind speed 1 m/s

#### OTHER ELECTRICAL PARAMETERS

System voltage (V)	1000	Temperature coefficient PMPP (%/ °C)	-0,44
Temperature coefficient ISC (%/ °C)	0,07	Temperature coefficient UOC (%/ °C)	-0,34

#### LIMIT VALUES

Permissible module temperature -40 to +80 °C

#### DESIGN

Cells	60 Sunways Solar Cells, multicrystalline, 3 bus bars
Cell dimensions	156 x 156 mm, pseudo-square
Frontside	4 mm solar glass, highly transparent and anti-reflective
Encapsulation	EVA - Solar Cells - EVA
Backside	Polyester multilayer sheet
Frame	Anodised aluminium standard module / Solrif frame integration variant.
Connection	2 x 1,2m solar cables with multicontact connectors
Bypass diodes	3 pieces

<b>QUALIFICATIONS AND CERTIFICATES</b>	Protection class II, IEC 61215 in process, CE
--	---

<b>WARRANTIES</b>	10 years for manufacturing faults and 80 % of the nominal output at 25 years
-------------------	--

<b>OUTPUT TOLERANCE</b>	+/- 3%
-------------------------	--------