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# **EnergyPal**

## Solar Panel Guide Specification Data Sheet

Heliene HEE215M Innovative HEE215MA70

Also available on the web at EnergyPal.com/heliene-solar-panels/hee215ma70



# MONOCRYSTALLINE HEE215M Innovative 270 Watt

The solar module HEE210U is manufactured with high efficiency cells made by industry leading suppliers to guarantee a long lasting reliable power output. Robots allocate the 3 *Bus Bar* polycrystalline cells equally and interconnect the ribbon efficiently. The lightly textured glass of great optical transmission and diffused light collection covers the homogenous colored cells to create an esthetic module layout of high performance and quality design. The building in-roof solar system allows a correct BIPV installation which ensures a waterproof sealing for roof structures as well as mechanical seals and thermal resistance, needed to preserve the performance of the building envelope.





#### HIGH POWER OUTPUT

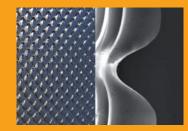
- 240-260 Wp. Wide range of output
- Homogeneous esthetics
- Maximum reliability

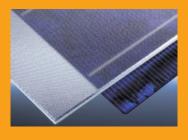
#### DIMENSIONS

Length x Width: 1724 x 1015 mm Thickness: 25mm Weight: 19 kg

#### BIPV

Built in roof mounting systems providing maximum sealing.





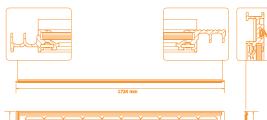
#### **PYRAMIDAL GLASS**

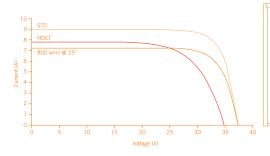
The pyramidal structure of solar glass ensures high production at low radiation conditions and reduces the reflection of incident light. At vertical installation the annual energy output is increased by 10%.

#### LIGHTLY TEXTURED GLASS

We use the lightly textured glass as our standard, which provides better properties on heat dissipation and reflection loss in comparison to plain usual solar glass.

# SOLAR MODULE **HEE215M** Innovative 270 Watt







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1015.5 m	1015 5 m
-	

270	265	260		
		200	255	250
STC (Standard Test Conditions)				
270	265	260	255	250
31.25	31.05	30.84	30.65	30.3
8.64	8.55	8.46	8.32	8.22
38.15	37.9	37.73	37.5	37.4
9.05	8.97	8.9	8.86	8.72
STC: Irradiation 1000W/m <sup>2</sup> – Air mass AM 1.5 – Cell temperature 25°C				
	31.25 8.64 38.15 9.05	31.25 31.05   8.64 8.55   38.15 37.9   9.05 8.97	31.25   31.05   30.84     8.64   8.55   8.46     38.15   37.9   37.73     9.05   8.97   8.9	31.25   31.05   30.84   30.65     8.64   8.55   8.46   8.32     38.15   37.9   37.73   37.5     9.05   8.97   8.9   8.86

#### NOCT (Normal Operation Cell Temperature)

Nominal power P <sub>MPP</sub> (W)	197	193	190	186	183
Nominal voltage U <sub>MPP</sub> (V)	28.23	27.95	27.77	27.6	27.3
Nominal current I <sub>MPP</sub> (A)	6.97	6.90	6.84	6.74	6.7
Open circuit voltage V <sub>oc</sub> (V)	35.4	35.1	34.9	34.6	34.5
Short circuit current I <sub>sc</sub> (A)	7.37	7.35	7.32	7.28	7.25

NOCT: Cell temperature (= 45°C) – Irradiation 800 W/m<sup>2</sup> – Wind speed 1m/s – Temperature 20°C

#### ELECTRICAL AND THERMAL CHARACTERISTICS

System tension (V): 1000	<b>Temp. Coeff. V</b> <sub>oc</sub> (%/9C) -0.34	Temp. Coeff. P <sub>MPP</sub> (%/ <sup>o</sup> C) -0.43
Reverse current (A): 12	Temp. Coeff. I <sub>sc</sub> (%/°C) +0.07	Operating Temp40 till +85 °C

#### MECHANICAL FEATURES

Cells	60 in series, 3BB, 6''
Glass	Lightly textured, high transparency, anti-reflective, hardened
Back sheet	Multi-layer lamination PVF and PET
Frame	Anodized aluminium in standard module / BIPV assembling
Connection	2x1.1m of cable, MC4 type connectors
Junction box	Protection index IP65, 3 diodes by-pass

MEASURING TOLERANCES Pmax: +/-3%

Warranty: 12 years for manufacturing defects and 80% nominal power at 25 years

Any additional information can be supplied under request



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Our packaging decomposition is biological and totally degradable.

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#### Specifications are subject to change without notice. HELIOS ENERGY EUROPE S.L. (HELIENE) 05/2014

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