Data sheet MAXIS

MULTICRYSTALLINE SILICON SOLAR CELL

The Maxis brand name already tells it all: it results from the combination of the high efficiency that the cells offer (MAX) and the technique of Isotropic texturization (IS) that Photovoltech uses in production.
The multicrystalline silicon solar cell technology of Photovoltech is characterized by several advanced high efficiency features. These include: isotropic texturing, high-quality emitter, effective bulk passivation and optimized front contacts with narrow fingers and busbars. The Photovoltech cells are particularly suited for applications where uniform appearance, maximum efficiency and high current density of PV modules play a crucial role.

MAXIS Product Features

- Increased efficiency up to 16% and more due to optimal passivation in combination with highly effective back surface field
- Uniform surface texture offering a superior visual aspect similar to monocrystalline cells
- Outstanding stability and reliability thanks to an adapted silicon nitride anti-reflection coating and an optimized metal contacting guaranteeing extended product lifetime
- 100% incoming inspection on high quality wafers
- Solar cells made in Belgium, Europe
- Advanced multicrystalline silicon solar cell technology developed in collaboration with IMEC
- 100% inline inspection
- Classification into narrow classes according to very strict specifications
- ISO 9001: 2008 certificate
- Regular calibration of cells by Fraunhofer ISE

Photovoltech was founded in Tienen, Belgium in 2001. The first solar cells were produced in 2003. The company has the backing of its major shareholders: Total and GDF SUEZ (through Electrabel and Soltech) and it is a spin-off of IMEC - a world-leading independent microelectronics research center with a proven reputation in photovoltaic research. IMEC supports our own R&D team with their research and state-of-the-art technology.
Thanks to this structure, Photovoltech has established a stable and reliable character. This (and the strong growth outlook for solar energy in Europe) means Photovoltech has everything to realize its ambition: to become a top player in the global market, working for the most renown module manufacturers of the world.

kiwa
ISO 9001 QUALITY

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Photovoltech
INNOVATIVE PHOTOVOLTAIC TECHNOLOGY

www.photovoltech.com

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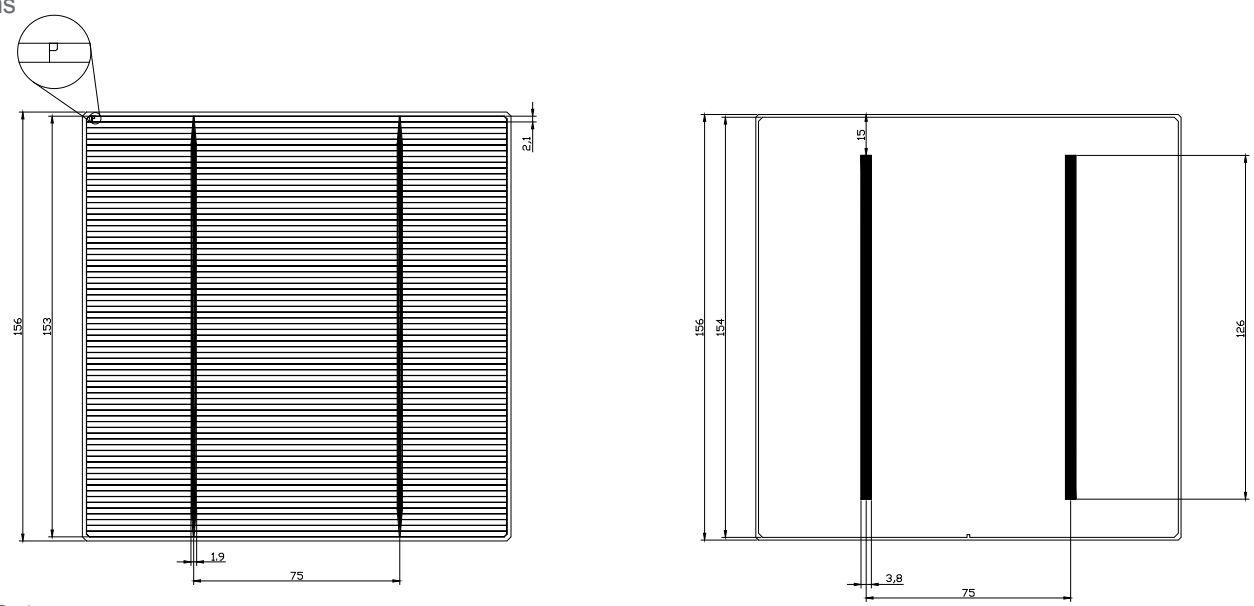
1. Cell Description

Multicrystalline silicon solar cell STD156-AC	Size	156 mm x 156 mm ± 0,5 mm
	Thickness	200 µm ± 40 µm / 180 µm ± 30 µm
	Front Contact	2 silver busbars, distance 75.0 mm, 1.9 mm wide
	Back Contact	2 silver busbars, distance 75.0 mm, length 126.0 mm, 3.8 mm wide

2. Dimensions



3. Electrical Data

Cell Class	P_{mpp}* (W)	n_{mpp}* (%)	V_{mpp}** (mV)	I_{mpp}** (A)	V_{oc}** (mV)	I_{sc}** (A)
STD156-4060	4.06	16.7	517	7.85	622	8.38
STD156-3980	3.98	16.4	516	7.72	621	8.26
STD156-3900	3.90	16.0	514	7.59	620	8.18
STD156-3820	3.82	15.7	509	7.51	616	8.10
STD156-3740	3.74	15.4	502	7.45	610	8.01
STD156-3660	3.66	15.0	496	7.39	606	7.93
STD156-3580	3.58	14.7	493	7.27	603	7.85
STD156-3500	3.50	14.4	492	7.12	602	7.72

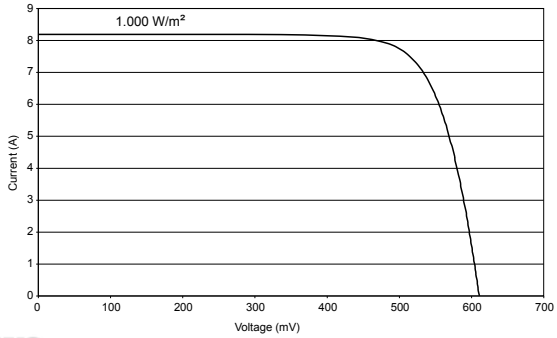
* Specified is the mid-value for each class, the class width is always 0.08 W in power or 0.32 % in efficiency.
** These values are typical class averages measured on previously produced solar cells.

The cells are measured at intensity 1000 W/m², spectrum AM1.5G, temperature 25°C. The error in P_{mpp} is < 2.5 %.

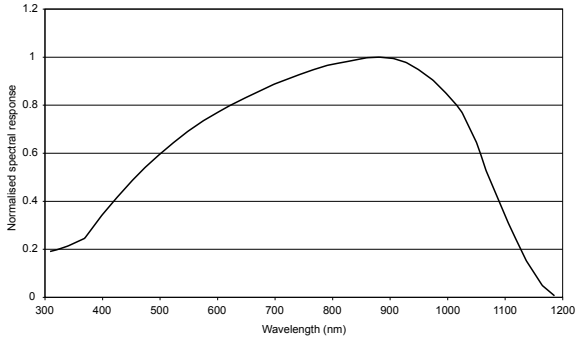
Temperature coefficients: $(dP_{mpp}/dT)/P_{mpp}$ = -0.4 %/°C dV_{OC}/dT = -2 mV/°C dI_{sc}/dT = +5.5 mA/°C

4. Electrical Characteristics

IV-curve



Spectral Response



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