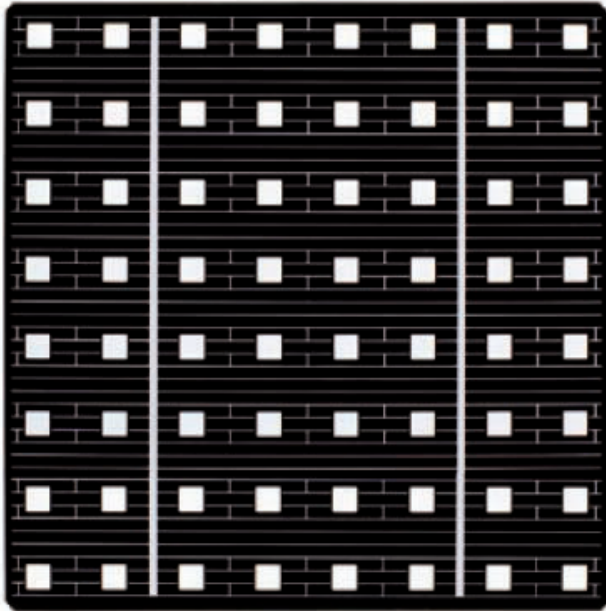


# SOLAR CELLS

## Sunways Solar Cells Mono 125 (AH81-E)



The new transparent Sunways Solar Cell is a square high performance solar cell based on mono- and multicrystalline silicon. Its new manufacturing technique using laser technology is a technical innovation. With the new manufacturing technique for the transparent Sunways Solar Cell, it has been possible to achieve efficiencies of up to 14,4 percent with 10 percent transmittance.

### Product description

Category:	monocrystalline, transparent
Dimensions:	square 125 +/-0.5 mm x 125 +/-0.5 mm Diagonal 200 +/-2.5 mm
Area:	140,62 cm <sup>2</sup>
Cell depth:	200 +/-40 µm
Temperature coefficients:	Power -19 mW/K Open circuit voltage -2.3 mV/K Short circuit current +1.1 mA/K

### Quality

- 100% camera-based, visual final check for an even appearance of the solar cells in the module
- 100% electric measurement with measuring equipment, calibrated according to ISO 9001:2008

### Electrical key data

Current class acc. to I (V <sub>FIX</sub> )	Efficiency rate [%]	Power at V <sub>FIX</sub> [W]	I (V <sub>FIX</sub> = 490 mV) [A]	Fill factor [%]	V <sub>OC</sub> [mV]	I <sub>SC</sub> [A]
AH814600E	14,4	2,25	4,6	76,02	609	4,85
AH814500E	14,1	2,21	4,5	75,38	607	4,82
AH814400E	13,8	2,16	4,4	74,56	606	4,80
AH814300E	13,5	2,11	4,3	73,35	605	4,78
AH814200E	13,2	2,06	4,2	71,63	604	4,78
AH814100E	12,9	2,01	4,1	70,13	603	4,77

All figures are averages (Fill factor, V<sub>OC</sub> and I<sub>SC</sub> are preliminary), all figures +/- 3 %. Cell class measurement at V<sub>FIX</sub> = 490 mV.

### Information and Sales

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Photovoltaic Technology

## Solar Cells

### Recommendations for subsequent processing

Monocrystalline Sunways Solar Cell can be processed using tin-coated copper bands (2 – 2.5 mm x 0.15 mm), which are coated with 10 - 15  $\mu\text{m}$  Sn (62 %), Pb (36 %) and Ag (2%). We recommend the use of no clean flux. The solar cells should be pre-heated to 80 - 150°C and soldered at a temperature of 250 - 350°C. Contact is provided by two continuous busbars on the front of the solar cell measuring 1.54 +/-0.15 mm and on the rear side with a width of 3.5 +/-0.5 mm.

### Production and packaging

Each Sunways Solar Cell is subjected to mechanical and optical quality control before the individual cells are divided into narrowly defined current classes, and classified according to  $I(V_{\text{FIX}} = 490 \text{ mV})$ . The solar cells are sealed in foil packaging of 50 cells each. The foam packaging can hold up to 2 x 12 packaging units (= 1200 solar cells) and offers optimal protection during transportation.

### Metallization drawing

