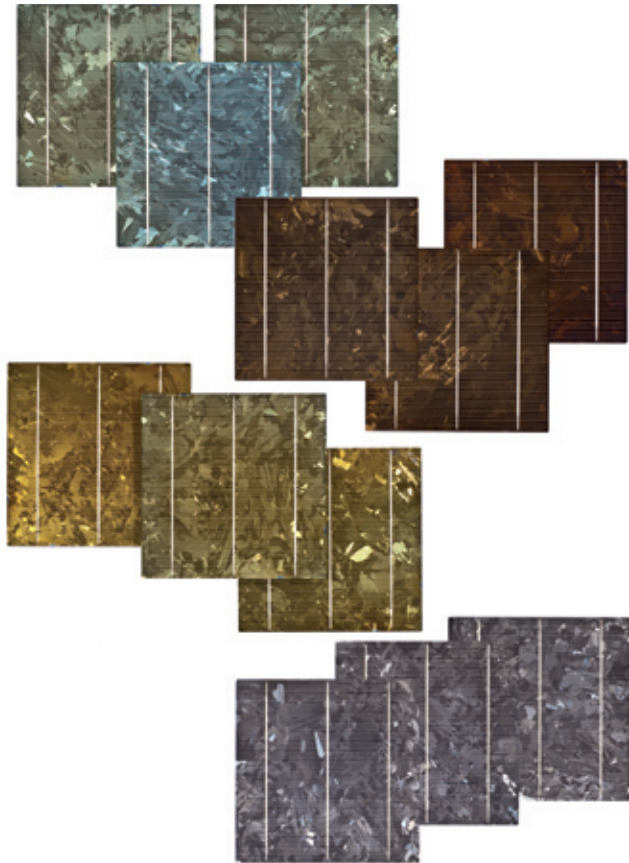


SOLAR CELLS

Sunways Solar Cells



Aesthetics and function

Coloured design cells from Sunways combine power generation and aesthetics. The cells are available in emerald, gold, bronze and silver and therefore enable unique, customised PV system designs. The application options for building-integrated photovoltaics appear limitless. In the coloured design cells architecture and photovoltaics merge to form a multi-functional solution.

Fresh design

Sunways design cells will turn your façade into a colourful building component. The bronze and silver colours offer impressive colour homogeneity. Due to their slight colour gradient, design cells in gold and emerald create a fresh appearance. The three-busbar technology optimises the current pick-up and contributes to optimum current yield of your system.

Product description

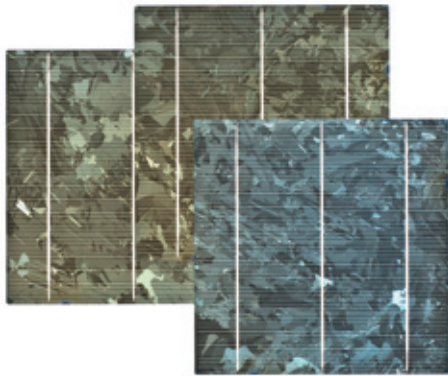
| | |
|---------------------------|---|
| Category: | Multicrystalline, 3-busbar |
| Format: | 156 ^{+/-0.5} mm x 156 ^{+/-0.5} mm |
| Cell thickness: | 200 ^{+/-40} µm |
| Temperature coefficients: | Output -0.43 %/K, Open-circuit voltage -0,36 %/K Short-circuit current 0,06 %/K |



Information and Sales

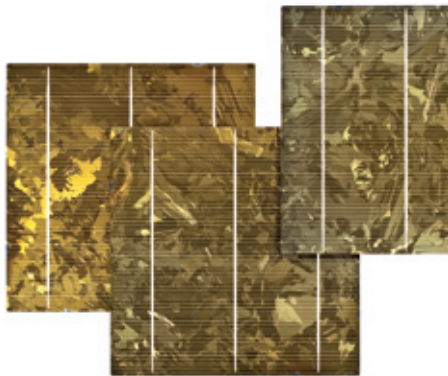
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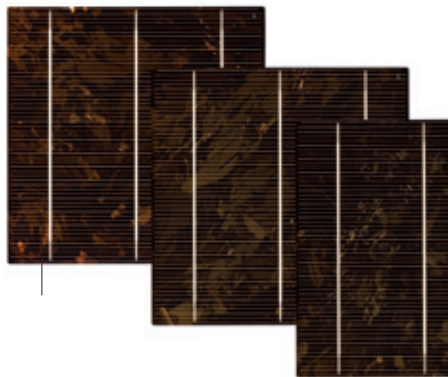
Solar Cells – Emerald

| Current class as per $I(V_{FIX})$ | Efficiency [%] | Output at V_{FIX} [Wp] | $I(V_{FIX} = 500 \text{ mV})$ [A] | Fill factor [%] | V_{OC} [mV] | I_{SC} [A] |
|-----------------------------------|----------------|--------------------------|-----------------------------------|-----------------|---------------|--------------|
| CH 50 6305 | 12,9 | 3,15 | 6,30 | 76,8 | 605 | 6,90 |
| CH 50 6505 | 13,4 | 3,25 | 6,50 | 77,2 | 606 | 6,95 |
| CH 50 6605 | 13,6 | 3,30 | 6,60 | 77,6 | 607 | 7,02 |
| CH 50 6705 | 13,8 | 3,35 | 6,70 | 77,6 | 608 | 7,11 |
| CH 50 6805 | 14,0 | 3,40 | 6,80 | 77,6 | 609 | 7,20 |
| CH 50 6905 | 14,2 | 3,45 | 6,90 | 77,7 | 609 | 7,30 |
| CH 50 7005 | 14,4 | 3,50 | 7,00 | 77,7 | 611 | 7,38 |
| CH 50 7105 | 14,6 | 3,55 | 7,10 | 77,7 | 613 | 7,47 |



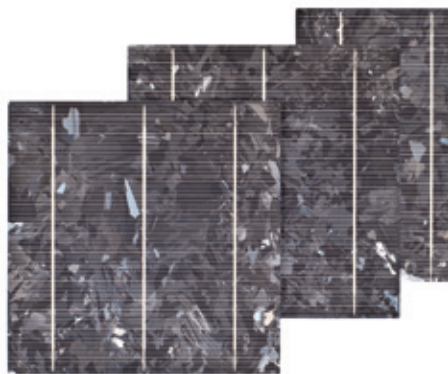
Solar Cells – Gold

| Current class as per $I(V_{FIX})$ | Efficiency [%] | Output at V_{FIX} [Wp] | $I(V_{FIX} = 500 \text{ mV})$ [A] | Fill factor [%] | V_{OC} [mV] | I_{SC} [A] |
|-----------------------------------|----------------|--------------------------|-----------------------------------|-----------------|---------------|--------------|
| CH 50 5904 | 12,1 | 2,95 | 5,90 | 72,8 | 605 | 6,60 |
| CH 50 6104 | 12,5 | 3,05 | 6,10 | 75,5 | 605 | 6,67 |
| CH 50 6204 | 12,7 | 3,10 | 6,20 | 76,1 | 607 | 6,72 |
| CH 50 6304 | 12,9 | 3,15 | 6,30 | 77,0 | 606 | 6,75 |
| CH 50 6404 | 13,1 | 3,20 | 6,40 | 77,4 | 607 | 6,82 |
| CH 50 6504 | 13,4 | 3,25 | 6,50 | 77,5 | 608 | 6,91 |
| CH 50 6604 | 13,6 | 3,30 | 6,60 | 77,6 | 608 | 7,00 |
| CH 50 6704 | 13,8 | 3,35 | 6,70 | 77,6 | 610 | 7,09 |



Solar Cells – Bronze

| Current class as per $I(V_{FIX})$ | Efficiency [%] | Output at V_{FIX} [Wp] | $I(V_{FIX} = 500 \text{ mV})$ [A] | Fill factor [%] | V_{OC} [mV] | I_{SC} [A] |
|-----------------------------------|----------------|--------------------------|-----------------------------------|-----------------|---------------|--------------|
| CH 50 5803 | 11,9 | 2,90 | 5,80 | 74,6 | 599 | 6,65 |
| CH 50 6103 | 12,5 | 3,05 | 6,10 | 77,1 | 602 | 6,59 |
| CH 50 6203 | 12,7 | 3,10 | 6,20 | 77,5 | 603 | 6,65 |
| CH 50 6303 | 12,9 | 3,15 | 6,30 | 77,6 | 603 | 6,74 |
| CH 50 6403 | 13,1 | 3,20 | 6,40 | 77,7 | 605 | 6,81 |
| CH 50 6503 | 13,4 | 3,25 | 6,50 | 77,7 | 605 | 6,91 |
| CH 50 6603 | 13,6 | 3,30 | 6,60 | 77,7 | 607 | 7,00 |
| CH 50 6703 | 13,8 | 3,35 | 6,70 | 78,0 | 609 | 7,04 |



Solar Cells – Silver

| Current class as per $I(V_{FIX})$ | Efficiency [%] | Output at V_{FIX} ¹⁾ [Wp] | $I(V_{FIX} = 500 \text{ mV})$ [A] | Fill factor [%] | V_{OC} [mV] | I_{SC} [A] |
|-----------------------------------|----------------|--|-----------------------------------|-----------------|---------------|--------------|
| CH 50 4801 | 9,9 | 2,40 | 4,80 | 74,7 | 594 | 5,66 |
| CH 50 5101 | 10,5 | 2,55 | 5,10 | 76,0 | 595 | 5,72 |
| CH 50 5201 | 10,7 | 2,60 | 5,20 | 76,5 | 596 | 5,77 |
| CH 50 5301 | 10,9 | 2,65 | 5,30 | 76,9 | 597 | 5,81 |
| CH 50 5401 | 11,1 | 2,70 | 5,40 | 77,2 | 598 | 5,86 |
| CH 50 5501 | 11,3 | 2,75 | 5,50 | 77,3 | 600 | 5,92 |
| CH 50 5601 | 11,5 | 2,80 | 5,60 | 77,4 | 602 | 6,00 |
| CH 50 5701 | 11,7 | 2,85 | 5,70 | 77,4 | 604 | 6,08 |

1) An embedding gain is expected for this colour

Solar Cells

Notes for ordering and delivery

Coloured design cells are custom-made for each order or project. In this case, any order includes all current classes. The minimum order quantity is 10,000 units. Design cells in other formats and materials, for example 4 or 5 inch and monocrystalline silicon, are available on request.

Recommendations for further processing

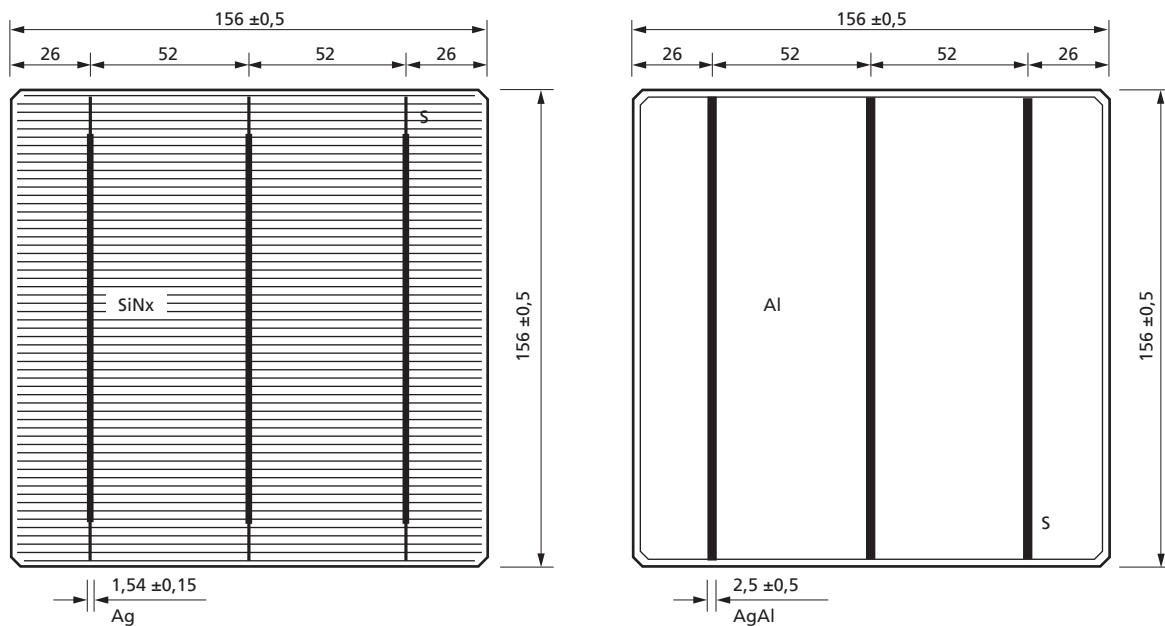
The multicrystalline Sunways Solar Cell can be processed further with tin-plated copper strips (2 - 2.5 mm x 0.18 mm). These are coated with 10 - 15 μm Sn (62%), Pb (36%) and Ag (2%). We recommend the use of no clean flux. The solar cells should be preheated to 80 - 150°C and soldered at a temperature of 250 - 350°C.

Contact is made via the three continuous busbars on the front of the solar cells with 1.54 ± 0.15 mm and with 2.5 ± 0.5 mm on the back.

Production and Packing

Each Sunways Solar Cell runs through a mechanical and visual quality check. Then the individual solar cells are classified in closely defined current classes. The classification is carried out according to I ($V_{\text{FIX}} = 500 \text{ mV}$). The solar cells are sealed in foil packages of 100 pieces. The foam packing material can hold 2 x 4 packing units (= 800 solar cells) and offers optimum protection for transport.

Metallization drawing



Information and Sales

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