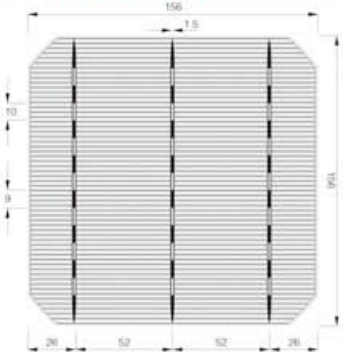
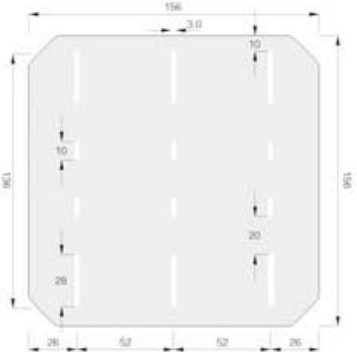
3BB MONOCRYSTALLINE SILICON SOLAR CELLS

Front and back contact design

MGSC-M6HC-3BB





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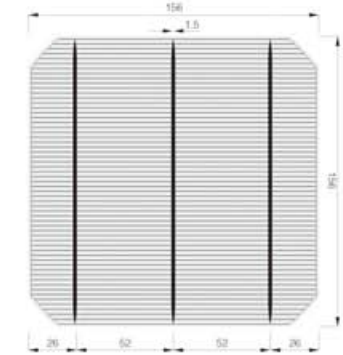

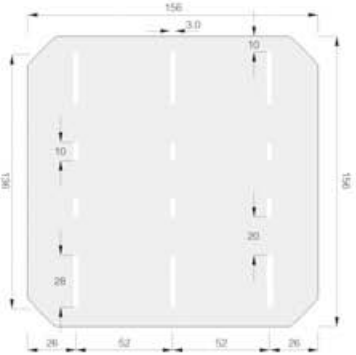

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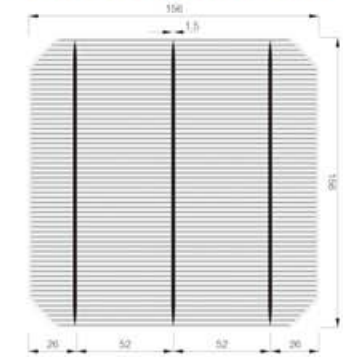
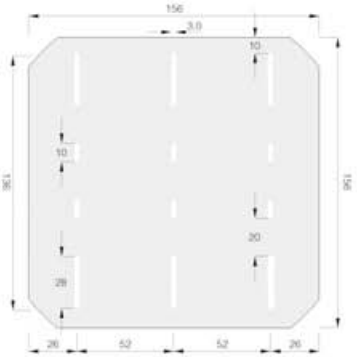
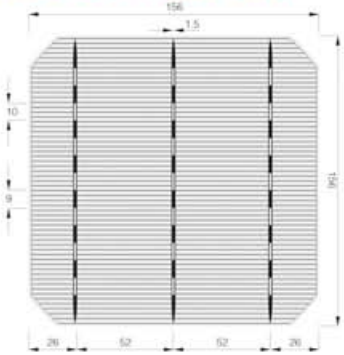
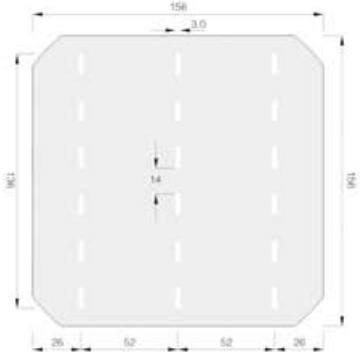




Front and back contact design

MGSC-M6HB-3BB





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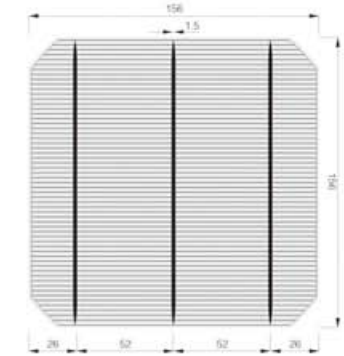

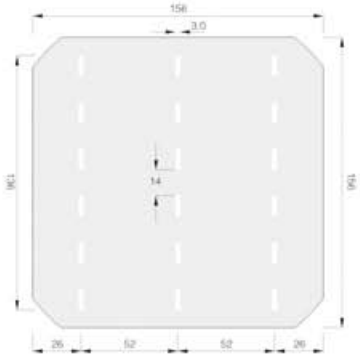

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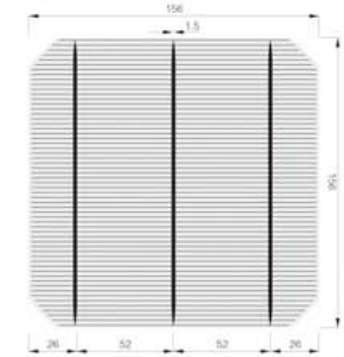
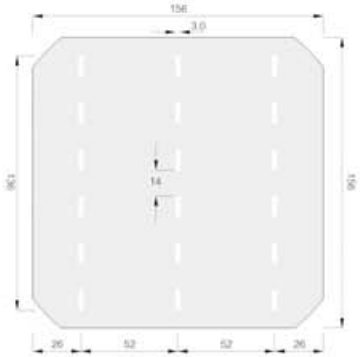




Design and mechanical data

Category:	monocrystalline silicon solar cell
Dimension:	pseudo-square 156mm × 156mm ± 0.5mm
Diagonal:	200 mm ± 1.0mm
Thickness:	200 µm ± 20µm
Front (-):	blue color SiNx anti-reflection coating 3×1.5mm silver busbars
Rear (+):	full-surface aluminium back- surface field 3x3.0mm silver/aluminium soldering pads

Temperature coefficients

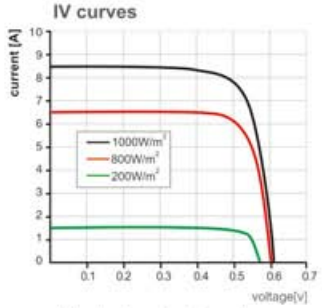
Power:	−0.48%/K
Open circuit voltage:	−0.36%/K
Short circuit current:	+0.02%/K

Electrical data

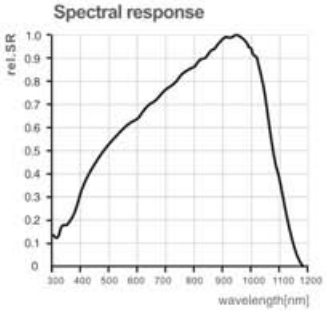
Power class acc. to $I(V_{FIX})$	Efficiency [%]	Power at V_{FIX} [W]	I (V_{FIX}=515mV) [A]	Fill factor [%]	V_{oc} [mV]	I_{sc} [A]
MGSC_4550	19.0	4,55	8,9	78,8	634	9,10
MGSC_4500	18,8	4,50	8,8	78,6	632	9,05
MGSC_4450	18,6	4,45	8,7	78,4	630	9,00
MGSC_4400	18,4	4,40	8,6	78,2	628	8,95
MGSC_4350	18,2	4,35	8,5	78,0	626	8,90
MGSC_4300	18,0	4,30	8,4	77,8	624	8,85
MGSC_4250	17,8	4,25	8,3	77,6	622	8,80

All electrical data measured under standard test conditions: 1000W/m². AM1.5; 25° C; tolerance P: ± 1.5 % rel.
Current class measurement at V_{FIX} = 515 mV. Reverse bias and shunt resistance criteria: R_{sh} > 15 Ohm, I_{sh2} < 1.5A at −12V);

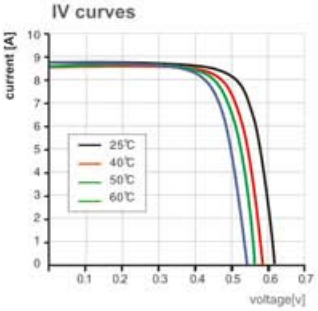
Electrical parameters



IV behavior at various degrees of irradiation intensity



Spectral sensitivity curve



IV behaviour for various temperatures

All data were derived under standard test conditions. Standard test conditions: light spectrum AM = 1.5; irradiation intensity E = 1000W/m²;
Cell temperature T= 25°C.