

## Solar module with MAIN cells



ASE-165-GT-FT/MC

**Module type key:**

G = Glass  
 T = Tedlar  
 F = Framed  
 T = Thermoplastic cell embedding  
 MC = MAIN cell

SCHOTT Solar produces high-performance modules in energy output classes 50 Wp and higher. High-quality crystalline solar cells ensure maximum energy yield. These modules have been awarded top ratings in a number of independent studies and surveys. Every module type is designed – from frame to connection box – for cost-effective system integration.

- Narrow output tolerance
- Quick and easy installation
- System voltage up to 860 V
- One step ahead



Tyco-Connectors

**Narrow output tolerance:** A very narrow module output selection permits serial connection with low connection losses.

**Quick and easy installation:** The anodized aluminum frame and the preinstalled cable with Tyco-Connectors ensure quick and easy installation.

**System voltage up to 860 V:** The Safety Class II module is configured for system voltage of up to 860 V. It is suitable for grid-connected systems.

**One step ahead:** The special SCHOTT Solar cell technology using multicrystalline wafers ensures optimum output and efficiency.

# Technical Data

## Electrical data

The electrical data apply to standard test conditions (STC):  
Irradiance at the module level of 1.000 W/m<sup>2</sup> with spectrum AM 1.5 and a cell temperature of 25 °C.



Nominal power	P <sub>nom</sub>	160 Wp	165 Wp	170 Wp
Voltage at maximum-power point	U <sub>mpp</sub>	35.9 V	36.0 V	36.0 V
Current at maximum-power point	I <sub>mpp</sub>	4.46 A	4.58 A	4.71 A
Open-circuit voltage	U <sub>oc</sub>	43.5 V	43.8 V	44.0 V
Short-circuit current	I <sub>sc</sub>	5.12 A	5.18 A	5.25 A

The rated power may vary by ± 4% and all other electrical parameters by ± 10%.

## Dimensions and weights



Dimensions (tolerances ± 3 mm)	1620 mm x 810 mm
Thickness with frame (tolerances ± 1 mm)	50 mm
Weight	approx. 15.5 kg

## Characteristic data



Solar cells per module	72
Type of solar cell	MAIN solar cell (multi-crystalline, 12.5 x 12.5 cm <sup>2</sup> , full-square)
Connection	Connection box with bypass diodes, 4 mm <sup>2</sup> -solar cable with Tyco-Connectors, length of pole 1 m each

## Temperature coefficients



Power	T <sub>K</sub> (P <sub>n</sub> )	- 0.47 % / °C
Open-circuit voltage	T <sub>K</sub> (U <sub>oc</sub> )	- 0.38 % / °C
Short-circuit current	T <sub>K</sub> (I <sub>sc</sub> )	+ 0.10 % / °C

## Limits



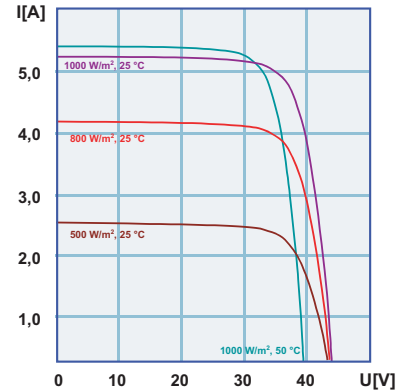
Max. system voltage	860 V <sub>DC</sub>
Operating module temperature	-40... +90 °C
Max. load	5400 N/m <sup>2</sup> or 551 kg/m <sup>2</sup> (IEC 61215)

The right is reserved to make technical modifications.

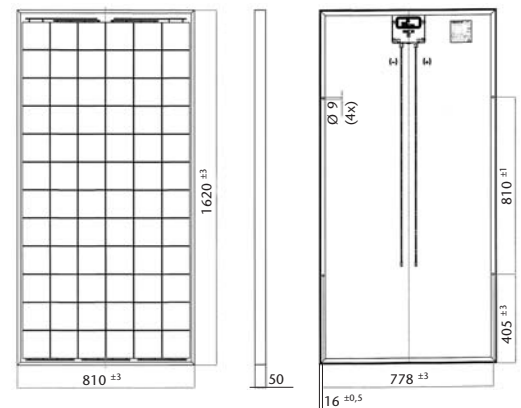
## Qualifications



The ASE-165-GT-FT/MC complies with the requirements of IEC 61215, Electrical Protection Class II and the EWG guideline 89/392 (CE).



Current/voltage characteristics with dependence on irradiance and module-temperature.



MANAGEMENTSYSTEM  
Certified by DQS according to  
DIN EN ISO 9001:2000 · Reg.-No. 2184  
DIN EN ISO 14001:1996 · Reg.-No. 2184

## SCHOTT Solar GmbH

Carl-Zeiss-Strasse 4  
63755 Alzenau

Germany

Phone.: +49 (0) 60 23 / 91 - 05

Fax: +49 (0) 60 23 / 91 - 17 00

E-Mail: solar.sales@schott.com

www.schott.com/solar

**SCHOTT**  
solar