

## The World's Single Most Powerful Photovoltaic Module is also the Most Reliable.

Utilized in a wide range of applications, the ASE-300-DGF/50 is the world's premiere solar power module. Extremely powerful and reliable; built to the highest standards, the module delivers maximum performance in large systems that require higher voltages, including the most challenging conditions of military, utility and commercial installations. For superior performance, quality and peace of mind, the ASE-300-DGF/50 is renowned as the first choice among those who recognize that not all solar modules are created equal.

### Faster Installation

- Large surface area requires fewer interconnects and structural members
- All module-to-module wiring is built right into the module
- Multi-Contact Plug-n-Play connectors mean source-circuit wiring takes just minutes
- Unique mounting systems available for residential and commercial roofs eliminate need for traditional mounting rails, heavy ballast, and roof penetrations

### More Reliability

- Bypass diode protection for every 18 solar cells in series, thus minimizing power loss, and mitigating overheating/safety problems
- Advanced encapsulation system ensures steady long-term module performance by eliminating degradation associated with traditional EVA-encapsulated modules
- A weather barrier system on *both* sides of the module protects against tears, perforations, fire, electrical conductivity, delamination and moisture
- Patented no-lead, high-reliability soldering system guarantees long life and ensures against environmental harm should the module break or be discarded

### Higher Quality

- Each of the module's 216 individual semi-crystalline silicon cells is inspected and power matched to ensure consistent performance between modules
- Every module is tested utilizing a calibrated solar simulator to ensure that the electrical ratings are within the specified tolerance for power, voltage, and current
- Module-to-module wiring loss is factored into the module's labeled electrical ratings by testing through the module's cable/connector assemblies

### Independently Certified

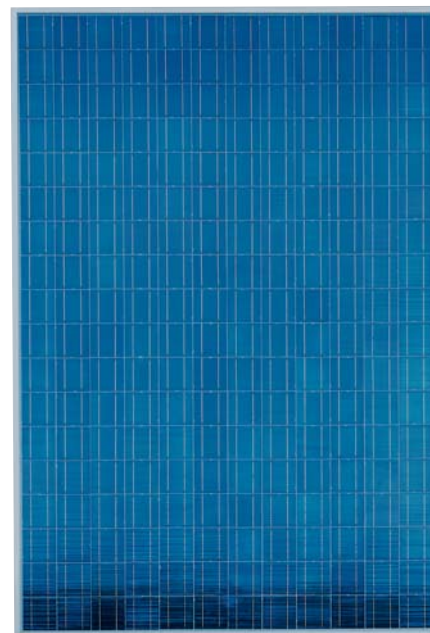
- The ASE-300-DGF/50 is independently certified to meet both IEEE 1262 and IEC 61215 Standards
- It is also the *only* module in the industry to receive a UL (Underwriters Laboratories) Class A fire rating

### Flexible Versions

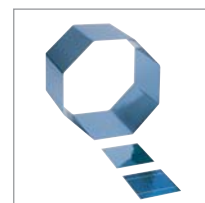
- ASE-300-DGF/50 is available with power ratings of 285, 300, and 315 watts. A variety of wiring and framing options, are also available upon request.

### Additional RWE SCHOTT Solar Advantages

- For reliability, energy savings, and a dramatic reduction in material waste, RWE SCHOTT Solar has developed the patented EFG (Edge-defined, Film-fed Growth) process that allows material-intensive wafer sawing to be replaced by highly efficient laser cutting



ASE-300-DGF/50 diode housing with bypass diodes, UV resistant cables with MC®-connectors.



Crystalline octagonal Si tubes are drawn from the melt, then laser cut into wafers. There are no losses due to sawing.

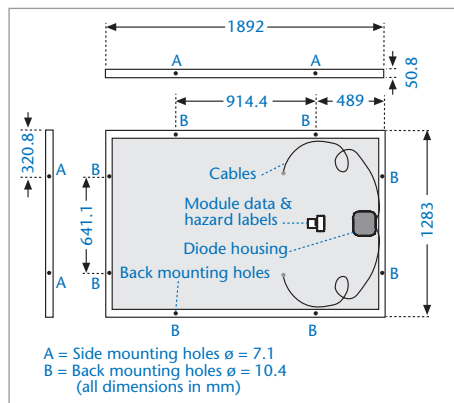
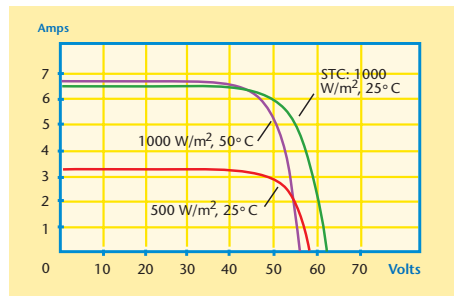
#### Designation:

DG = Double Glass

F = Frame

/50 = Nominal Voltage at STC

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



### Electrical data

The electrical data applies 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.

Power (max.)	P <sub>p</sub> (watts)	285 W	300 W	315 W
Voltage at maximum-power point	V <sub>p</sub> (volts)	50.0 V	51.0 V	51.5 V
Current at maximum-power point	I <sub>p</sub> (amps)	5.7 A	5.9 A	6.1 A
Open-circuit voltage	V <sub>oc</sub> (volts)	60.0 V	60.0 V	60.0 V
Short-circuit current	I <sub>sc</sub> (amps)	6.3 A	6.5 A	6.6 A

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

NOCT-value (800 W/m<sup>2</sup>, 20° C, 1m/sec.) = 45° C.

### Dimensions and weights

Length mm (in)	1,892.3 (74.5")
Width mm (in)	1,282.7 (50.5")
Weight kg (lbs)	46.6 ± 2 kg (107 ± 5lbs)
Area	2.43 sq meters (26.13 ft sq)

### Characteristic data

Solar cells per module	216
Type of solar cell	Semi-crystalline solar cells (EFG process), 10x10 cm <sup>2</sup>
Connections	10 AWG single conductor, stranded copper with Multi-Contact connector. Junction box comes with 10 built-in bypass diodes

### Cell temperature coefficients

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

### Limits

Max. system voltage	600 VDC U.S.
Operating module temperature	-40 to +90° C
UL certified design load	50 PSF
Equivalent wind resistance	Wind speed of 192 km/h (120 mph)

The right is reserved to make technical modifications.

For detailed product drawings and specifications please contact RWE SCHOTT Solar or an authorized reseller.

### Certifications and Warranty

The ASE-300-DGF/50 has been independently certified to IEC 1215 and IEEE 1262, UL 1703 (Class A Fire rating). It meets Electrical Protection Class II and EU guidelines, e.g. EMC according to DIN EN. The ASE-300-DGF/50 comes with a 20 year power warranty (see terms and conditions for details)

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