

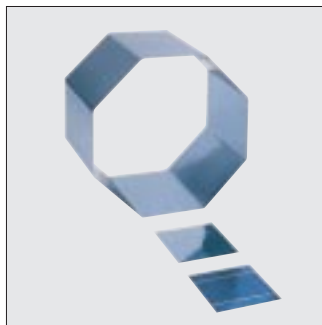
# World's Most Powerful Photovoltaic Module with ASE's Crystal Clean™ EFG Cell Technology



ASE-300-DGF/50



ASE-300-DGF/50 connection box with bypass diodes, U-V resistant cables with quick connects.



Crystalline octagonal Si tubes are drawn from the melt. There are no losses due to sawing.

The ASE-300-DGF/50 is ASE's Flagship Module used in a wide range of applications, including the toughest military, utility and commercial settings. It is also becoming extremely popular in large pumping systems that require higher voltages. As the world's largest and most powerful PV module, installers, architects and owners credit the ASE-300 with significant cost savings and peace of mind. Give your PV system the ASE 300 advantage.

#### Design and Installation Advantage

We designed the ASE-300-DGF/50 to save time and cost.

- The uniquely high module voltage (Vp 50.5 volts) allows system integrators to "fine tune" a system by providing just the right number of modules to meet the specified power.
- Large area requires fewer interconnects and structural members.
- Module-module and source circuit wiring can be incorporated in the module.
- Unique ASE quick-connects reduce source circuit wiring time to minutes. We offer connector options to suit your needs.

#### Reliability Advantage

- Advanced proprietary encapsulation system overcomes the decline in module performance associated with degradation of traditional EVA encapsulant.
- Weather barrier system on both the front and back of the module protects against tear, penetration, fire, electrical conductance, delamination, and moisture.
- Our patented no-lead high reliability soldering system ensures long life, while making the module environmentally benign for disposal or recycling.

#### Quality Advantage

ASE Americas' quality program is focused on meeting or exceeding expected performance and reducing system losses:

- Each module is individually tested under ASE Americas' calibrated solar simulator.
- Module-module wiring losses are included in the rating.
- Each of the 216 crystalline silicon cells is inspected and power matched.

#### Certification Advantage

- To provide our customers with the highest level of confidence, the ASE-300-DG/50 is independently IEEE 1262 and IEC 1215 certified. It is UL (Underwriters Laboratories) listed with the only Class A fire rating in the industry.

#### Available Versions

The standard power rating is 285 watts at STC with versions at 300 watts and 265 watts also available. We offer a variety of wiring/connector options. Modules without frames are also available.

#### ASE Core Advantage

ASE's patented EFG process (Edge-defined Film-fed Growth) produces silicon octagons of correct thickness and width. Energy, hazardous waste and material intensive wafer sawing is replaced by highly efficient advanced laser cutting.

ASE - 300 - DGF / 50

Designation:

DG = Double Glass

F = Frame

/50 = Nominal Voltage at STC

# ASE-300-DGF/50

## 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	265 W
Voltage at maximum-power point	V <sub>p</sub> (volts)	50.5 V	51.0 V	50.0 V
Current at maximum-power point	I <sub>p</sub> (amps)	5.6 A	5.9 A	5.3 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)	6.2 A	6.5 A	5.8 A

The quoted technical data refer to the usual series cell configuration.

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	Multi-crystalline solar cells (EFG process), 10x10 cm <sup>2</sup>
Connections	14 AWG w/Single Pole Quick Connectors Optional Connections – 16AWG w/Double Pole Quick Connectors. Conventional Junction Box module comes with 6 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 V <sub>DC</sub> U.S. 700 V <sub>DC</sub> Europe
Operating module temperature	-40... +90° C
Test wind conditions	Wind speed of 130 km/h (120 mph)

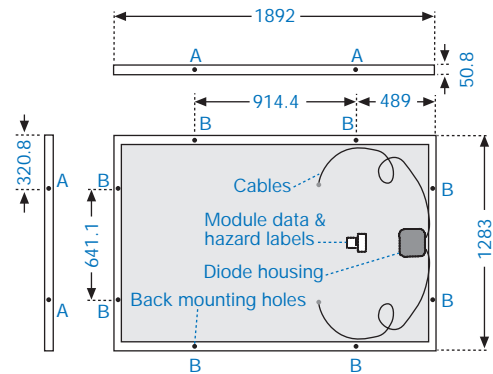
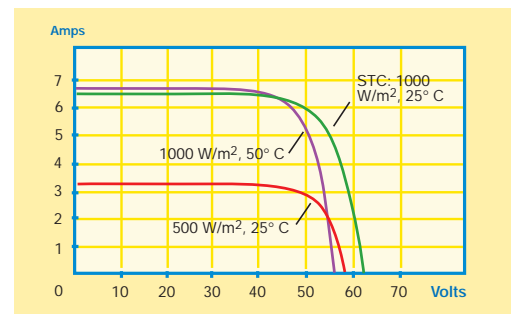
The right is reserved to make technical modifications.

For detailed product drawings and specifications please contact your distributor or our office.

## 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)

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



A = Side mounting holes  $\phi = 10.5$   
 B = Back mounting holes  $\phi = 10.5$   
 (all dimensions in mm)



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