

DuPont Apollo D Series Thin Film Modules

- ✓ High Energy Yields
- ✓ Stable Power Output
- ✓ Robust Encapsulation
- ✓ Integrated Mounting Solution
- ✓ Low BOS Cost
- ✓ Low Maintenance Cost
- ✓ Low Cable Power Loss

Product Specification

Model	DA130	DA133	DA136	DA139	DA142	DA145
Technology	Amorphous / Microcrystalline Silicon (Tandem Junction)					

Mechanical Characteristics

Dimensions	L 1400 x W 1100 x T 7.6 mm (T 24.6 mm with junction box)					
Weight	30 kg					
Front Cover	4.0 mm TCO Glass					
Encapsulant	EVA					
Back Cover	3.2 mm Tempered Glass					
Frame	Frameless					

Electrical Characteristics

At Standard Test Conditions (STC)

Nominal power output (Pmpp)	130W	133W	136W	139W	142W	145W
Voltage at Pmpp (Vmpp)	118V	119V	120V	120V	121V	122V
Current at Pm point (Impp)	1.10A	1.12A	1.14A	1.16A	1.17A	1.19A
Open circuit voltage (Voc)	154V	154V	155V	156V	156V	157V
Short circuit current (Isc)	1.27A	1.31A	1.35A	1.39A	1.43A	1.47A
Open circuit voltage, initial (Voc, initial)	158V	159V	159V	160V	161V	162V
Short circuit current, initial (Isc, initial)	1.30A	1.34A	1.38A	1.42A	1.46A	1.50A

At Nominal Operating Cell Temperature (NOCT)

Nominal power output (Pmpp)	96W	98W	100W	102W	105W	107W
Voltage at Pm point (Vmpp)	108V	108V	109V	109V	110V	111V
Current at Pm point (Impp)	0.89A	0.91A	0.92A	0.94A	0.95A	0.97A
Open circuit voltage (Voc)	143V	143V	144V	144V	145V	146V
Short circuit current (Isc)	1.04A	1.07A	1.10A	1.13A	1.16A	1.19A

Temperature Characteristics (1000 W/m², AM 1.5)

α Temperature coefficient of Isc	+ 0.08% / °C
β Temperature coefficient of Voc	- 0.33% / °C
γ Temperature coefficient of Pmpp	- 0.34% / °C

Operating Conditions

Operating temperature	- 40 ~ + 85 °C
Maximum mechanical load (front / back)	2400 / 2400; 5400 / 2400; 5600 / 5600 N/m ²
Maximum system voltage	1000 V (IEC)
Maximum reverse current overload	2A
Connector	MC3 Compatible / MC4 Compatible
Cable size	2.5 mm ²
Cable length	890 ~ 1000 mm

Standard Guarantees and Certifications

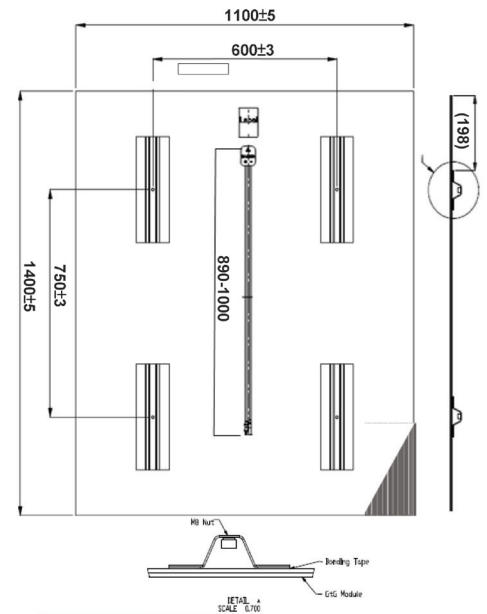
Product warranty	5 years
Performance warranty	80% of nominal power for 25 years 90% of nominal power for 10 years
Certifications	IEC 61646 / IEC 61730

Packaging Details

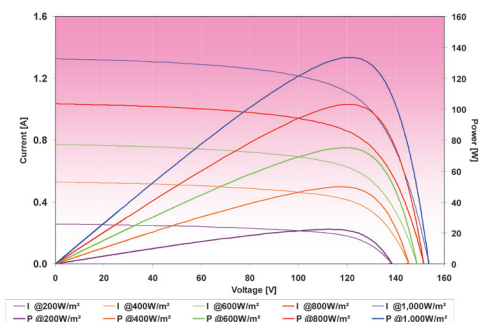
Packaging unit	28 modules per pallet
Dimensions	L 1436 x W 1117 x H 1295 mm
Storage	896 modules (32 pallets) in 40' HQ container

Above electrical data represents stabilized module performance, unless specified otherwise. Tolerance for power and other parameters are subject to ± 5% and ± 10% respectively. Initial Pmpp is approximately 12-16% higher than stabilized Pmpp. STC: 1000 W/m², AM 1.5, cell temperature 25°C. NOCT: 43.4 ± 0.2°C, 800 W/m², AM 1.5, ambient temperature 20°C, wind speed 1 m/s. Diagram demonstrates 2400/2400 N/m² mechanical load. Back-mount accessory is excluded from TÜV certificate. All data are subject to change without prior notice. Please consult with your sales representative for the exact product specifications of the actual shipment.

Modules Outline



Electrical Characteristics for DA130 at 25°C



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