



MONOCRYSTALLINE MODULES

200D-205D-210D-215D-220D-225D-230D-240D-245D-250D-20



Why LDK Solar Modules

- Industry leading module power output warranty
- Module performance reinsurance policy
- International quality, safety and performance certifications
- Modules manufactured at ISO 9001 certified factories
- High-reliability with guaranteed 0/+5W peak power classification

Warranty:

- 5 years for product defects in materials and workmanship
- 12 years for 90% of warranted minimum power
- 25 years for 80% of warranted minimum power

Certificates:



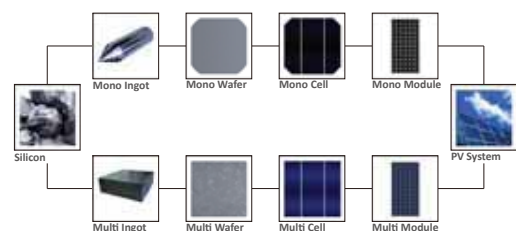
- IEC: IEC 61215, IEC 61730 (1&2), conformity to CE
- UL1703 2002/03/15 Ed:3 Rev:2004/06/30
- ULC/ORD-C1703-01 second edition 2001/01/01
- UL and Canadian standard for safety flat-plate
- ISO9001:2008 Quality Management System
- CEC Listed: Modules are eligible for California rebates
- PV Cycle: Voluntary module take back and recycling program

About LDK Solar

Established in 2005 (NYSE:LDK) is one of the leading, fastest growing, vertically-integrated manufacturers and suppliers of photovoltaics products in the world. LDK has successfully developed into an internationally recognized leader in the solar energy industry based on its strong, vertically integrated business model. LDK produces its own solar and semiconductor grade polysilicon, monocrystalline and multicrystalline ingots, wafers, cells and modules in-house. Manufacturing all of these products ensures that we can tightly control our materials and production quality, offering customers leading product durability and sustainable performance.

Today, LDK is the largest multicrystalline wafer manufacturer and supplier in the world with 2.2GW capacity in 2010.

LDK Solar PV Value Chain



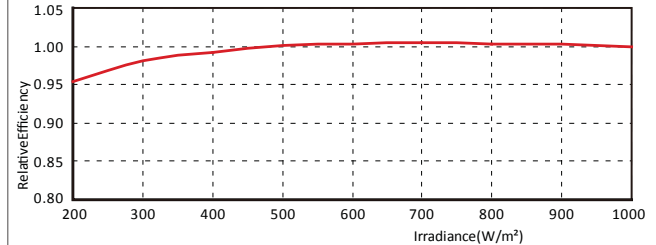
ELECTRIC CHARACTERISTICS (STC*)

Type	200 D-20	205 D-20	210 D-20	215 D-20	220 D-20	225 D-20	230 D-20	235 D-20	240 D-20	245 D-20	250 D-20
Nominal Output (Pmax) [W]	200	205	210	215	220	225	230	235	240	245	250
Warranted Minimum Power [W]	194	198.85	203.7	208.55	213.4	218.55	223.1	227.95	232.8	237.65	242.5
Flash Test Power Classification	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W	0/+5 W
Voltage at Pmax (Vmp) [V]	29.5	29.7	29.9	30.6	31.2	31.5	31.8	32.0	32.2	32.4	32.6
Current at Pmax (Imp) [A]	6.78	6.91	7.02	7.03	7.05	7.15	7.23	7.35	7.45	7.56	7.67
Open Circuit Voltage (Voc) [V]	36.1	36.4	36.6	36.7	36.9	37.0	37.2	37.2	37.3	37.4	37.5
Short Circuit Current (Isc) [A]	7.68	7.73	7.78	7.90	8.01	8.11	8.21	8.30	8.39	8.48	8.57
Maximum System Voltage	IEC: 1000 V / UL: 600 V										
Maximum Series Fuse Rating	12A										
Cell Efficiency [%]	14.37	14.74	15.09	15.46	15.81	16.18	16.56	16.90	17.25	17.51	17.93
Module Efficiency [%]	12.25	12.56	12.87	13.17	13.48	13.79	14.09	14.40	14.70	15.01	15.32

STC* (Standard Test Conditions): Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

PERFORMANCE AT LOW IRRADIANCE

The typical relative change in module efficiency at an irradiance of 200W/m² in relation to 1000W/m²(both at 25°C and AM 1.5 spectrum) is less than 6%

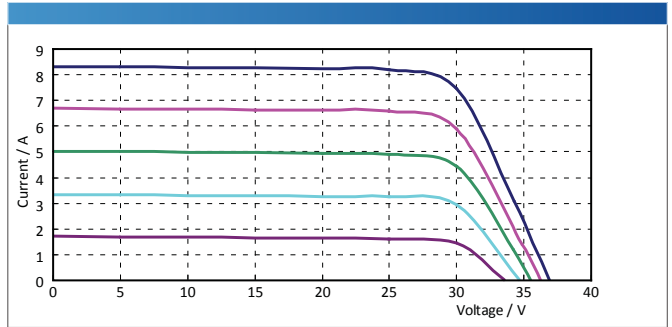


ELECTRICAL PERFORMANCE AT NOCT

Type	200 D-20	205 D-20	210 D-20	215 D-20	220 D-20	225 D-20	230 D-20	235 D-20	240 D-20	245 D-20	250 D-20
Nominal Output (Pmax) [W]	145	149	152	156	159	163	167	170	174	178	181
Voltage at Pmax (Vmp) [V]	25.3	25.8	26.1	26.3	26.5	26.8	27.1	27.3	27.7	28.0	28.2
Current at Pmax (Imp) [A]	5.74	5.78	5.84	5.93	6.01	6.09	6.16	6.23	6.28	6.36	6.41
Open Circuit Voltage (Voc) [V]	33.2	33.5	33.7	33.8	34.0	34.1	34.3	34.3	34.3	34.4	34.5
Short Circuit Current (Isc) [A]	6.22	6.26	6.30	6.40	6.48	6.57	6.65	6.72	6.79	6.87	6.94

NOCT: Irradiance 800 W/m², Module Temperature 45± 2 °C, Air Mass 1.5

IV CURVE AT DIFFERENT IRRADIANCE LEVELS



Above graphics according to LDK-220D-20

TEMPERATURE CHARACTERISTICS

Type	LDK-D-20 Series
NOCT**	45±2 °C
Temperature Coefficient of Pmax	-0.47 % / °C
Temperature Coefficient of Voc	-0.34 % / °C
Temperature Coefficient of Isc	0.06 % / °C
Operating Temperature	-40°C to +85°C

NOCT**: Nominal Operation Cell Temperature Sun 800W/m²; Air 20°C; Wind speed 1m/s

MECHANICAL CHARACTERISTICS

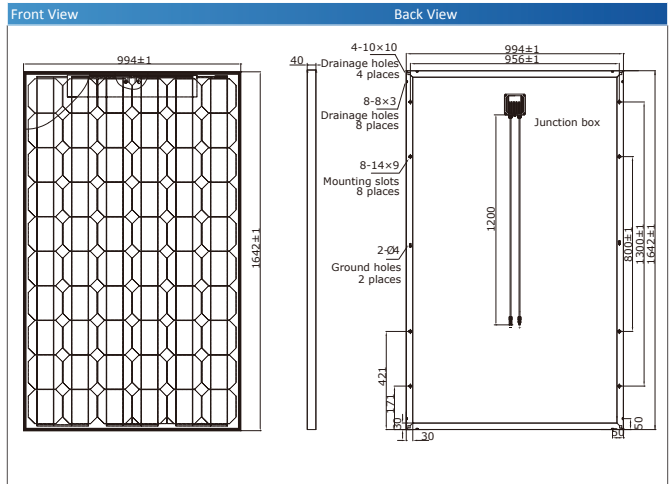
Type	LDK-D-20 Series
Solar Cells	(6x10) monocrystalline cells 156mm
Front Cover	3.2mm thick, low iron tempered glass
Back Cover	TPT (Tedlar-PET-Tedlar)
Encapsulant	EVA (Ethylene vinyl acetate)
Frame	Anodized aluminium alloy, double wall
Diodes	6 Bypass diodes serviceable
Junction Box	IP65 rated
Connector	MC4 or compatible connector
Cables	Length: 1200 mm / Section: 4.0 mm ²
Dimension	1642 x 994 x 40 mm / 64.6 x 39.1 x 1.6 inches
Weight	20 Kg / 44.1lbs
Max.Load	Certified to 5400 Pa

PACKING CONFIGURATION

Type	LDK-D-20 Series
Packing Configuration	24 pcs. / box
Quantity / Pallet	48 pcs. / pallet
Loading Capacity	624 pcs. / 40ft (H)

Partner:

DIMENSIONS



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