



LDK-225P-20, LDK-230P-20, LDK-235P-20, LDK-240P-20



WHY LDK SOLAR MODULES

- Industry leading module power output warranty
- International quality, safety and performance certifications
- Modules manufactured in ISO 9001 certified factories
- High-reliability with guaranteed -0/+5 W positive power tolerance

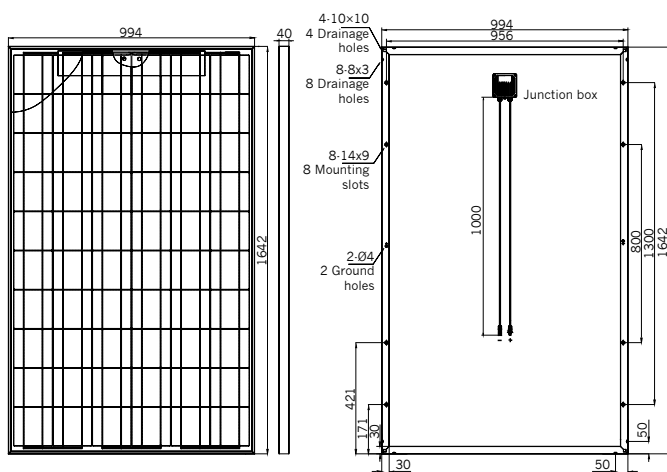
WARRANTIES

- 10 years for product defects in materials & workmanship
- 4-Step Power Warranty**
- Up to 5 years a minimum of 94% Nominal Output
- Up to 11 years a minimum of 90% Nominal Output
- Up to 18 years a minimum of 85% Nominal Output
- Up to 25 years a minimum of 80% Nominal Output

CERTIFICATES

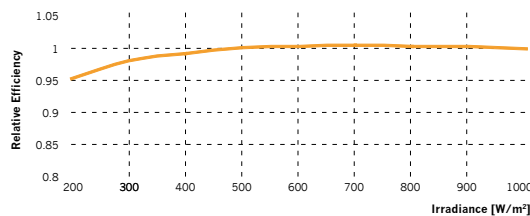
- IEC EN 61215, IEC EN 61730-1-2, CE Conformity
- UL 1703 2002/03/15 Ed:3 Rev:2008/04/08
- ULC/ORD-C1703-01 second edition 2001/01/01
- UL and Canadian standard for safety flat-plate
- CEC Listed: modules are eligible for California rebates
- MCS The Microgeneration Certification Scheme UK
- ISO 9001:2008 Quality Management System
- PV CYCLE: voluntary module take back and recycling program

DIMENSIONS



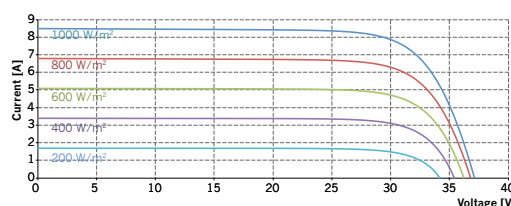
Tolerance of length and width dimensions is ± 2 mm

PERFORMANCE AT LOW IRRADIANCE



The typical relative change in module efficiency at an irradiance of 200W/m² in relation to 1000 W/m² (both at 25°C and AM 1.5 spectrum) is less than 5%

I-V CURVE AT DIFFERENT IRRADIANCE LEVELS



Above graphics according to LDK-235P-20

MULTICRYSTALLINE MODULES

LDK-235P-20 Value Series



ELECTRIC CHARACTERISTICS (STC*)

TYPE	225P-20	230P-20	235P-20	240P-20
Nominal Power (Pmax) [W]	225	230	235	240
Voltage at Pmax (Vmp) [V]	29.0	29.3	29.5	29.8
Current at Pmax (Imp) [A]	7.78	7.88	7.98	8.08
Open Circuit Voltage (Voc) [V]	36.6	36.9	37.1	37.3
Short Circuit Current (Isc) [A]	8.36	8.43	8.50	8.56
Tolerance on Nominal Power [W]	-0/+5	-0/+5	-0/+5	-0/+5
Maximum System Voltage	IEC EN: 1000 V / UL: 600 V			
Cell Efficiency [%]	15.41	15.75	16.09	16.44
Module Efficiency [%]	13.79	14.09	14.40	14.70

STC* (Standard Test Conditions): Irradiance 1000 W/m², Module Temperature 25 °C, Air Mass 1.5
Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/-3%

ELECTRICAL PERFORMANCE AT NOCT

TYPE	225P-20	230P-20	235P-20	240P-20
Power Output (Pmax) [W]	164	167	171	175
Voltage at Pmax (Vmp) [V]	26.4	26.5	26.8	27.1
Current at Pmax (Imp) [A]	6.22	6.30	6.38	6.46
Open Circuit Voltage (Voc) [V]	33.9	34.2	34.4	34.5
Short Circuit Current (Isc) [A]	6.77	6.82	6.88	6.93

NOCT: Irradiance 800 W/m², Module Temperature 45±2°C, Wind Speed 1 m/s
Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/-3%

TEMPERATURE CHARACTERISTICS

TYPE	LDK-P-20 Series
NOCT**	45±2°C
Temperature Coefficient of Pmax	-0.45% / °C
Temperature Coefficient of Voc	-0.33% / °C
Temperature Coefficient of Isc	0.06% / °C
Maximum Series Fuse Rating	20 A
Operating Temperature	from -40 to +85 °C
Storage Temperature	from -40 to +60 °C

NOCT** (Nominal Operating Cell Temperature): Irradiance 800 W/m², Air 20 °C, Wind Speed 1 m/s

PACKING CONFIGURATION

TYPE	LDK-P-20 Series
Packing Configuration	25 pcs. / box
Quantity / Pallet	50 pcs. / pallet
Loading Capacity	700 pcs. / 40 ft (High Cube Container)

MECHANICAL CHARACTERISTICS

TYPE	LDK-P-20 Series
Solar Cells	60 (6x10) multicrystalline silicon solar cells 156 x 156 mm
Front Glass	3.2 mm thick, tempered glass / AR coating glass
Backsheet	TPT (Tedlar-PET-Tedlar) / BBF
Encapsulant	EVA (ethylene vinyl acetate)
Frame	Double-layer anodized aluminium alloy
Diodes	6 (3 x 2 in parallel) serviceable Bypass Diodes
Junction Box	IP65 rated
Connectors	MC4 or compatible connectors
Cables	Length: 1000 mm / Section: 4.0 mm ²
Dimensions	1642 x 994 x 40 mm / 64.64 x 39.13 x 1.57 in
Weight	19 kg / 41.9 lbs
Max. Load	Wind Load: 2400 Pa / Snow Load: 5400 Pa

LDK Solar reserves the right to make specifications changes without any prior notice.

