



WHY LDK SOLAR MODULES

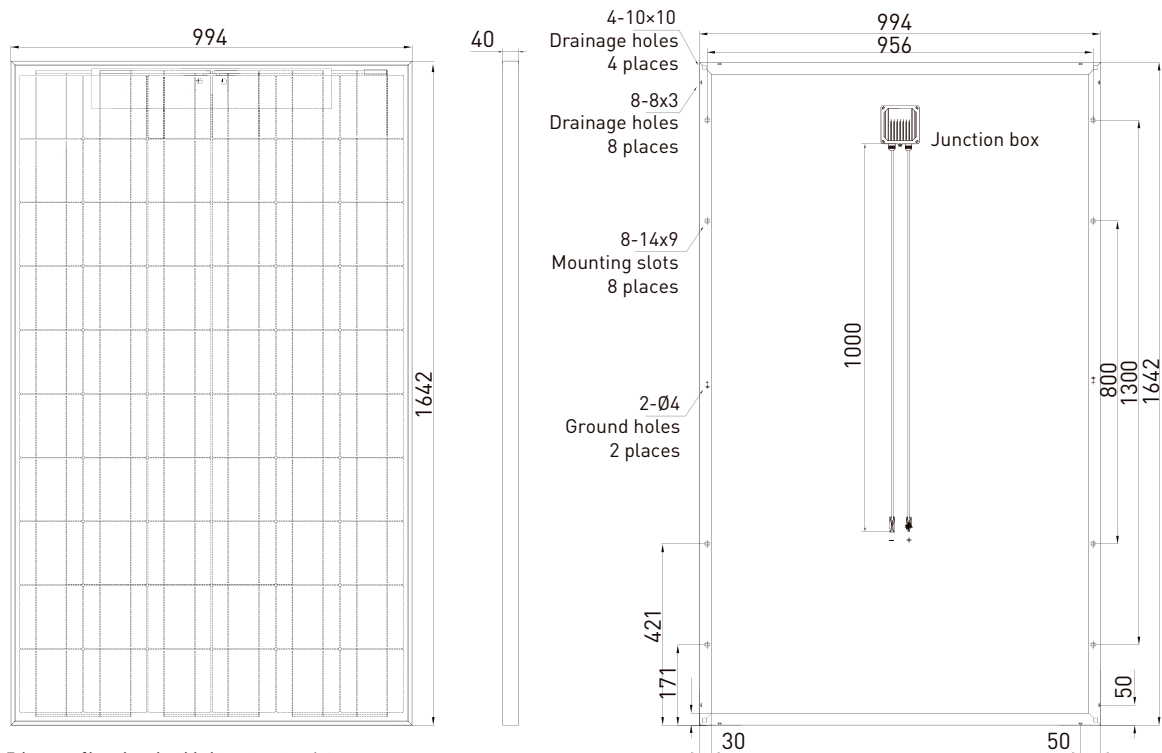
- Industry leading module power output warranty
- International quality, safety and performance certifications
- Modules manufactured in ISO 9001 certified factories
- High-reliability with guaranteed 0/+5 Wp peak power classification

WARRANTIES

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

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
- ISO 9001:2008 Quality Management System
- CEC Listed: modules are eligible for California rebates
- PV CYCLE: voluntary module take back and recycling program
- MCS The Microgeneration Certification Scheme UK



Tolerance of length and width dimensions is +/- 2 mm

ELECTRICAL CHARACTERISTICS (STC*)

TYPE		LDK-230P-20	LDK-235P-20
Nominal Output (Pmax)	[Wp]	230	235
Voltage at Pmax (Vmp)	[V]	29.3	29.5
Current at Pmax (Imp)	[A]	7.88	7.98
Open Circuit Voltage (Voc)	[V]	36.9	37.1
Short Circuit Current (Isc)	[A]	8.43	8.50
Power Classification Range	[Wp]	-0/+4.99	-0/+4.99
Tolerance on Nominal Output	[%]	+/-3	+/-3
Maximum System Voltage		IEC EN: 1000 V / UL: 600 V	
Cell Efficiency	[%]	15.75	16.09
Module Efficiency	[%]	14.09	14.40

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

ELECTRICAL PERFORMANCE AT NOCT

TYPE		LDK-230P-20	LDK-235P-20
Nominal Output (Pmax)	[Wp]	167	171
Voltage at Pmax (Vmp)	[V]	26.5	26.8
Current at Pmax (Imp)	[A]	6.30	6.38
Open Circuit Voltage (Voc)	[V]	34.2	34.4
Short Circuit Current (Isc)	[A]	6.82	6.88

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

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

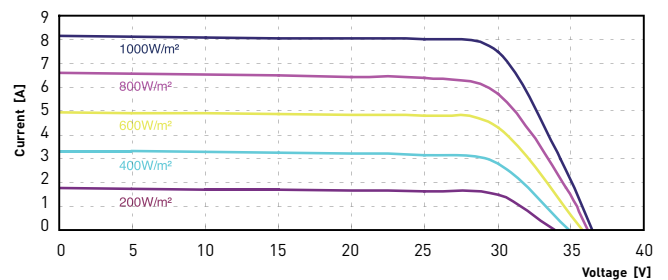
NOCT** (Nominal Operating Cell Temperature): irradiance 800 W/m², Air 20 °C, wind speed 1 m/s

MECHANICAL CHARACTERISTICS

TYPE	LDK-P-20 Series
Solar Cells	60 (6x10) polycrystalline 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

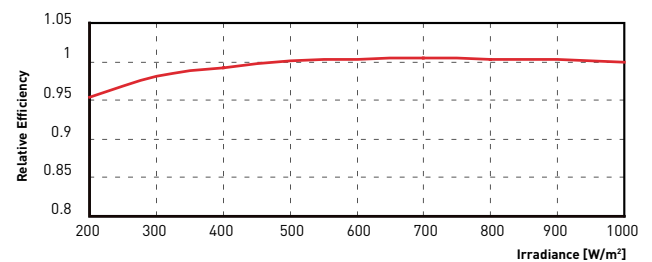
LDK Solar reserves the right to make specifications changes without any prior notice. This data sheet complies with the EN 50380 requirements. V1 - February 2012 - © LDK Solar Limited. All rights reserved. E.&O.E.

I-V CURVE AT DIFFERENT IRRADIANCE LEVELS



Above graphics according to LDK-220P-20

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%

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)

Partner:

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