



WHY LDK SOLAR MODULES

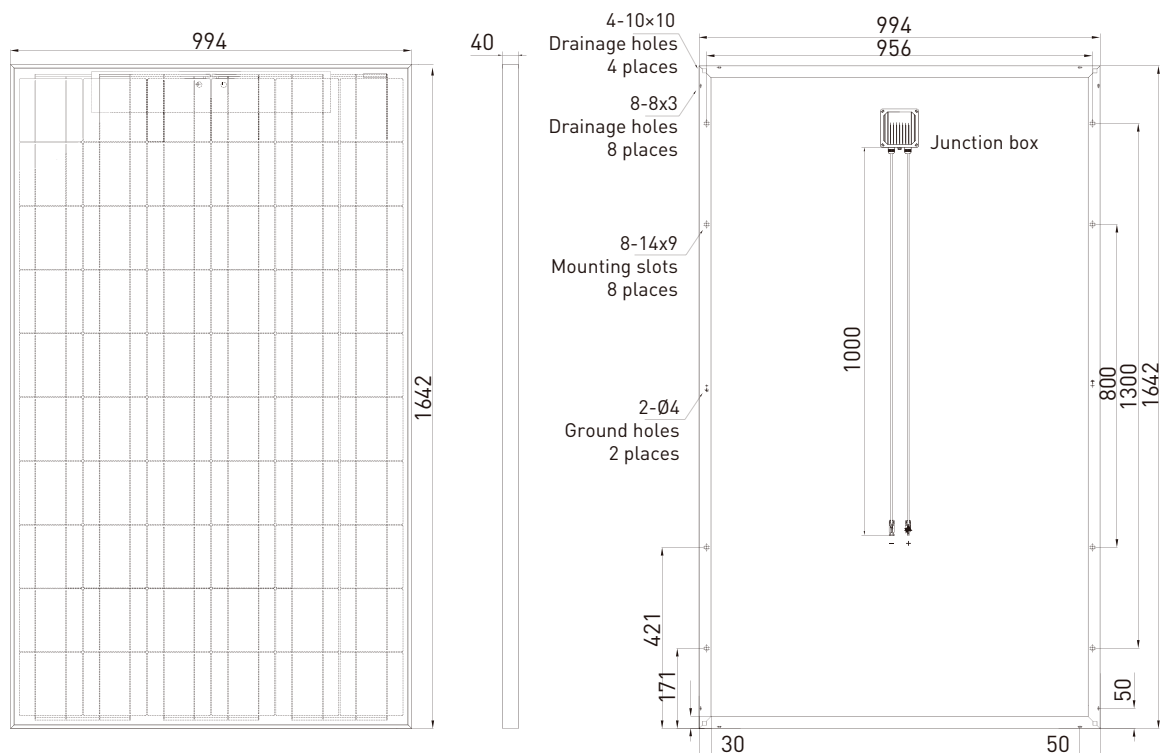
- Industry leading module power output warranty
- International quality, safety and performance certifications
- Modules manufactured in ISO 9001 certified factories
- High-reliability with guaranteed 0/+5 Wp peak power classification

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



POLYCRYSTALLINE MODULES

ELECTRICAL CHARACTERISTICS (STC*)

TYPE	215P-20	220P-20	225P-20	230P-20	235P-20	240P-20	245P-20	250P-20
Nominal Output (Pmax) [Wp]	215	220	225	230	235	240	245	250
Voltage at Pmax (Vmp) [V]	28.5	28.7	29.0	29.3	29.5	29.8	30.0	30.3
Current at Pmax (Imp) [A]	7.58	7.68	7.78	7.88	7.98	8.08	8.18	8.27
Open Circuit Voltage (Voc) [V]	36.2	36.4	36.6	36.9	37.1	37.3	37.5	37.7
Short Circuit Current (Isc) [A]	8.23	8.30	8.36	8.43	8.50	8.56	8.63	8.69
Power Classification Range [Wp]	-0/+4.99	-0/+4.99	-0/+4.99	-0/+4.99	-0/+4.99	-0/+4.99	-0/+4.99	-0/+4.99
Tolerance on Nominal Output [%]	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3
Maximum System Voltage	IEC EN: 1000 V / UL: 600 V							
Cell Efficiency [%]	14.72	15.07	15.41	15.75	16.09	16.44	16.78	17.12
Module Efficiency [%]	13.17	13.48	13.79	14.09	14.40	14.70	15.01	15.32

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

ELECTRICAL PERFORMANCE AT NOCT

TYPE	215P-20	220P-20	225P-20	230P-20	235P-20	240P-20	245P-20	250P-20
Nominal Output (Pmax) [Wp]	157	160	164	167	171	175	178	182
Voltage at Pmax (Vmp) [V]	25.9	26.1	26.4	26.5	26.8	27.1	27.3	27.5
Current at Pmax (Imp) [A]	6.07	6.14	6.22	6.30	6.38	6.46	6.53	6.62
Open Circuit Voltage (Voc) [V]	33.5	33.7	33.9	34.2	34.4	34.5	34.7	34.8
Short Circuit Current (Isc) [A]	6.66	6.72	6.77	6.82	6.88	6.93	6.99	7.04

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

TEMPERATURE CHARACTERISTICS

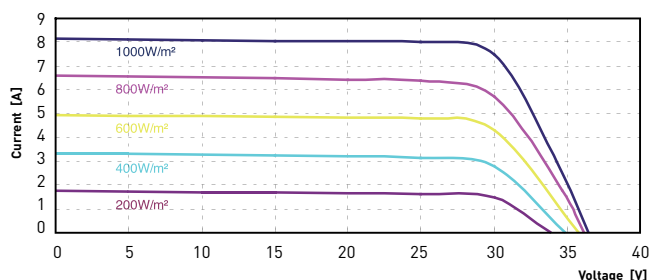
TYPE	LDK-P-20 Series
NOCT**	45 +/- 2 °C
Temperature Coefficient of Pmax	-0.45 %/°C
Temperature Coefficient of Voc	-0.33 %/°C
Temperature Coefficient of Isc	0.06 %/°C
Maximum Series Fuse Rating	20 A
Operating Temperature	from -40 to +85 °C
Storage Temperature	from -40 to +60 °C

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

MECHANICAL CHARACTERISTICS

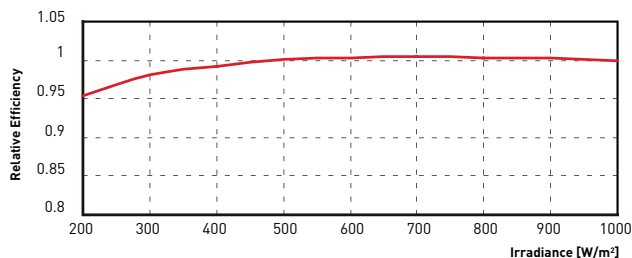
TYPE	LDK-P-20 Series
Solar Cells	60 (6 x10) polycrystalline silicon solar cells 156 x 156 mm
Front Glass	3.2 mm thick, tempered glass / AR coating glass
Backsheet	TPT (Tedlar-PET-Tedlar) / BBF
Encapsulant	EVA (ethylene vinyl acetate)
Frame	Double-layer anodized aluminium alloy
Diodes	6 (3 x 2 in parallel) 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

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)