

# 220D-225D-230D-235D-240D-245D-250D-255D-260D-20 250D-255D-260D-20



## WHY LDK SOLAR MODULES

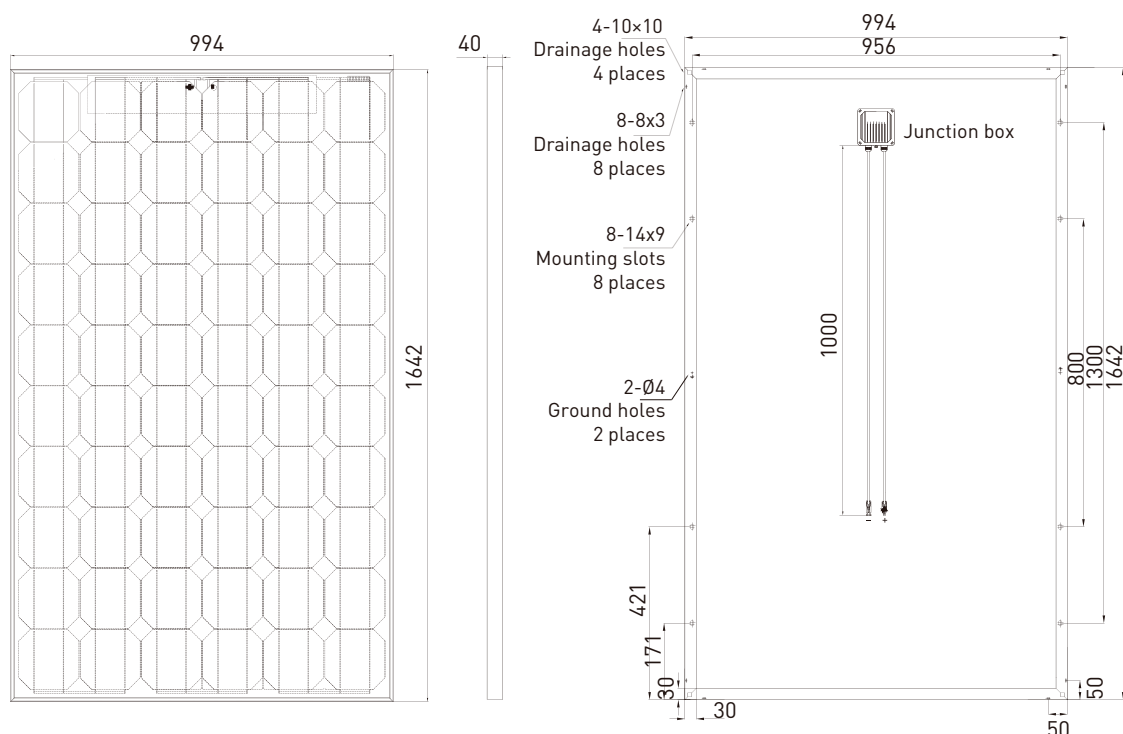
- Industry leading module power output warranty
- International quality, safety and performance certifications
- Modules manufactured in ISO 9001 certified factories
- High-reliability with guaranteed 0/+5 Wp peak power classification

## 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



# MONOCRYSTALLINE MODULES

## ELECTRICAL CHARACTERISTICS (STC\*)

TYPE	220D-20	225D-20	230D-20	235D-20	240D-20	245D-20	250D-20	255D-20	260D-20
Nominal Output (Pmax) [Wp]	220	225	230	235	240	245	250	255	260
Voltage at Pmax (Vmp) [V]	31.2	31.5	31.8	32.0	32.2	32.4	32.6	32.8	33.0
Current at Pmax (Imp) [A]	7.05	7.15	7.23	7.35	7.45	7.56	7.67	7.78	7.88
Open Circuit Voltage (Voc) [V]	36.9	37.0	37.2	37.2	37.3	37.4	37.5	37.6	37.8
Short Circuit Current (Isc) [A]	8.01	8.11	8.21	8.30	8.39	8.48	8.57	8.66	8.76
The power tolerance is +/- 3% referred to the Nominal Output									
Maximum System Voltage	IEC: 1000 V / UL: 1000 V								
Cell Efficiency [%]	15.81	16.18	16.56	16.90	17.25	17.51	17.93	18.34	18.70
Module Efficiency [%]	13.48	13.79	14.09	14.40	14.70	15.01	15.32	15.62	15.93

STC\* (Standard Test Conditions): Irradiance 1000 W/m<sup>2</sup>, Module Temperature 25 °C, Air Mass 1.5

## ELECTRICAL PERFORMANCE AT NOCT

TYPE	220D-20	225D-20	230D-20	235D-20	240D-20	245D-20	250D-20	255D-20	260D-20
Nominal Output (Pmax) [W]	159	163	167	170	174	178	181	185	188
Voltage at Pmax (Vmp) [V]	26.5	26.8	27.1	27.3	27.7	28.0	28.2	28.5	28.7
Current at Pmax (Imp) [A]	6.01	6.09	6.16	6.23	6.28	6.36	6.41	6.49	6.55
Open Circuit Voltage (Voc) [V]	34.0	34.1	34.3	34.3	34.3	34.4	34.5	34.6	34.7
Short Circuit Current (Isc) [A]	6.48	6.57	6.65	6.72	6.79	6.87	6.94	7.00	7.06

NOCT: Irradiance 800 W/m<sup>2</sup>, Module Temperature 45 +/- 2 °C, Air Mass 1.5

## 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
Maximum Series Fuse Rating	20
Operating Temperature	from -40 to +85 °C
Storage Temperature	from -40 to +60 °C

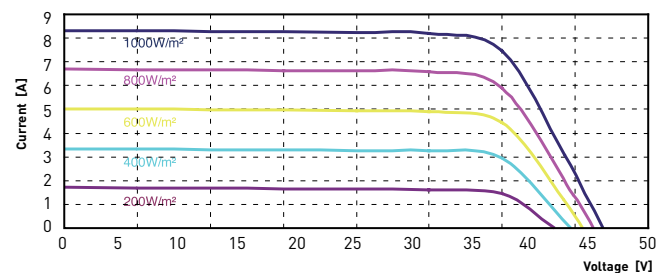
NOCT\*\*: Nominal Operation Cell Temperature Sun 800 W/m<sup>2</sup>; Air 20 °C; wind speed 1 m/s

## MECHANICAL CHARACTERISTICS

TYPE	LDK-D-20 Series
Solar Cells	60 (6x10) monocrystalline silicon solar cells 156 x 156 mm
Front Cover	3.2 mm thick, tempered glass / AR coating glass
Back Cover	TPT (Tedlar-PET-Tedlar) / BBF
Encapsulant	EVA (ethylene vinyl acetate)
Frame	Double-layer anodized aluminium alloy
Diodes	6 Bypass diodes serviceable
Junction Box	IP65 rated
Connectors	MC4 or compatible connectors
Cables	Lentgh: 1000 mm / Section: 4.0 mm <sup>2</sup>
Dimensions	1642 x 994 x 40 mm / 64.2 x 39.1 x 1.6 in
Weight	20 kg / 44.1 lbs
Max. Load	Wind Load: 2400 Pa / Snow Load: 5400 Pa

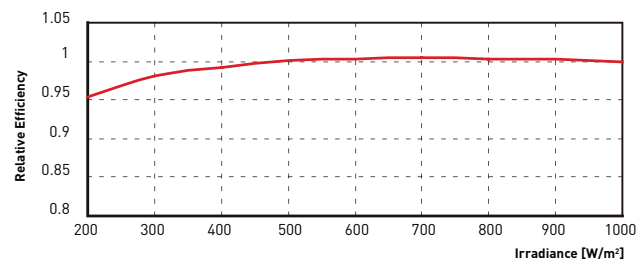
LDK Solar reserves the right to make specifications changes without any prior notice. This data sheet complies with the EN 50380 requirements. V4 - September 2011 - © LDK Solar Limited. All rights reserved. E.&O.E.

## I-V CURVE AT DIFFERENT IRRADIANCE LEVELS



Above graphics according to LDK-220D-20

## PERFORMANCE AT LOW IRRADIANCE



The typical relative change in module efficiency at an irradiance of 200W/m<sup>2</sup> in relation to 1000W/m<sup>2</sup> (both at 25 °C and AM 1.5 spectrum) is less than 6%

## PACKING CONFIGURATION

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