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PRESENTACION

LDK
MODULES CATALOG

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LDK SOLAR MODULES

LDK LIGHT OUR FUTURE

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Photo Courtesy: LDK Solar Power Tech./ Location: Xin Yu, China/ System Size: 2MW/LDK factory rooftop application

SCALE, COST-LEADERSHIP, INNOVATION & QUALITY
A NEW FACE OF SOLAR ENERGY

Who we are

Established in 2005 in China (NYSE:LDK), LDK Solar is one of the leading, fastest-growing, vertically integrated manufacturers and suppliers of Photovoltaic (PV) products in the world. Today, LDK Solar has more than 15.000 employees with manufacturing facilities in China, and sales, marketing, and customer service offices in Asia, Europe and North America. We provide monocrystalline and polycrystalline wafers and modules to our customers worldwide.

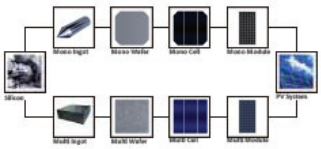
Our Mission

Our mission is to be recognized as the top PV brand and the preferred partner in the solar energy industry. To achieve this important mission, we focus on large scale, cost-effective manufacturing to provide price-competitive, high-quality, high-efficiency and environmentally friendly PV products to our customers worldwide. We are helping our customers achieve grid parity and make solar energy affordable and accessible for everyone.

Our Business Model

There are only a few companies in the industry that have the ability to cover the entire PV value chain. LDK has successfully developed into a leader in the solar energy industry based on its strong vertically integrated business model; producing its own high-purity solar & semiconductor grade polysilicon, monocrystalline and polycrystalline ingots, wafers, cells and modules in China. Manufacturing of these products under one roof ensures that we can tightly control our incoming materials and production quality, offering customers leading product durability and sustainable performance.

LDK Solar PV Value Chain





LDK Solar, HQ, Xin Yu,China

LDK Solar Modules

At LDK Solar, we produce high-quality, high-efficiency and environmentally friendly monocrystalline and multicrystalline photovoltaics modules. Our monocrystalline modules range from 160 Watt to 250 Watt in power output and our polycrystalline modules series of modules range from 160Watt to 280Watt. Our solar modules are clean, environmentally friendly and built to our customers' and end-users' specifications. Adapting our product range to meet market demands allow us to provide our customers with a broad range of on-grid and off-grid solutions for residential, commercial, industrial and utility-scale applications around the world.

LDK SOLAR MODULES CATALOG CONTENTS

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- *LDK 160D to 190D Series*
- *LDK 200D to 250D Series*

6 Polycrystalline Modules
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- *LDK 180P to 220P Series*
- *LDK 200P to 250P Series*
- *LDK 240P to 280P Series*

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LIGHT OUR FUTURE

LDK SOLAR

MONOCRYSTALLINE MODULES

160D-165D-170D-175D-180D-185D-190D-24

160D WATT to 190D WATT





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

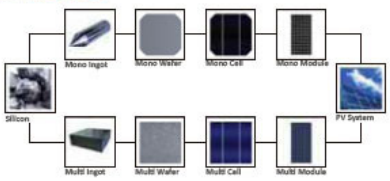
- ISO9001:2008 Quality Management System
- CEC Listed: Modules are eligible for California rebates
- PV Cycle: Voluntary module take back and recycling program

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

LDK Solar PV Value Chain



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LDK SOLAR

MONOCRYSTALLINE MODULES

160D-165D-170D-175D-180D-185D-190D-24

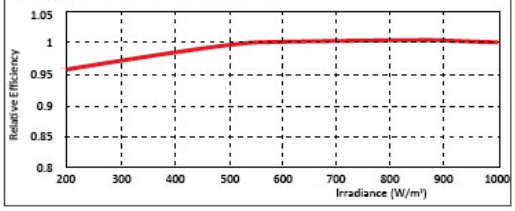
ELECTRIC CHARACTERISTICS (STC*)

Type	160D-24	165D-24	170D-24	175D-24	180D-24	185D-24	190D-24
Nominal Output (Pmax) [W]	160	165	170	175	180	185	190
Warranted Minimum Power [W]	155.2	160.05	164.9	169.75	174.6	179.45	184.3
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
Voltage at Pmax (Vmp) [V]	35.0	35.2	35.4	35.9	36.2	36.9	37.7
Current at Pmax (Imp) [A]	4.6	4.68	4.76	4.87	4.98	5.02	5.05
Open Circuit Voltage (Voc) [V]	44.0	44.2	44.5	44.7	44.9	45.1	45.2
Short Circuit Current (Isc) [A]	5.38	5.40	5.42	5.43	5.46	5.48	5.51
Maximum System Voltage	IEC: 1000 V / UL: 600 V						
Maximum Series Fuse Rating	10A						
Cell Efficiency [%]	15.37	15.85	16.33	16.81	17.28	17.77	18.25
Module Efficiency [%]	12.48	12.88	13.27	13.66	14.05	14.44	15.22

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%

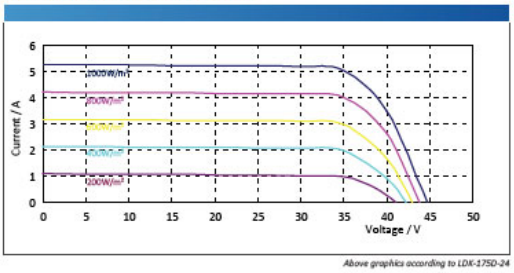


ELECTRICAL PERFORMANCE AT NOCT

Type	160D-24	165D-24	170D-24	175D-24	180D-24	185D-24	190D-24
Nominal Output (Pmax) [W]	116	120	123	127	130	134	138
Voltage at Pmax (Vmp) [V]	29.8	30.7	31.3	32.3	32.8	33.6	34.6
Current at Pmax (Imp) [A]	3.89	3.91	3.93	3.94	3.96	3.98	3.99
Open Circuit Voltage (Voc) [V]	40.5	40.7	41.0	41.2	41.3	41.5	41.6
Short Circuit Current (Isc) [A]	4.36	4.37	4.39	4.40	4.42	4.44	4.46

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-175D-24

TEMPERATURE CHARACTERISTICS

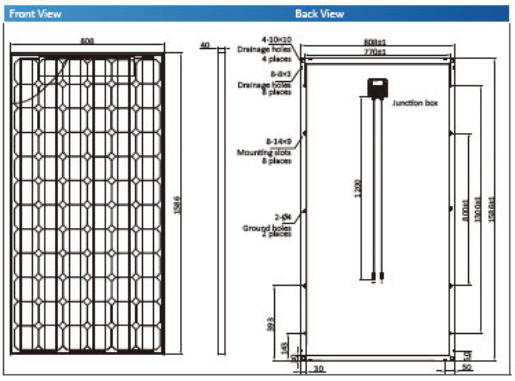
Type	LDK-D-24 Series
NOCT**	45±2 °C
Temperature Coefficient of Pmax	-0.47 % / °C
Temperature Coefficient of Voc	-0.34 % / °C
Temperature Coefficient of Isc	0.06 % / °C
Operating Temperature	-40°C to +85°C

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

MECHANICAL CHARACTERISTICS

Type	LDK-D-24 Series
Solar Cells	72(6x12) monocrystalline cells 125mm
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 mm²
Dimension	1586 x 808 x 40 mm / 62.4 x 31.8 x 1.6 inches
Weight	15.6 Kg / 34.4 lbs
Max.Load	Certified to 5400Pa

DIMENSIONS



PACKING CONFIGURATION

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

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Email: clientes@importsunpv.com
Web:www. importsunpv.com

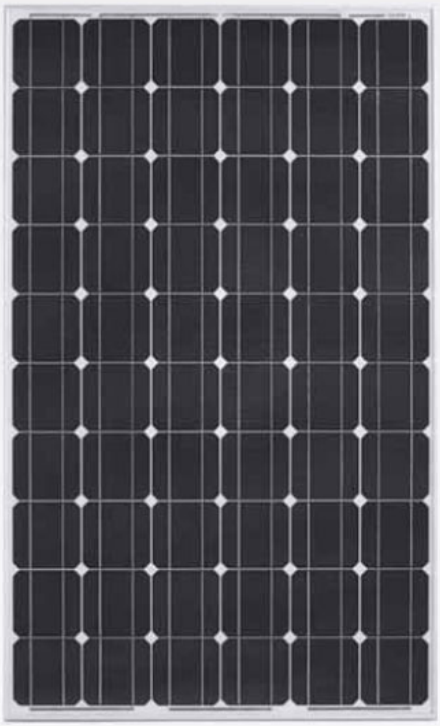
LIGHT OUR FUTURE

LDK SOLAR

MONOCRYSTALLINE MODULES

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

200D WATT to 250D WATT





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

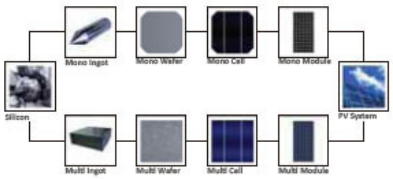
- ISO9001:2008 Quality Management System
- CEC Listed: Modules are eligible for California rebates
- PV Cycle: Voluntary module take back and recycling program

About LDK Solar

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

LDK Solar PV Value Chain



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MONOCRYSTALLINE MODULES

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

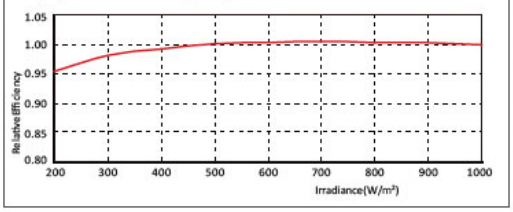
ELECTRIC CHARACTERISTICS (STC*)

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%

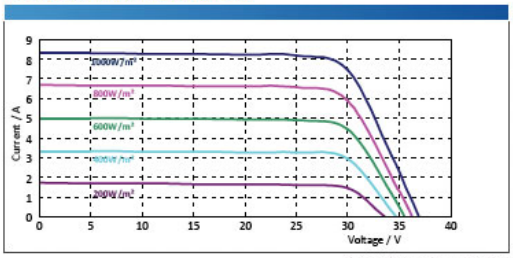


ELECTRICAL PERFORMANCE AT NOCT

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

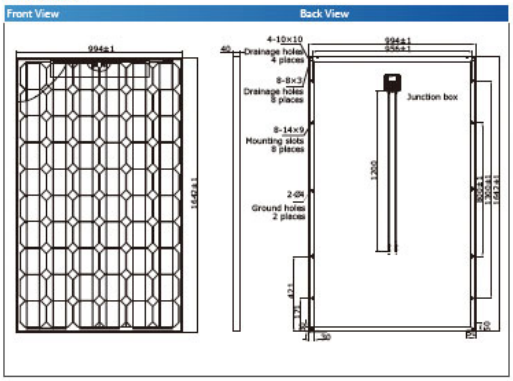
Type	LDK-D-20 Series
NOCT**	45±2 °C
Temperature Coefficient of Pmax	-0.47 % / °C
Temperature Coefficient of Voc	-0.34 % / °C
Temperature Coefficient of Isc	0.06 % / °C
Operating Temperature	-40°C to +85°C

*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 mm²
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

DIMENSIONS



PACKING CONFIGURATION

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

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LDK SOLAR

POLYCRYSTALLINE MODULES

160P-165P-170P-175P-180P-185P-190P-24

160P WATT to 190P WATT





Why LDK Solar Modules

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- 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:

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- 12 years for 90% of warranted minimum power
- 25 years for 80% of warranted minimum power

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- UL and Canadian standard for safety flat-plate

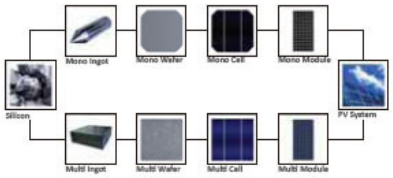
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160P-165P-170P-175P-180P-185P-190P-24

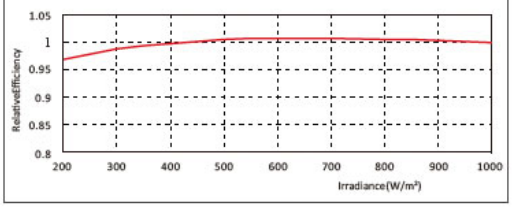
ELECTRIC CHARACTERISTICS (STC*)

Type	160P-24	165P-24	170P-24	175P-24	180P-24	185P-24	190P-24
Nominal Output (Pmax) [W]	160	165	170	175	180	185	190
Warranted Minimum Power [W]	155.2	160.05	164.9	169.75	174.6	179.45	184.3
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
Voltage at Pmax (Vmp) [V]	35.1	35.4	35.9	36.1	36.4	36.8	37.2
Current at Pmax (Imp) [A]	4.60	4.68	4.76	4.87	4.96	5.02	5.1
Open Circuit Voltage (Voc) [V]	43.2	43.6	44.0	44.3	44.6	44.9	45.1
Short Circuit Current (Isc) [A]	4.95	5.04	5.13	5.21	5.28	5.51	5.6
Maximum System Voltage	IEC: 1000 V / UL: 600 V						
Maximum Series Fuse Rating	10A						
Cell Efficiency [%]	14.66	15.12	15.58	16.04	16.49	16.95	17.41
Module Efficiency [%]	12.48	12.88	13.27	13.66	14.05	14.44	15.22

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%

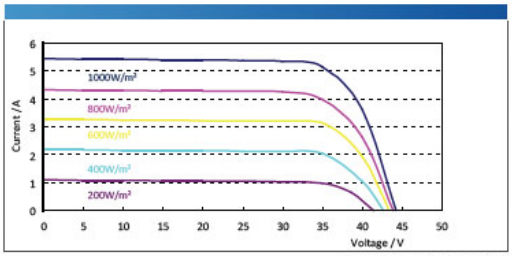


ELECTRICAL PERFORMANCE AT NOCT

Type	160P-24	165P-24	170P-24	175P-24	180P-24	185P-24	190P-24
Nominal Output (Pmax) [W]	116	120	123	127	130	134	138
Voltage at Pmax (Vmp) [V]	31.7	32.3	32.6	33.1	33.6	33.6	34.1
Current at Pmax (Imp) [A]	3.65	3.71	3.77	3.83	3.87	3.99	4.05
Open Circuit Voltage (Voc) [V]	39.8	40.1	40.5	40.8	41.1	41.3	41.5
Short Circuit Current (Isc) [A]	4.01	4.08	4.15	4.22	4.27	4.46	4.53

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-175P-24

TEMPERATURE CHARACTERISTICS

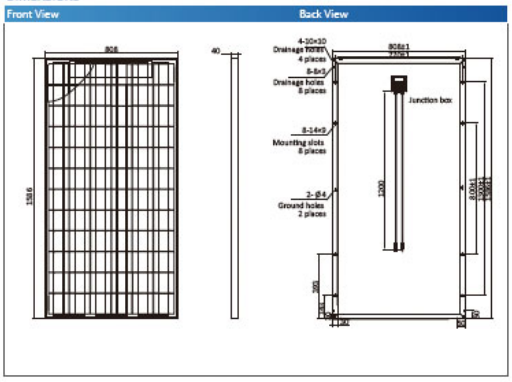
Type	LDK-P-24 Series
NOCT**	45±2 °C
Temperature Coefficient of Pmax	-0.47 % / °C
Temperature Coefficient of Voc	-0.34 % / °C
Temperature Coefficient of Isc	0.06 % / °C
Operating Temperature	-40°C to +85°C

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

MECHANICAL CHARACTERISTICS

Type	LDK-P-24 Series
Solar Cells	72(6x12) polycrystalline cells 125mm
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 mm²
Dimension	1586 x 808 x 40 mm / 62.4 x 31.8 x 1.6 Inches
Weight	15.6 Kg / 34.4 lbs
Max.Load	Certified to 5400 Pa

DIMENSIONS



PACKING CONFIGURATION

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

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LIGHT OUR FUTURE

LDK SOLAR

POLYCRYSTALLINE MODULES

180P-185P-190P-195P-200P-205P-210P-215P-220P-18

180P WATT to 220P WATT





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

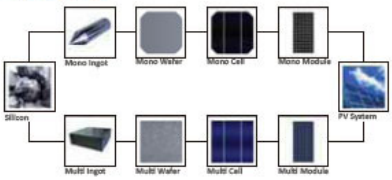
- ISO9001:2008 Quality Management System
- CEC Listed: Modules are eligible for California rebates
- PV Cycle: Voluntary module take back and recycling program

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 sucessfully developed into an internationally recognized leader in the solar energy industry based on its stong, 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 multicrstalline wafer manufacturer and supplier in the world with 2.2GW capacity in 2010.

LDK Solar PV Value Chain



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POLYCRYSTALLINE MODULES

180P-185P-190P-195P-200P-205P-210P-215P-220P-18

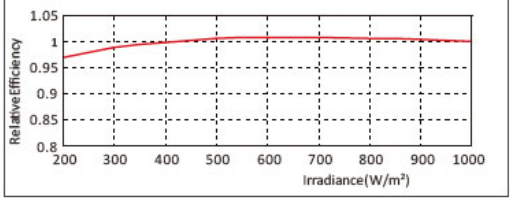
ELECTRIC CHARACTERISTICS (STC*)

Type	180P-18	185P-18	190P-18	195P-18	200P-18	205P-18	210P-18	215P-18	220P-18
Nominal Output (Pmax) [W]	180	185	190	195	200	205	210	215	220
Warranted Minimum Power [W]	174.6	179.45	184.3	189.15	194	198.85	203.7	208.55	213.4
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
Voltage at Pmax (Vmp) [V]	26.6	26.6	26.7	26.8	26.9	27.0	27.1	27.1	27.2
Current at Pmax (Imp) [A]	6.77	6.96	7.11	7.28	7.44	7.60	7.75	7.94	8.09
Open Circuit Voltage (Voc) [V]	32.5	32.5	32.6	32.7	32.8	33.0	33.2	33.2	33.3
Short Circuit Current (Isc) [A]	7.96	7.97	7.97	8.11	8.25	8.33	8.47	8.48	8.49
Maximum System Voltage	IEC: 1000 V / UL: 600 V								
Maximum Series Fuse Rating	12A								
Cell Efficiency [%]	14.12	14.51	14.91	15.3	15.69	16.08	16.47	16.87	17.26
Module Efficiency [%]	12.20	12.54	12.88	13.22	13.56	13.90	14.24	14.47	14.70

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%

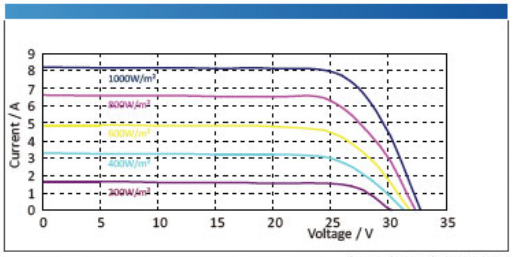


ELECTRICAL PERFORMANCE AT NOCT

Type	180P-18	185P-18	190P-18	195P-18	200P-18	205P-18	210P-18	215P-18	220P-18
Nominal Output (Pmax) [W]	130	134	138	141	145	149	152	156	159
Voltage at Pmax (Vmp) [V]	22.2	22.8	23.5	23.6	23.8	24.2	24.3	24.9	25.4
Current at Pmax (Imp) [A]	5.85	5.87	5.88	5.98	6.09	6.15	6.24	6.26	6.26
Open Circuit Voltage (Voc) [V]	29.9	29.9	30.0	30.1	30.2	30.4	30.6	30.6	30.7
Short Circuit Current (Isc) [A]	6.44	6.45	6.45	6.57	6.68	6.74	6.86	6.87	6.87

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-200P-18

TEMPERATURE CHARACTERISTICS

Type	LDK-P-18 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

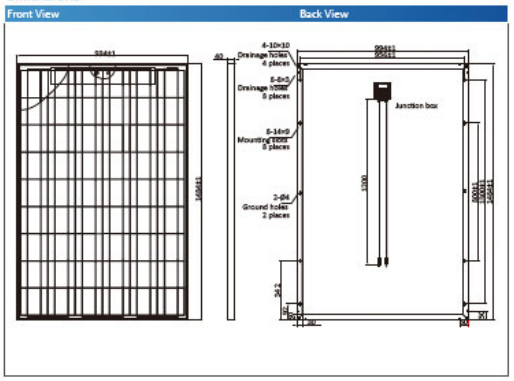
*NOCT**: Nominal Operation Cell Temperature Sun 800W/m²; Air 20°C; Wind speed 1m/s*

MECHANICAL CHARACTERISTICS

Type	LDK-P-18 Series
Solar Cells	54(6x9) polycrystalline 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 mm²
Dimension	1484 x 994 x 40 mm / 58.4 x 39.1 x 1.6 Inches
Weight	18 Kg / 39.7 lbs
Max.Load	Certified to 5400 Pa

DIMENSIONS

Front View | Back View



PACKING CONFIGURATION

Type	LDK-P-18 Series
Packing Configuration	24 pcs. / box
Quantity / Pallet	48 pcs. / pallet
Loading Capacity	672 pcs. / 40ft (H)

Tel:+34 607 926 585
Email: clientes@importsunpv.com
Web:www. importsunpv.com

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POLYCRYSTALLINE MODULES

200P-205P-210P-215P-220P-225P-230P-235P-240P-245P-250P-20

200P WATT to 250P WATT





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

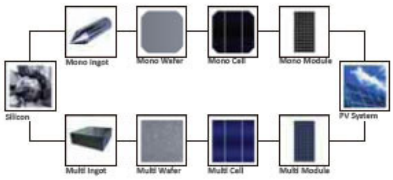
- ISO9001:2008 Quality Management System
- CEC Listed: Modules are eligible for California rebates
- PV Cycle: Voluntary module take back and recycling program

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LDK Solar PV Value Chain



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POLYCRYSTALLINE MODULES

200P-205P-210P-215P-220P-225P-230P-235P-240P-245P-250P-20

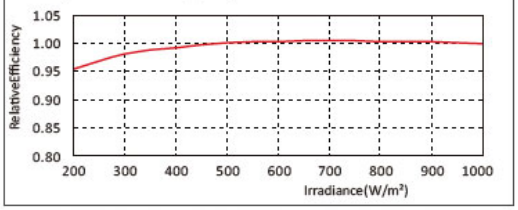
ELECTRIC CHARACTERISTICS (STC*)

Type	200 P-20	205 P-20	210 P-20	215 P-20	220 P-20	225 P-20	230 P-20	235 P-20	240 P-20	245 P-20	250 P-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	218.25	223.1	227.95	232.8	237.65	242.5
Flash Test Power Classification	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W	Q/+5 W
Voltage at Pmax (Vmp) [V]	29.5	29.6	29.7	29.8	29.8	29.9	29.9	30.0	30.0	30.1	30.2
Current at Pmax (Imp) [A]	6.75	6.93	7.07	7.23	7.40	7.53	7.68	7.84	7.98	8.14	8.28
Open Circuit Voltage (Voc) [V]	36.0	36.0	36.1	36.3	36.5	36.7	36.8	36.8	36.9	37.2	37.5
Short Circuit Current (Isc) [A]	7.82	7.82	7.83	7.98	8.14	8.24	8.34	8.35	8.35	8.48	8.59
Maximum System Voltage	IEC: 1000 V / UL: 600 V										
Maximum Series Fuse Rating	12A										
Cell Efficiency (%)	14.12	14.47	14.83	15.18	15.53	15.89	16.24	16.59	16.94	17.29	17.64
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%

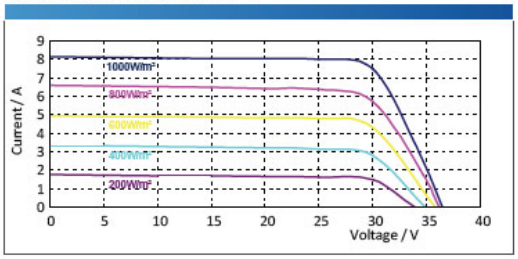


ELECTRICAL PERFORMANCE AT NOCT

Type	200 P-20	205 P-20	210 P-20	215 P-20	220 P-20	225 P-20	230 P-20	235 P-20	240 P-20	245 P-20	250 P-20
Nominal Output (Pmax) [W]	145	149	152	156	159	163	167	170	174	178	181
Voltage at Pmax (Vmp) [V]	25.1	25.7	26.2	26.3	26.4	26.7	27.1	27.4	28.0	28.1	28.2
Current at Pmax (Imp) [A]	5.80	5.80	5.81	5.93	6.04	6.12	6.19	6.22	6.23	6.33	6.42
Open Circuit Voltage (Voc) [V]	33.1	33.1	33.2	33.4	44.6	33.8	33.9	33.9	34.0	34.3	34.5
Short Circuit Current (Isc) [A]	6.33	6.33	6.34	6.46	6.59	6.67	6.75	6.76	6.76	6.87	6.95

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-220P-20

TEMPERATURE CHARACTERISTICS

Type	LDK-P-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

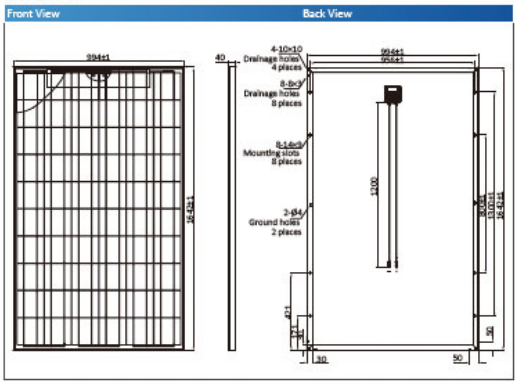
*NOCT**: Nominal Operation Cell Temperature Sun 800W/m²; Air 20°C; Wind speed 1m/s*

MECHANICAL CHARACTERISTICS

Type	LDK-P-20 Series
Solar Cells	60(6x10) polycrystalline 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 mm²
Dimension	1642 x 994 x 40 mm / 64.6 x 39.1 x 1.6 inches
Weight	20 Kg / 44.1 lbs
Max Load	Certified to 5400 Pa

DIMENSIONS

Front View | Back View



PACKING CONFIGURATION

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

Tel:+34 607 926 585
Email: clientes@importsunpv.com
Web:www. importsunpv.com

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POLYCRYSTALLINE MODULES

240P-245P-250P-255P-260P-265P-270P-275P-280P-24

240P WATT to 280P WATT





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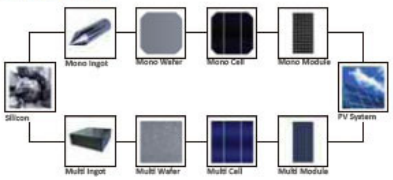
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240P-245P-250P-255P-260P-265P-270P-275P-280P-24

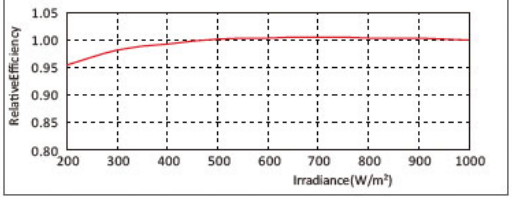
ELECTRIC CHARACTERISTICS (STC*)

Type	240 P-24	245 P-24	250 P-24	255 P-24	260 P-24	265 P-24	270 P-24	275 P-24	280 P-24
Nominal Output (Pmax) [W]	240	245	250	255	260	265	270	275	280
Warranted Minimum Power [W]	232.8	237.65	242.5	247.35	252.2	257.05	261.9	266.75	271.6
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
Voltage at Pmax (Vmp) [V]	35.8	35.8	35.9	35.9	36.0	36.1	36.2	36.2	36.3
Current at Pmax (Imp) [A]	6.70	6.85	6.96	7.11	7.23	7.35	7.47	7.60	7.72
Open Circuit Voltage (Voc) [V]	44.1	44.1	44.1	44.1	44.2	44.2	44.2	44.3	44.3
Short Circuit Current (Isc) [A]	8.01	8.02	8.02	80.4	80.6	8.14	8.21	8.28	8.36
Maximum System Voltage	IEC: 1000 V / UL: 600 V								
Maximum Series Fuse Rating	12A								
Cell Efficiency [%]	14.27	14.57	14.86	15.16	15.46	15.75	16.05	16.35	16.66
Module Efficiency [%]	12.33	12.59	12.84	13.10	13.36	13.62	13.87	14.13	14.39

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%

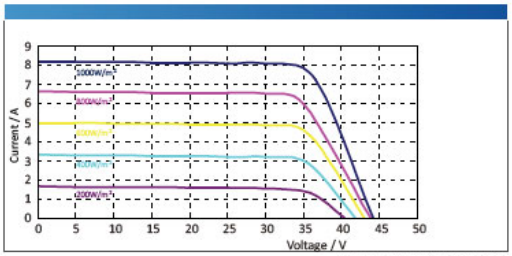


ELECTRICAL PERFORMANCE AT NOCT

Type	240 P-24	245 P-24	250 P-24	255 P-24	260 P-24	265 P-24	270 P-24	275 P-24	280 P-24
Nominal Output (Pmax) [W]	174	178	181	185	188	192	196	199	203
Voltage at Pmax (Vmp) [V]	29.9	30.3	30.8	31.0	31.4	31.6	31.8	32.1	32.4
Current at Pmax (Imp) [A]	5.82	5.86	5.89	5.96	6.01	6.07	6.15	6.21	6.27
Open Circuit Voltage (Voc) [V]	40.6	40.6	40.6	40.6	40.7	40.7	40.7	40.8	40.8
Short Circuit Current (Isc) [A]	6.48	6.49	6.49	6.51	6.53	6.59	6.65	6.70	6.77

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-260P-24

TEMPERATURE CHARACTERISTICS

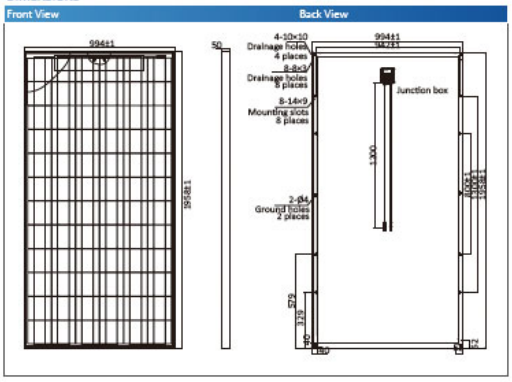
Type	LDK-P-24 Series
NOCT**	45±2 °C
Temperature Coefficient of Pmax	-0.47 % / °C
Temperature Coefficient of Voc	-0.34 % / °C
Temperature Coefficient of Isc	0.06 % / °C
Operating Temperature	-40°C to +85°C

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

MECHANICAL CHARACTERISTICS

Type	LDK-P-24 Series
Solar Cells	72(6x12) polycrystalline cells 156mm
Front Cover	4mm 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 mm²
Dimension	1958 x 994 x 50 mm / 77.1 x 39.1 x 2.0 inches
Weight	30.5 Kg / 67.2 lbs
Max.Load	Certified to 5400 Pa

DIMENSIONS



PACKING CONFIGURATION

Type	LDK-P-24 Series
Packing Configuration	20 pcs. / box
Quantity / Pallet	40 pcs. / pallet
Loading Capacity	440 pcs. / 40ft (H)

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