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# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

**IREX Energy Joint Stock Company**

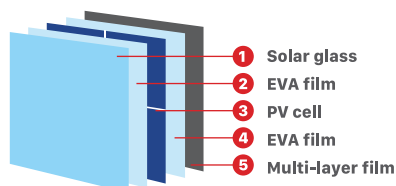
**IR145P-185P-36**

**IR180P-36**

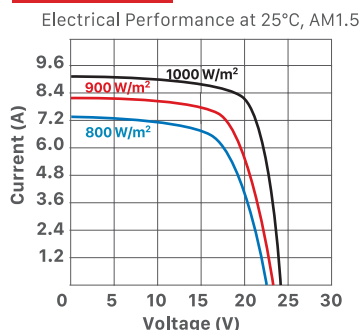
Also available on the web at  
[EnergyPal.com/irex-energy-joint-stock-company-solar-panels/ir180p-36](http://EnergyPal.com/irex-energy-joint-stock-company-solar-panels/ir180p-36)

# 156 SERIES POLYCRYSTALLINE

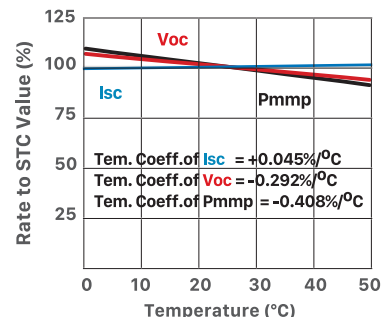
SOLAR MODULE: 145 W, 150 W, 155 W, 160 W, 165 W, 170 W, 175 W, 180 W, 185 W



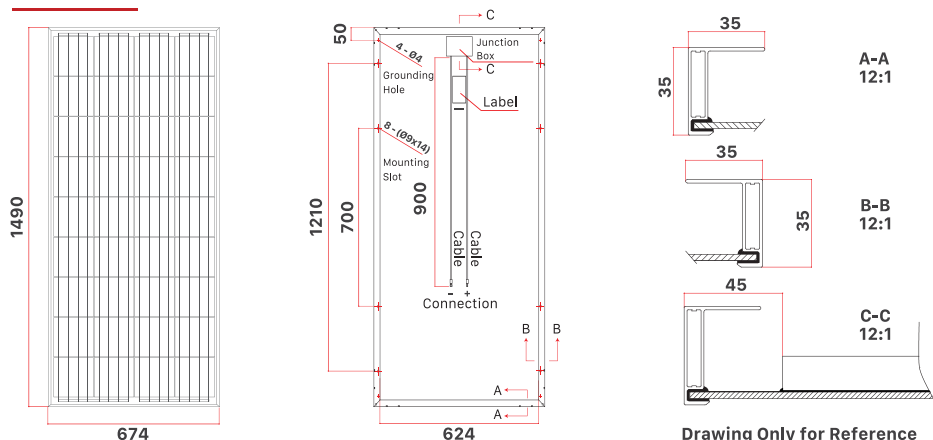
## PERFORMANCE



Temperature Dependence of  $I_{sc}$ ,  $V_{oc}$  &  $P_{mp}$  at 1000 W/m<sup>2</sup>, AM1.5



## STRUCTURE



### ELECTRICAL CHARACTERISTICS STC

	IR145P-36	IR150P-36	IR155P-36	IR160P-36	IR165P-36	IR170P-36	IR175P-36	IR180P-36	IR185P-36
Maximum Power (Pmax)	145 W	150 W	155 W	160 W	165 W	170 W	175 W	180 W	185 W
Power Tolerance	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%
Module Efficiency	14.4%	14.9%	15.4%	15.9%	16.4%	16.9%	17.4%	17.9%	18.4%
Maximum Power Current (Imp)	8.08 A	8.24 A	8.32 A	8.42 A	8.60 A	8.68 A	8.76 A	8.82 A	8.90 A
Maximum Power Voltage (Vmp)	17.95 V	18.21 V	18.64 V	19.01 V	19.19 V	19.59 V	19.98 V	20.41 V	20.79 V
Short Circuit Current (Isc)	8.56 A	8.73 A	8.82 A	8.93 A	9.12 A	9.20 A	9.27 A	9.34 A	9.42 A
Open Circuit Voltage (Voc)	22.26 V	22.59 V	23.15 V	23.59 V	23.80 V	24.31 V	24.70 V	25.28 V	25.66 V

Values at Standard Test Conditions (STC: Air Mass AM 1.5, Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C)

### ELECTRICAL CHARACTERISTICS NOCT

	IR145P-36	IR150P-36	IR155P-36	IR160P-36	IR165P-36	IR170P-36	IR175P-36	IR180P-36	IR185P-36
Maximum Power (Pmax)	104.00 W	108.00 W	112.00 W	115.00 W	120.00 W	124.00 W	128.00 W	131.00 W	135.00 W
Maximum Power Current (Imp)	6.33 A	6.46 A	6.54 A	6.61 A	6.77 A	6.85 A	6.90 A	6.97 A	7.05 A
Maximum Power Voltage (Vmp)	16.44 V	16.74 V	17.14 V	17.40 V	17.88 V	18.10 V	18.55 V	18.80 V	19.15 V
Short Circuit Current (Isc)	6.84 A	6.98 A	7.05 A	7.14 A	7.30 A	7.34 A	7.40 A	7.46 A	7.55 A
Open Circuit Voltage (Voc)	20.70 V	21.00 V	21.51 V	21.92 V	22.13 V	22.37 V	22.70 V	23.22 V	23.57 V

Values at Nominal Operating Cell Temperature

(NOCT: Wind Speed 1m/s, Irradiance 800 W/m<sup>2</sup>, Cell Temperature 45°C, Ambient Temperature 20°C)

## MECHANICAL CHARACTERISTICS

Cell Type	156.75x156.75 mm Polycrystalline, 36 (4x9) pcs in series
Solar glass	High Transmission, Low Iron, Tempered Glass with Anti Reflecting Coating
Frame	Anodized Aluminum Alloy type 6063 - T5
Junction Box	Rated current ≥ 15 A, IP ≥ 67, TUV & UL
Dimension	1490 x 674 x 35 mm
Output Cable	4 mm <sup>2</sup> (EU)/12 AWG (US), 900 mm
Weight	12 kg
Installation hole Location	See Drawing Above

## PACKING INFORMATION

Container	20' GP	40' GP	40' HQ
Pallets per Container	14	30	30
Pieces per Container	420	900	960

## WORKING CONDITIONS

Operating Temperature	-40°C to +85°C
Maximum System Voltage	1500 VDC (IEC) / 1500 VDC (UL)
Maximum Series Fuse Rating	20 A (IEC) / 20 A (UL)
Application Class	Class A