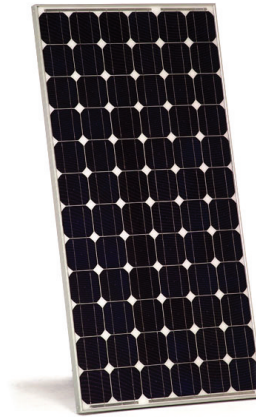


- ◆ Maximum quality standard modules
- ◆ Ultrafine high efficiency cells
- ◆ Generating energy since 1981
- ◆ Strength and reliability
- ◆ Tested and certified by TÜV

## PHOTOVOLTAIC MODULES IS- 160 / 165 / 170 / 175 / 180

### Monocrystalline solar modules



#### PHYSICAL CHARACTERISTICS

CELL TYPE	with antireflection layer, textured, Monocrystalline Si size 125 x 125 mm
CONTACTS	Redundant, multiple contacts in each cell
CELLS NUMBER PER MODULE	72 cells in serial
STRUCTURE	1) Tempered microstructured high transmittance glass 2) EVA laminated cells 3) Tedlar/Polyesther back layers
FRAME	Anodized aluminium
GROUND	Yes
ANTITHEFT DRILL	Yes
INTERCONNECTION BOXES	1 x IP 65 with bypass diode
WIRES	1 m (+); 1 m (-); 4 mm <sup>2</sup> Multicontact MC4 or similar



For further details please visit [isofoton.com](http://isofoton.com)

#### TYPICAL VALUES FOR SYSTEM INTEGRATION

MAXIMUM VOLTAGE ALLOWED	1.000 V
REVERSE CURRENT OVERLOAD	2 h overload at 135% of maximum protection value
MAXIMUM MECHANICAL LOAD ALLOWED	5.400 Pa
OPERATION CONDITIONS	-40 °C à 85 °C
IMPACT RESISTANCE	25 mm hail, from 1 m of distance at 23 m/s

#### GENERAL CHARACTERISTICS

DIMENSIONS	1.600 x 790 x 40 mm
WEIGHT	14,4 kg
PACKAGING CONDITIONS	25 modules per box (4 modules per box as option)
PACKAGING BOX SIZE FOR 25 units	1.650x 850 x 1.220 mm (recyclable materials)



## PERFORMANCE AT STANDARD TEST CONDITIONS (STC)

	IS - 160	IS - 165	IS - 170	IS - 175	IS - 180
MAXIMUM POWER RATING -P <sub>max</sub> - (W)	160	165	170	175	180
OPEN CIRCUIT VOLTAGE -V <sub>oc</sub> - (V)	44,2	44,3	44,6	44,8	45,2
MAXIMUM POWER VOLTAGE -V <sub>mpp</sub> - (V)	35,5	35,6	35,7	36,2	36,5
SHORT CIRCUIT CURRENT -I <sub>sc</sub> - (A)	4,87	5,0	5,13	5,2	5,3
MAXIMUM POWER CURRENT -I <sub>mp</sub> - (A)	4,50	4,64	4,77	4,84	4,93
MODULE EFFICIENCY (%)	12,9	12,9	13,3	13,7	14,0
OUTPUT TOLERANCE (% P <sub>max</sub> )	± 3%	± 3%	± 3%	± 3%	± 3%

Measured in solar simulator Class A, according to IEC-60904-9 Ed.2, certified by TÜV Rheinland

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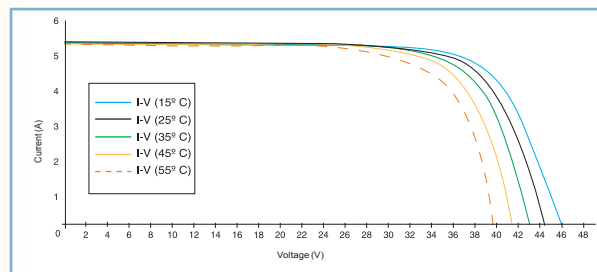
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## PERFORMANCE AT 800 W/m<sup>2</sup>, NOCT, AM 1,5

	IS - 160	IS - 165	IS - 170	IS - 175	IS - 180
MAXIMUM POWER RATING -P <sub>max</sub> - (W)	114	118	122	125	129
OPEN CIRCUIT VOLTAGE -V <sub>oc</sub> - (V)	39,8	40,3	40,5	40,7	41,1
MAXIMUM POWER VOLTAGE -V <sub>mpp</sub> - (V)	31,6	31,8	31,9	32,3	32,7
SHORT CIRCUIT CURRENT -I <sub>sc</sub> - (A)	3,95	4,03	4,13	4,19	4,27
MAXIMUM POWER CURRENT -I <sub>mp</sub> - (A)	3,60	3,71	3,82	3,87	3,94
OUTPUT TOLERANCE (% P <sub>max</sub> )	± 3%	± 3%	± 3%	± 3%	± 3%

Reduction in efficiency from 1000W/m<sup>2</sup> to 200W/m<sup>2</sup> at 25°C, according to IEC-60904-1: 5% (+/-3%)

## I-V VARIATION OF IS-170 ACCORDING TO CELL'S TEMPERATURE

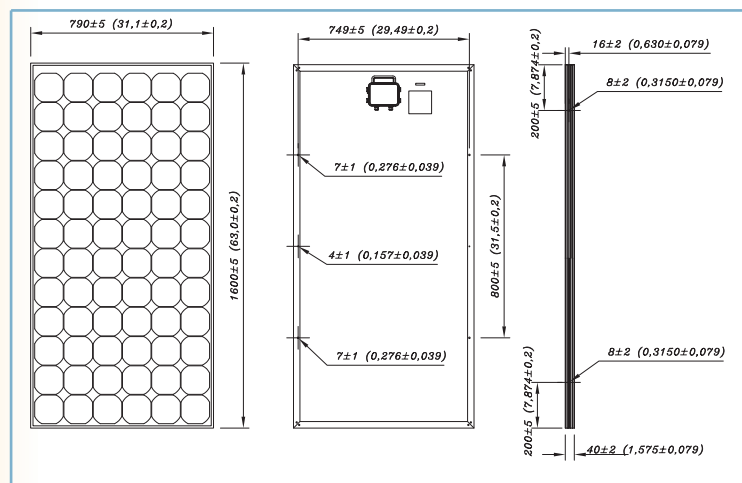


## TEMPERATURE COEFFICIENTS

TONC	47°C +/- 2°C
CCT I <sub>sc</sub>	0,0254 %/ K
CCT V <sub>oc</sub>	-0,378 %/ K
CCT P <sub>max</sub>	-0,48 %/ K

REMARKS:  
All specifications are subject to change without prior notification by ISOFOTÓN S.A. This commercial sheet meets the requirements of EN 50380

## DIMENSIONS



The longitudinal and transversal size does not include the head of the rivets (+3,2 mm).