

## QUALIFICATIONS AND CERTIFICATES

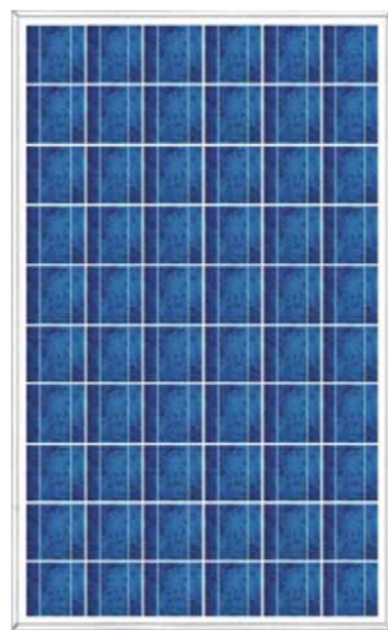
IEC 61215 Edition 2, IEC 61730 Class A, CE, ISO 9001



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection



Monocrystalline



Polycrystalline

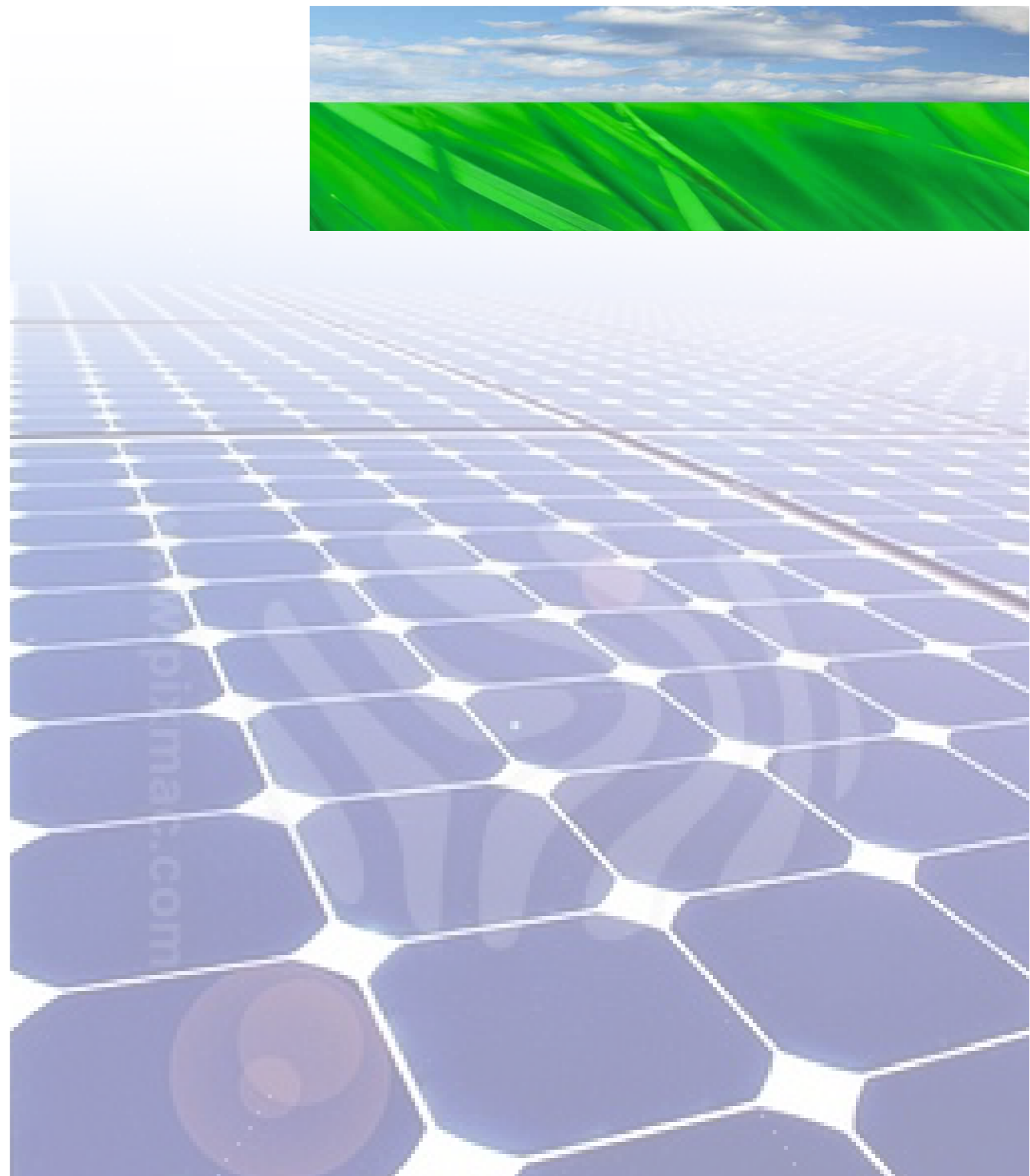
### 25 year Quality Guarantee

- 10 years with 100% product guarantee
- 12 years 90% rated power output
- 25 years 80% rated power output

# ARQE

Arqe s.r.o., Holandská 6, Brno 639 00, CZ  
tel.: +420 543 215 120  
fax: +420 543 210 144  
arqe@arqe.cz

# ARQE

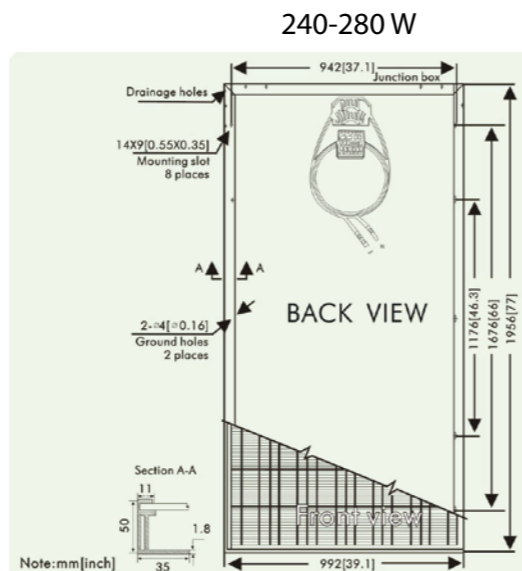
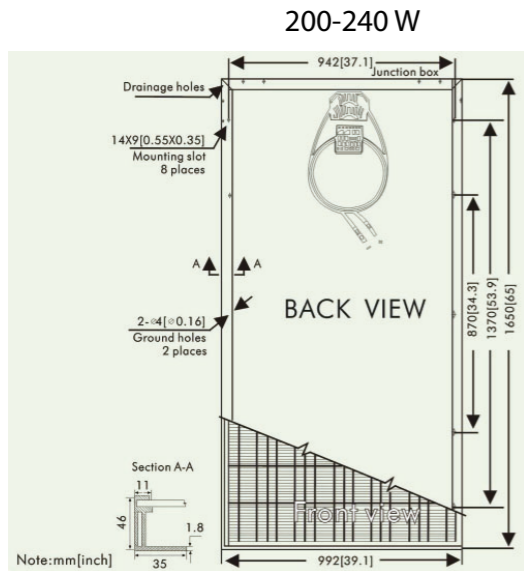
 Photovoltaic systems

# POLYCRYSTALLINE module

## ELECTRICAL PARAMETERS

Electrical parameters at STC (1,000 W/m<sup>2</sup>, 25°C, AM 1.5 according to EN 60904-3)

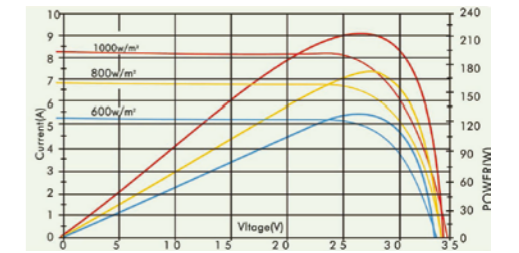
Module type	[W]	AQ 200P	AQ 230P	AQ 240P	AQ 270P	AQ 280P
Power output	[W]	200 Wp	230 Wp	240 Wp	270 Wp	280 Wp
Power output tolerances	[W]	+/- 3	+/- 3	+/- 3	+/- 3	+/- 3
Module Efficiency	[V]	15,6%	15,6%	15,6%	15,6%	15,6%
Voltage at Pmax, V <sub>mpp</sub>	[A]	28.7 V	30 V	30.6 V	35 V	35.3 V
Current at Pmax, I <sub>mp</sub>	[V]	6.97 A	7.66 A	7.84 A	7.72 A	7.94 A
Open circuit voltage V <sub>oc</sub>	[A]	36 V	37 V	37,5 V	43,7 V	44V
Short circuit current I <sub>sc</sub>	[V]	7.75 A	8.18 A	8.38 A	8.40 A	8.58 A
Max. system Voltage		1,000 VDC	1,000 VDC	1,000 VDC	1,000 VDC	1,000 VDC
Dimensions (length [mm] / width [mm] / thickness [mm])		1,650 / 992 / 46	1,650 / 992 / 46	1,650 / 992 / 46	1,956 / 992 / 50	1,956 / 992 / 50
Weight [kg]		20 kg	20 kg	20 kg	27 kg	27 kg



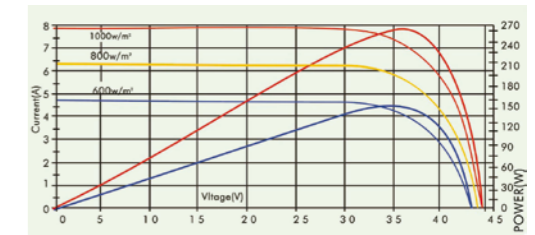
## MECHANICAL PARAMETERS

Junction box (manufacturer / protection degree / number of diodes)	CIXI / IP65 / 6
Junction box dimensions (length / width / thickness [mm])	151 / 122 / 25
Positive cable & negative cable (manufacturer / length [mm] / cable cross-section [mm <sup>2</sup> ])	CIXI / 1,200 / 4.0
Plug connector (manufacturer / type / protection degree)	MC4 / UV resistance and self-locking / IP67
Encapsulation materials	Ethylene Vinyl Acetate (EVA)
Rear cover (material / thickness [mm])	Le - PET - PVDF / 0.287
Frame (material)	robust anodized aluminum alloy

## 200-240 W

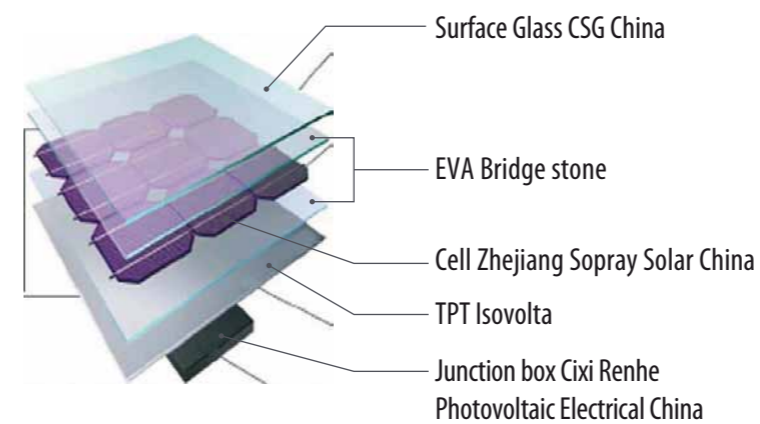


## 240-280 W



## PARAMETERS OF THE THERMAL CHARACTERISTICS

NOCT (Nominal Operating Cell Temperature)	[°C]	46 +/- 2
Temperature coefficient beta of I <sub>sc</sub>	[1/K]	+ 0.0006
Temperature coefficient alpha of V <sub>oc</sub>	[1/K]	- 0.0037
Temperature coefficient gamma of P <sub>mp</sub>	[1/K]	- 0.0045



## QUALITY & RELIABILITY

- Robust, corrosion resistant aluminium frame independently tested to withstand wind loads of 2.4KPa and snow loads of 5.4KPa ensuring a stable mechanical life for your modules.
- Modules independently tested to ensure conformance with certification and regulatory standards.
- Manufacturing facility certified to ISO 9001 Quality Management System standards.

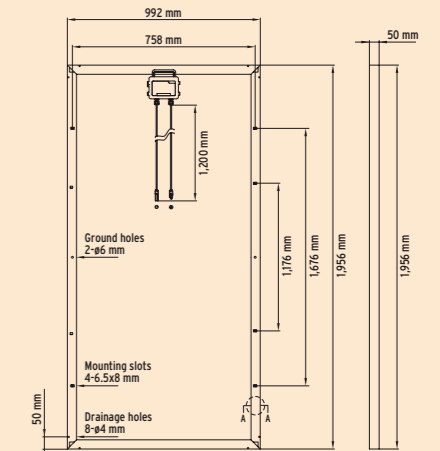
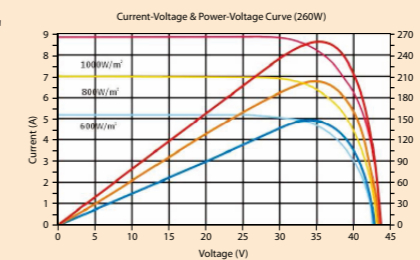
# MONOCRYSTALLINE module

## 72x6"/ 260 - 310 W

Module type	SYP260M	SYP270M	SYP280M	SYP290M	SYP300M	SYP310M
Pm (Wp)	260 W	270 W	280 W	290 W	300 W	310 W
Tolerance	- 0 - + 3 %	- 0 - + 3 %	- 0 - + 3 %	- 0 - + 3 %	- 0 - + 3 %	- 0 - + 3 %
Vm (V)	34.80	35.00	35.20	34.4	35.8	36
Im (A)	7.47	7.71	7.95	8.19	8.37	8.61
Voc (V)	44.00	44.50	44.80	44.8	44.8	44.8
Isc (A)	8.09	8.20	8.33	8.63	8.93	9.22
Module Efficiency	>13.44 %	>13.96 %	>14.47 %	>14.94 %	>15.46 %	>15.97 %
Dimensions (length [mm] / width [mm] / thickness [mm])	1,956 / 992 / 50					
Weight [kg]	21					

## SPECIFICATIONS

- number of mono crystalline solar cell 72 pcs x 6"
- maximum system voltage 1000 VDC
- bypass diodes to reduce loss in partial shadow
- MC4 plug system
- IP65
- performance test data for each module
- positive power tolerance up to +3%
- bypass diodes to reduce loss in partial shadow



## PARAMETERS OF THE THERMAL CHARACTERISTICS

NOCT (Nominal Operating Cell Temperature)	[°C]	46 +/- 2
Temperature coefficient beta of I <sub>sc</sub>	[1/K]	- 0.02 % / °C
Temperature coefficient alpha of V <sub>oc</sub>	[1/K]	- 0.37 % / °C
Temperature coefficient gamma of P <sub>mp</sub>	[1/K]	- 0.50 % / °C