

Some data on the composition of the module:



**UNION GLASS S.r.l.**  
 Cap. Soc. € 600.000,00 i.v.  
 Sede Legale: Via Istria  
 31045 MOTTA DI LIVENZA (TV)  
 Tel.: 0422.861235 - Fax: 0422.768563  
 www.unionglass.it - info@unionglass.it  
 R.I./C.F./P.I.: IT 03156240263 - R.E.A. TV N. 224776



General		
Manufacturer	UNION GLASS	
Series	biPV-UGM	
Type of construction	158.75 x 158.75 mm 5BB monocrystalline silicon	
Number of cells	60	
Panel code	FV1 - Fornaciari	
Electrical parameters		
All electrical specifications are to STC standard test conditions (1,000 W/sq m.; AM 1.5; 25 °C)		
Technical Data		Module power class
Module power (Pmax)	W	320
Voltage at max power (Vpmax)	V	34.61
Current at max power (Ipmax)	A	9.20
Open-circuit voltage (Voc)	V	40.20
Short-circuit current (Isc)	A	9.62
Maximum system voltage	V	1,000
Power tolerance	%	± 5
Temperature coefficient (Isc) (α)	%/°C	0.06
Temperature coefficient (Voc) (β)	%/°C	-0.36
Temperature coefficient (Pmax) (γ)	%/°C	-0.36
Module Efficiency	%	17.9
Cell Efficiency	%	22.5
Fill Factor	%	82.4
Nominal Operating Cell Temperature (NOCT)	°C	48 ± 3
Mechanical parameters		
Dimensions: base	mm	1050
Dimensions: height	mm	1700
Front glass (type and thickness)	-	extra-clear 4 mm tempered + HST, ground raw edge
Solar PVB	-	PVB 0.76 mm + cell + PVB 0.76 mm
Rear glass (type and thickness)	-	extra-clear 4 mm hardened, ground raw edge
Chamber	mm	-
Internal glass	-	-
Total thickness	mm	9.52
Junction box	-	Standard junction box/edge junction box
Cable length	mm	pending definition
Weight	kg	36
Test parameters		
Operating temperature	°C	-40 / +85
Mechanical load test	-	2,400 Pa or 244 kg/sq m.
Hail impact resistance	-	diam. 25 mm at 83 km/h
Humidity	%	85
Modules produced according to the following certifications and guarantees		
Design qualification and type approval	EN 61215: 2005/IEC 61215: 2005	
Safety qualification (requirements for construction)	EN 61730-1: 2007/IEC 61730-1:2004	
Safety qualification (requirements for testing)	EN 61730-2/A1: 2012/IEC 61730-2:2012	
Management/Production System	ISO 9001: 2008	
Module performance guarantee	90% production at 10 years; 80% at 25 years	
<b>N.B. 100% of the modules are tested with solar simulator (solar test).</b>		