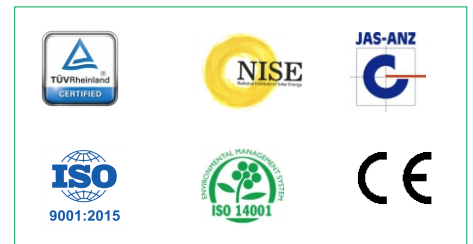
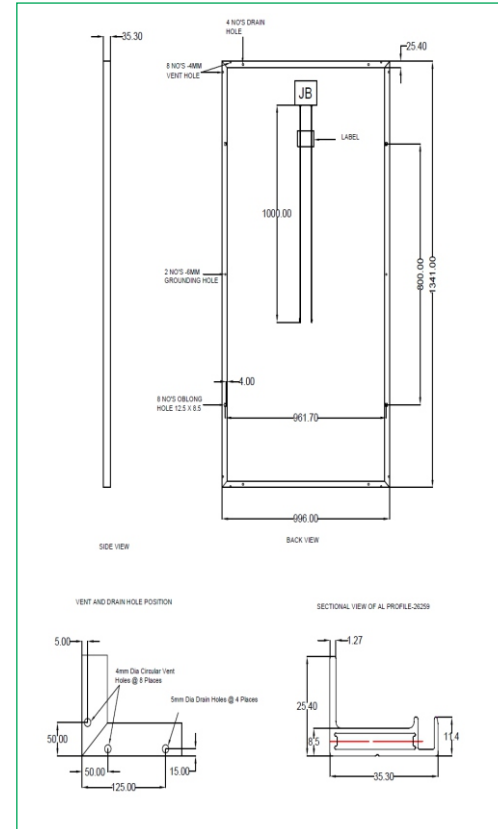


MINITHRON SERIES

4BB SERIES

Model Type	EFS12180MF72
Electrical Data: at Standard test condition (STC)*	
Maximum power (P_{max})	180 W
Open circuit voltage (V_{oc})	22.32 V
Short circuit current (I_{sc})	10.60 A
Voltage at P_{max} (V_{mp})	18.5 V
Current at P_{max} (I_{mp})	9.73 A
Tolerance at P_{max}	$\pm 3\%$ WP
Thermal Data:	
Temperature coefficient of V_{oc}	-0.36 %/K
Temperature coefficient of I_{sc}	0.06 %/K
Temperature coefficient of P_{max}	-0.43 %/K
Normal operating cell temperature	47 ± 2 °C
Mechanical Data:	
Cell type	Multi Crystalline
Solar cell per module	72
Module dimensions L x W x T, mm	1341 x 996 x 35.30
Mounting hole pitch (Y)	800mm
Mounting hole pitch (X)	962mm
Mounting hole size (A)	12 x 8.5mm oblong holes at 4 places
Grounding Hole Size (B)	6mm dia circular @ 2 places
Module weight, Kg	15.12
Module area, m ²	1.34
Junction box	IP67 With 3 diode
Cables & Plug	MC4
Front cover	3.2 Toughened textured low iron glass
Embedding	EVA (ethylene vinyl acetate)
Permissible operating conditions:	
Operating temperature range	-40 °C TO 85 °C
Maximum system voltage	1000 VDC
Application class	A
Warranty and Certifications	
Product Warranty	10 years on materials & workmanship
Perfarnance Warranty	25 years linears power out put



Notes:

* STC: 1000 W/m² irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN 60904-3
 The specifications and the key feature may deviate due to on going innovation, research and product enhancement. Enfros reserves the right to make any changes/modifications to the information described herein at any time without prior notice.
 Warranty - Please refer to "Enfros Solar Warranty" document for Terms & Conditions
 Certifications - IEC 61215 Ed. 2, IEC 61730, IEC 61701, CE