

# 90Ex and 180Ex

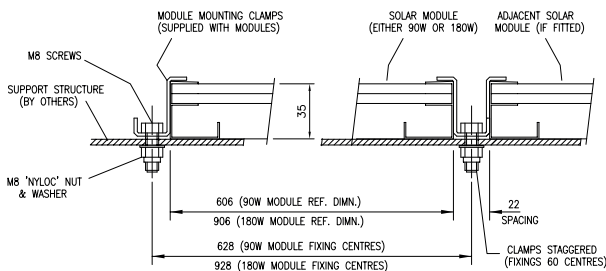
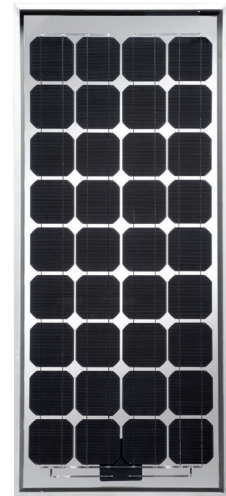
ATEX CERTIFIED SOLAR PV MODULES  
ATEX CERTIFIED FOR ZONE 1 INSTALLATION

**Tideland's 90Ex and 180Ex (90Wp and 180Wp Nominal Power) ATEX certified Solar PV Modules use high output 125 x 125 mono-crystalline cells laminated between two sheets of heat strengthened glass.**

The aluminum frame is hard anodized with a dichromate seal giving a film thickness of 30 - 60 microns. This has a high resistance to sea water making the modules ideally suited for offshore and areas with a salt laden atmosphere.

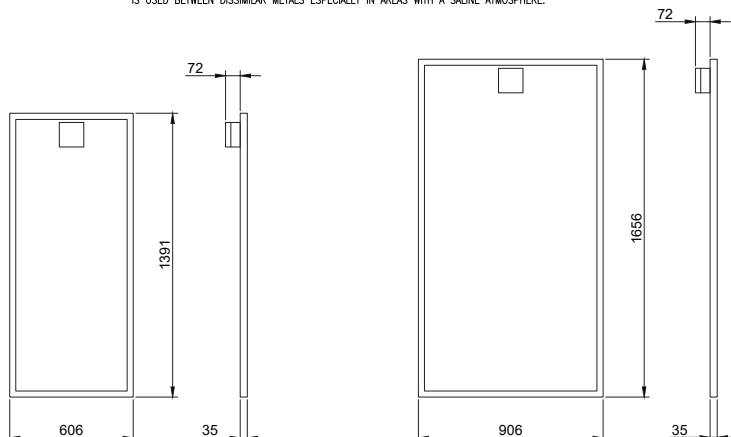
Blocking diodes are incorporated into the module laminations.

An IP66 glass fiber reinforced polyester junction box containing four terminals to accept 1.5 to 6mm conductors and two M20 cable entries is mounted on the rear of the module.



SECTIONAL VIEW OF MODULE FIXING.

NOTE - MODULE MOUNTING CLAMPS ARE A4 STAINLESS STEEL. IT IS RECOMMENDED THAT AN INSULATION MATERIAL IS USED BETWEEN DISSIMILAR METALS ESPECIALLY IN AREAS WITH A SALINE ATMOSPHERE.



# 90Ex and 180Ex

## Technical Details

	PV90Ex	PV180Ex
<b>Nominal Voltage</b>	12V	24V
<b>Nominal Power</b>	90Wp	180Wp
<b>Open Circuit Voltage</b>	22.27V	44.44V
<b>Maximum Power Point Voltage</b>	18.24V	36.80V
<b>Maximum Power Point Current</b>	5.0 Amps	5.00 Amps
<b>Short Circuit Current</b>	5.31 Amps	5.36 Amps
<b>Maximum System Voltage</b>		500V
<b>Operating Temperature Range</b>		-20 to +55 Deg. C
<b>Maximum Series Fuse</b>		10A
<b>Lifetime Expectancy</b>		25 years
<b>Temperature Coefficients</b>		
Temp Coeff. V		-0.36%/Deg. C
Temp. Coeff I		0.04%/Deg. C

The PV90Ex and the PV180Ex are produced in accordance with IEC 61215

Hazardous Area Certification by BASEEFA in accordance with EN60079-0, EN60079-7 & EN60079-18

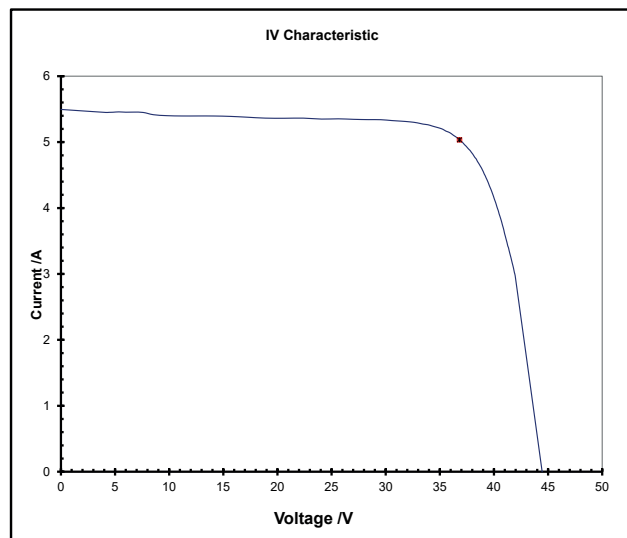
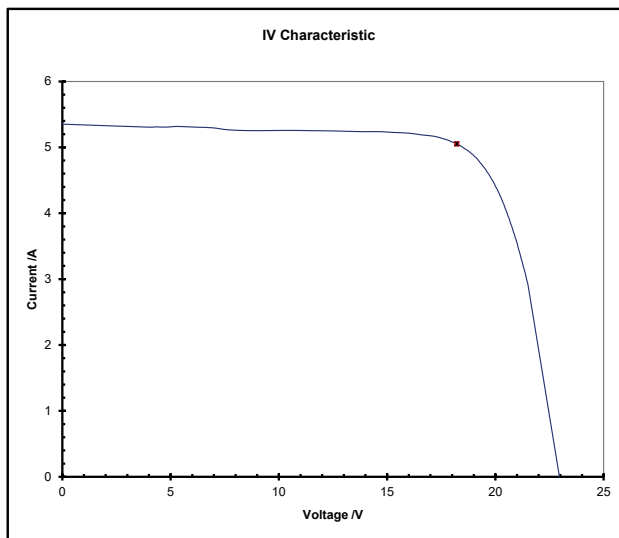
Classification and Protection: II2G ExembII T4

Certificate Number: BASEEFA 13ATEX0295x

### Electrical Parameters at SSTC (1000Wm<sup>2</sup>, AM 1.5 spectrum, cell temperature 25°C)

**Mounting** - The modules are supplied with fixing clamps for securing to the support structure. This method of fixing avoids the need for rear access to the support structure. Refer to installation and maintenance manual for full details.

### Ex MODULE SOLAR PANEL



NOTE: The IV characteristics above shows the typical performance of the solar module (T=25 deg. C)

Because of continuous product development and improvement the specifications in this data sheet are subject to change without notice. Specifications can vary slightly. For installation instructions please refer to the installation and maintenance manual. No rights can be derived from this data sheet and Tideland Signal Ltd. Assumes no liability whatsoever connected to or resulting from the use of and information contained herein.



Tideland Signal Corporation  
(USA)  
us-sales@tidelandsignal.com

Tideland Signal Ltd  
(Canada)  
canada-sales@tidelandsignal.com

Tideland Signal Ltd  
(Burgess Hill, UK)  
emea-sales@tidelandsignal.com

Tideland Signal  
(The Netherlands)  
emea-sales@tidelandsignal.com

Tideland Signal Ltd  
(Dubai, UAE)  
emea-sales@tidelandsignal.com

Tideland Signal Pte Ltd  
(Singapore)  
asia-sales@tidelandsignal.com

Tideland Signal Pte Ltd  
(Tianjin, China)  
asia-sales@tidelandsignal.com

[www.tidelandsignal.com](http://www.tidelandsignal.com)