



# Model SPS-40W-DV2

## 40 Watt Photovoltaic Module

GAS DETECTION SENSORS ■ INTEGRATED CONTROL SYSTEMS ■ SMARTWIRELESS® ■ PIPELINE ANALYZERS ■ ALARMS

High-efficiency photovoltaic module using silicon nitride multicrystalline silicon cells.

### Performance

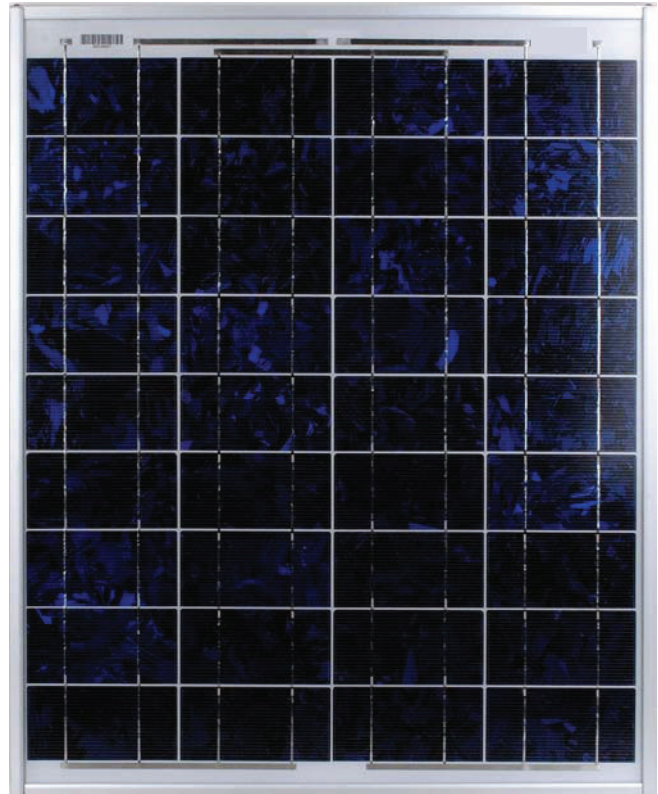
Rated power ( $P_{max}$ )	40W
Power tolerance	$\pm 10\%$
Nominal voltage	12V
Limited Warranty <sup>1</sup>	25 years

### Configuration

J	Clear universal frame and standard J-Box
---	--

### Electrical Characteristics <sup>2</sup>

Maximum power ( $P_{max}$ ) <sup>3</sup>	40W
Voltage at Pmax ( $V_{mp}$ )	17.3V
Current at Pmax ( $I_{mp}$ )	2.3A
Warranted minimum $P_{max}$	36W
Short-circuit current ( $I_{sc}$ )	2.5A
Open-circuit voltage ( $V_{oc}$ )	21.8V
Temperature coefficient of $I_{sc}$	$(0.065 \pm 0.015)\%/^{\circ}C$
Temperature coefficient of $V_{oc}$	$-(80 \pm 10)mV/^{\circ}C$
Temperature coefficient of power	$-(0.5 \pm 0.05)\%/^{\circ}C$
NOCT (Air 20°C; Sun 0.8kW/m <sup>2</sup> ; wind 1m/s)	47 $\pm$ 2°C
Maximum series fuse rating	20A
Maximum system voltage	50V (U.S. NEC & IEC 61215 rating)



### Mechanical Characteristics




Dimensions	Length: 655mm (25.8")	Width: 537mm (21.1")	Depth: 50mm (1.97")
Weight	5.75 kg (12.7 pounds)		
Solar Cells	36 cells (62.5mm x 125mm) in a 4x9 matrix connected in series		
Junction Box	J-Version junction box with 4-terminal connection block; IP 65, accepts PG 13.5, M20, 1/2 inch conduit, or cable fittings accepting 6-12mm diameter cable. Terminals accept 2.5 to 10mm <sup>2</sup> (8 to 14 AWG) wire.		
Construction	Front: High-transmission 3mm (1/8 <sup>th</sup> inch) tempered glass; Back: White Polyester; Encapsulant: EVA		
Frame	Clear anodized aluminum alloy type 6063T 6 Universal frame; Color: silver		

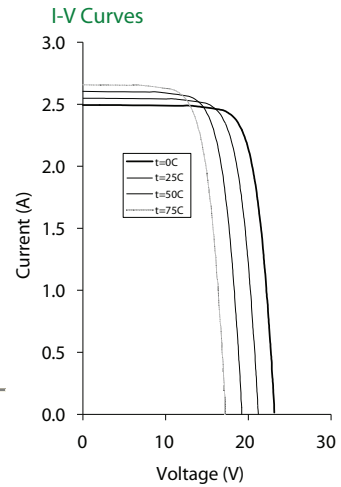
1. Module Warranty: 25-year limited warranty of 80% power output; 12-year limited warranty of 90% power output; 5-year limited warranty of materials and workmanship. See your local representative for full terms of these warranties.
2. This data represents the performance of typical BP modules, and are based on measurements made in accordance with ASTM E1036 corrected to SRC (STC.)
3. During the stabilization process that occurs during the first few months of deployment, module power may decrease by approx. 1% from typical  $P_{max}$ .

# Model SPS-40W-DV2 ■ 40 Watt Photovoltaic Module

R071211

## Quality and Safety

	Manufactured in ISO 9001-certified factories; conforms to European Community Directives 89/33/EEC, 73/23/EEC, 93/68/EEC; certified to IEC 61215
ESTI	Module power measurements calibrated to World Radiometric Reference through ESTI
	Listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)
	Approved by Factory Mutual Research in NEC Class 1, Division 2, Groups C & D hazardous locations.

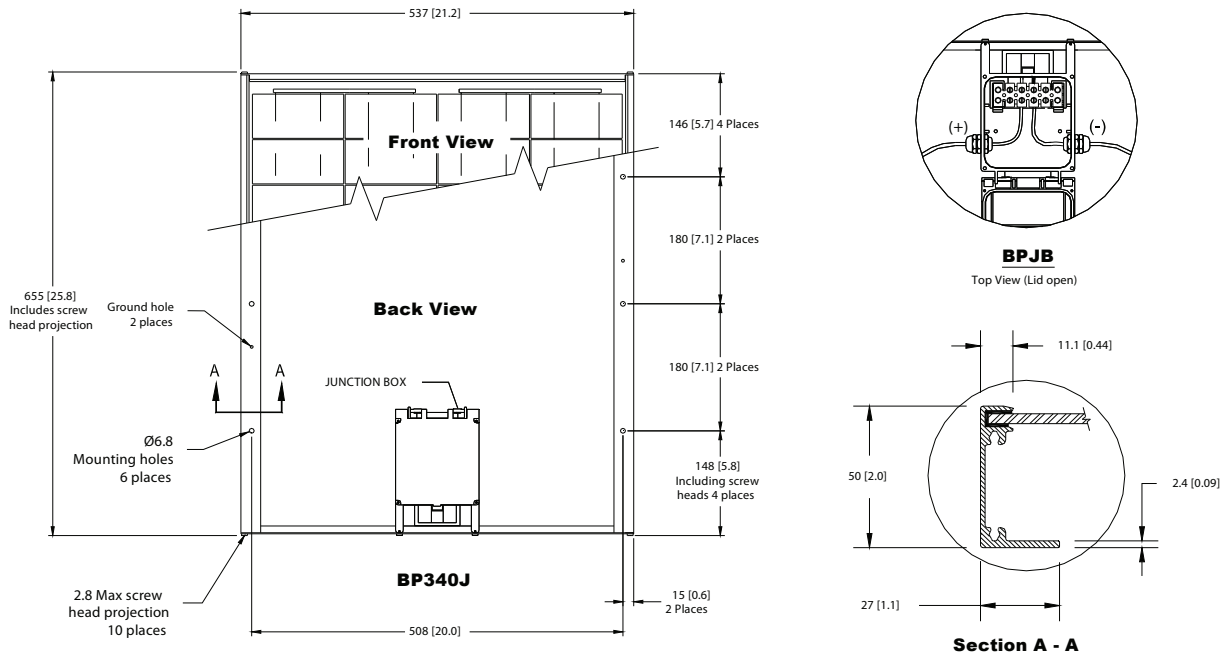


## Qualification Test Parameters

Temperature cycling range	-40°C to +85°C (-40°F to 185°F)
Humidity freeze, damp heat	85% RH
Static load front and back (e.g. wind)	50psf (2400 pascals)
Front loading (e.g. snow)	113psf (5400 pascals)
Hailstone impact	25mm (1 inch) at 23 m/s (52mph)

## Module Diagram

Dimensions in brackets are in inches. Un-bracketed dimensions are in millimeters. Overall tolerances  $\pm 3\text{mm}$  (1/8")



Included with each module: self-tapping grounding screw, instruction sheet, and warranty document.

Note: This publication summarizes product warranty and specifications, which are subject to change without notice.

Houston ■ Odessa ■ Shanghai ■ Dammam ■ Del Carmen ■ Europe



Tel: 713-559-9200  
 Toll Free: 888-367-4286  
 Fax: 281-292-2860  
 Email: sales@detcon.com  
 Web: www.detcon.com

ISO 9001: 2008  
 Certified