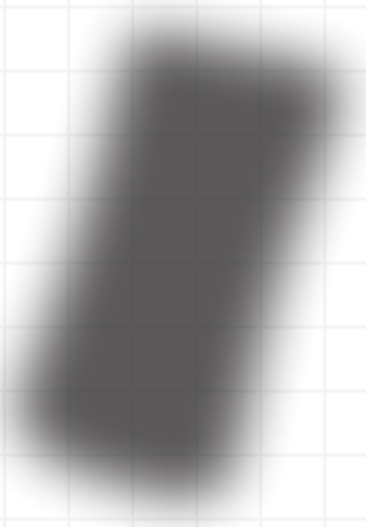
IXYSSOLAR
Efficiency By The Sun

SIV-3028 Data Sheet

SIV-3028
Solar Curve Tracer



Features:

- Automatically reads and calculates I_{SC}, V_{OC} and P_{MPP}
- Monitors and displays ambient light level in W/m^2
- Array, panel and individual cell measurements
- Compact and rugged for field use
- Touch screen operation

The SIV-3028 is an industry leading curve tracer that measures solar cells and solar panels in the field, storing 100 measurements in non volatile memory. The unit displays a current verses voltage graph, current light conditions, V open circuit, P maximum power point, and I short circuit.

The instrument auto ranges while making all measurements to assure the maximum current and voltage resolutions. Operating the instrument is simple utilizing the color touch screen and intuitive graphical user interface. To make a measurement the user only has to press an icon on the main screen, the instrument then makes up to 300 unique current and voltage measurements, calculates V open circuit, P maximum power point, and I short circuit and reads the internal light sensor. After the measurement is made, the data is displayed on the LCD and stored into non volatile memory.

Transferring data to a computer is possible with the built in RS-232 interface. USB can be used to transfer data with an optional USB to RS232 cable.

Voltage	
Range	16 - 28 Volts (see SOA graph)
Resolution Range 1 (16 to 28.0 Volts)	resolution 30 mV
Resolution Range 2 (0 to 16.0 Volts)	resolution 17 mV
Current	
Range	0 - 30 Amps (see SOA graph)
Resolution Range 1 (12 to 30.0 Amps)	resolution 35 mA
Resolution Range 2 (4.0 to 12.0 Amps)	resolution 12 mA
Resolution Range 3 (0 to 4.0 Amps)	resolution 4 mA
Device Under Test Power Specifications	
Range	0 - 150 Watts (see SOA graph)
Power Source	
Batteries	"Two AA NiMH batteries (included) ***Only use NiMH batteries.*** "
Batteries Capacity	> 2500 mAh
Runtime on fully charged batteries	~ 8 hours
Battery Charge time with ACDC adapter	~ 16 hours
Computer Interface	
RS232	Baudrate supported: 115,200 DB9 Male Pinout : 2 = Received Data (to SIV-3028) 3 = Transmit Data (from SIV-3028) 5 = Ground
RS232 Instrument Connector	DB9 Male Pinout : 2 = Received Data (to SIV-3028) 3 = Transmit Data (from SIV-3028) 5 = Ground
RS232 DB9 to DB9 Null Modem Cable	3 meter long www.digikey.com #AE9879-ND (Assmann#AK143-3-R)
USB to RS232 Adapter	newegg.com # N82E16812203018 (optional) Supported OS: XP, Vista, Windows 7, Linux

Measurement Interface	
Instrument input connector	Two Non-Insulated Banana Jacks
Test leads included	2x Pomona # 72918 Single Banana Plug (0 to 36 Amps) 1x Pomona # 1330-0 Double Banana Plug (0 to 15 Amps) 1x Pomona # 1166-24-0 (Black) (0 to 5 Amps) 1x Pomona # 1166-24-2 (Red) (0 to 5 Amps)
Built in optical sensor	
Sensor	IXYS solar bit
Instrument measurement range	0 to 1500 W / m^2
Instrument measurement resolution	3 W / m^2
General	
External Power Source	"SL Power # PW170KB0503B01 AC Entry: 100 ~ 240 VAC DC connector: 2.5mm ID x 5.5mm OD x 9.5mm Female"
Automatic Instrument Power Down (without any activity)	~ 10 minutes from the Light Meter Screen ~ 2 minutes from all other screens
Dimensions	~ 7.0" L x 3.5" W x 1.25" H
Weight	~ 12 ounces
Warranty	One year parts and labor on defects in materials and workmanship