1. ELECTRICAL SPECIFICATIONS

Accuracy is calculated as ± [% reading + (number of dgts) x resolution] at 23 °C ± 5 °C, <80%HR

I-V, IVCK: VDC Voltage @ OPC

Range (V) (*)	Resolution (V)	Accuracy (*)
15.0 ÷ 99.9	0.1	±(0.5%rdg+2dgt)
100.0 ÷ 1499.9	0.3	

(*) The I-V curve measurements start for VDC > 15V and the accuracy is defined for VDC > 20V

I-V, IVCK: IDC Current @ OPC

Range (A) (*)	Resolution (A)	Accuracy
0.10 ÷ 15.00	0.01	±(1.0%rdg+2dgt)

(*) Maximum allowed current = 15A for Voc≤1000V; Maximum allowed current = 10A for Voc>1000V

I-V: DC Power @ OPC (Vmpp >30V, Impp >2A)

Range (W) (*)	Resolution (W)	Accuracy
50 ÷ 99999	1	±(1.0%rdg+6dgt)

Vmpp = Maximum power voltage, Impp = Maximum Power Current
(*) Max measurable value of Power must include FF value(~ 0.7) → Pmax = 1000V x 15A x 0.7 = 10500W
→ Pmax = 1500V x 10A x 0.7 = 10500W

I-V, IVCK: VDC Voltage (@ STC)

Range (V)	Resolution (V)	Accuracy (*,**)
5.0 ÷ 999.9	0.1	±(4.0%rdg+2dgt)

I-V: IDC Current (@ STC)

Range (A)	Resolution (A)	Accuracy (**)
0.10 ÷ 99.00	0.01	±(4.0%rdg+2dgt)

I-V: DC Power @ STC (Vmpp >30V, Impp >2A)

Range (W) (*, **)	Resolution (W)	Accuracy (**)
50 ÷ 99999	1	±(5.0%rdg+1dgt)

Vmpp = Maximum power voltage, Impp = Maximum Power Current
(*) Measurements start for VDC > 15V and the accuracy is defined for VDC > 20V
(**) Test conditions:

- Test cond.: Steady Irrad.≥700W/m^2 , spectrum AM 1.5,solar incidence vs perpendicular. ≤ ± 25°, Cells Temp. [15..65°C]
- Accuracy include contribute of solar sensor and its measuring circuit

Irradiance (with reference cell)

Range (mV)	Resolution (mV)	Accuracy
1.0 ÷ 100.0	0.1	±(1.0%rdg+5dgt)

Temperature of module (with auxiliary PT1000 probe)

Range (°C)	Resolution (°C)	Accuracy
-20.0 ÷ 100.0	0.1	±(1.0%rdg+1°C)

CAUTION

Do not use the instrument for I-V Curve measurements and IVCK tests **on PV modules with efficiency >19%**. Check the technical characteristics of the PV modules **before** carrying out the tests in order to avoid possible damage to the instrument

2. GENERAL SPECIFICATIONS

DISPLAY AND MEMORY:	
Features:	128x128pxl custom LCD with backlight
Memory capacity:	256kbytes
Saved data:	249 curves (I-V curve test), 999 IVCK
POWER SUPPLY:	
Internal power supply:	6x1.5V alkaline batteries type AA, LR06
Battery life::	> 249 curve (I-V curve test), 999 IVCK test
SOLAR-02 power supply:	4x1.5V alkaline batteries type AAA LR03
SOLAR-02 max recording time (@ IP=5s):	approx 1.5h
Auto Power OFF:	after 5 min of idleness
RF MODULE SPECIFICATIONS:	
Frequency range:	2.412 ÷ 2.462GHz
Modulation:	802.11b Compatibility: DSSS (CCK-11, CCK-5.5, DQPSK-2, DBPSK-1), 802.11g: OFDM
R&TTE category:	Class 1
Max transmission power:	30µW
Max distance of RF connection:	1m
OUTPUT INTERFACE	
PC communication port:	optical/USB and WiFi
Interface with SOLAR-02 :	wireless RF communication (max distance 1m)
MECHANICAL FEATURES	
Dimensions (L x W x H):	235 x 165 x 75mm
Weight (batteries included):	1.2kg
Mechanical protection:	IP40
ENVIRONMENTAL CONDITIONS:	
Reference temperature:	23°C ± 5°C
Working temperature:	0°C ÷ 40°C
Working humidity:	<80%RH
Storage temperature (batt. not included):	-10°C ÷ 60°C
Storage humidity:	<80%RH
Max altitude of use:	2000m
GENERAL REFERENCE STANDARDS:	
Safety:	IEC/EN61010-1
EMC:	IEC/EN61326-1
Safety of measurement accessories:	IEC/EN61010-031
I-V curve measurement:	IEC/EN60891 (I-V curve test) IEC/EN60904-5 (Temperature measurement)
Insulation:	double insulation
Pollution degree:	2
Overvoltage category:	CAT II 1000V DC, CAT III 300V AC to ground Max 1500V among inputs P1, P2, C1, c2

This instrument complies with the requirements of the European Low Voltage Directives 2014/35/EU (LVD), Directive EMC 2014/30/EU and RED Directive 2014/53/EU
This instrument satisfies the requirements of 2011/65/EU (RoHS) directive and 2012/19/EU (WEEE) directive