2. ELECTRICAL SPECIFICATIONS

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

VDC Voltage @ OPC

Range (V) (***)	Resolution (V)	Accuracy
5.0 ÷ 999.9	0.1	$\pm(1.0\%rdg+2dgt)$

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

IDC Current @ OPC

Range (A)	Resolution (A)	Accuracy
0.10 ÷ 10.00	0.01	$\pm(1.0\%rdg+2dgt)$

Max Power @ OPC (Vmpp >30V, Impp >2A)

Range (W) (*, **)	Resolution (W)	Accuracy
50 ÷ 9999	1	$\pm(1.0\%rdg+6dgt)$

Vmpp = Maximum power voltage, Impp = Maximum Power Current
(*) Max measurable value of Power must include FF value(~ 0.7) → Pmax = 1000V x 10A x 0.7 = 7000W
(**) Test is stopped and the message "Thermal instability" occurs if the instrument detects Voltage > 700V and Current I >3A, I > -0.038*V + 37.24 - 0.5

VDC Voltage (@ STC and OPC), IVCK

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

IDC Current (@ STC and OPC), IVCK

Range (A)	Resolution (A)	Accuracy (**)
0.10 ÷ 10.00	0.01	$\pm(4.0\%rdg+2dgt)$

Max Power @ STC (Vmpp >30V, Impp >2A)

Range (W) (*, **)	Resolution (W)	Global accuracy (**)
50 ÷ 9999	1	$\pm(5.0\%rdg+1dgt)$

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.$\geq 700W/m^2$, spectrum AM 1.5,solar incidence vs perpendicular. $\leq \pm 25°$, Cells Temp. [15..65°C]
➢ Global 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	$\pm(1.0\%rdg+5dgt)$

Temperature of module (with auxiliary PT1000 probe)

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

3. 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:

SOLAR I-V internal power supply:	6x1.5V alkaline batteries type LR6, AA, AM3, MN 1500
Autonomy of SOLAR I-V:	> 249 curve (I-V curve test), 999 IVCK test
	approx 120 hours (yield test)
SOLAR-02 power supply:	4x1.5V alkaline batteries type AAA LR03
SOLAR-02 max recording time (@ IP=5s):	approx 1.5h

OUTPUT INTERFACE

PC communication port:	optical/USB
Interface with SOLAR-02 :	wireless RF comunication (max distance 1m)

MECHANICAL FEATURES

Dimensions (L x W x H):	235 x 165 x 75mm
Weight (batteries included):	1.2kg

ENVIRONMENTAL CONDITIONS:

Reference temperature:	23°C $\pm$ 5°C
Working temperature:	0° $\div$ 40°C
Working humidity:	<80%HR
Storage temperature (batt. not included):	-10 $\div$ 60°C
Storage humidity:	<80%HR

GENERAL REFERENCE STANDARDS:

Safety:	IEC/EN61010-1
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 1000V among inputs P1, P2, C1, c2
Max altitude of use:	2000m

This instrument complies with the requirements of the European Low Voltage Directives 2006/95/EEC (LVD) and EMC 2004/108/EEC