hybrid power, Patent

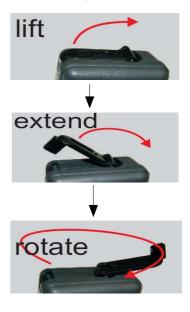
## GREEN POWER 4 in 1 METER

**Model: LM-8020G** 

ISO-9001, CE, IEC1010



No battery Generator power







The Art of Measurement

## **GREEN POWER 4 in 1 METER**

Model: LM-8020G

## **FEATURES**

*	Hybrid power, power supply from green power ( handy
	generator ) or battery. If power source come from " Green
	power ", battery is no need. Wind-up the generator 20
	seconds will offer several minutes energy typically.
*	1 in 1 professional measuring instrument. Anemometer

- \* 4 in 1 professional measuring instrument: Anemometer, Hygrometer, Thermometer, and Light meter.
- \* Anemometer use low-friction ball bearing mounted wheel design provides high accuracy at high and low air velocity.
- \* Anemometer use the separate probe, convenient for measurement.
- \* Light meter use exclusive photo diode and color correction filter light sensor, spectrum meets C.I.E. photopic.
- \* High precision humidity sensor with fast response time.
- \* Standard type K (NiCr-NiAl) thermocouple input jack suitable for all kinds of type K probe.
- \* Concise and compact buttons arrangement, easy operation.
- \* Memorize the maximum and minimum value with recall.
- \* °C/°F detection by pressing button on the front panel.
- Lux/Feet-candle selection by pressing button on the front panel.
- \* Air velocity measuring units selection by pressing button on the front panel for five kinds of units.
- \* Multi channel display for relative humidity and temperature measured values or air velocity and temperature measured values at the same time.
- \* Zero button design makes light meter calibration.
- \* Hold function to freeze the current reading value.
- \* Microprocessor circuit assures high accuracy and reliable performance.
- \* Large LCD, dual function display.
- \* Auto power shut off to battery life or manual power off.
- \* Using the durable, long-lasting components and a strong lightweight ABS-plastic housing case.

## **GENERAL SPECIFICATIONS**

Circuit	Custom one-chip of microprocessor LSI		
	circuit.		
Display	40 mm x 32 mm LCD (Liquid crystal		
	display).		
Measurement	Anemometer, Humidity, Temperature. Light		
Data Hold	Freeze the display reading.		
Memory	Maximum and Minimum reading values can		
Recall	be saved and retrieved by record function.		
Power off	Auto shut off saves battery life or manual		
	off by push button.		
Overload	"" symbol on the display.		
indication			
Operating	0 °C to 50 °C (32 °F to 122 °F).		
Temperature			
Operating	Max. 80% RH.		
Humidity			
Sampling Time	Approx. 1 second.		
Power Supply	Green power :		
* Hybrid power	Power from the handy generator, battery is		
	no need.		
	Battery power :		
	DC 9V battery, 006P, MN1604 ( PP3 ) or		
	equivalent.		
	* Alkaline or heavy duty type.		

Power	Battery power : Approx. DC 10 mA.		
Consumption			
Weight	432 g/0.95 LB ( w/o battery ).		
Dimension	Meter:		
	170 x 70 x 39 mm ( 6.7 x 2.8 x 1.1.5 inch).		
	Anemometer probe head :		
	Round, 72 mm Dia.		
Standard	Instruction manual1 PC		
Accessories	Hard carrying case 1 PC		
Optional	Type temperature probe :		
Accessories	TP-01 : Naked-bead, -40 to 250 $^\circ\!\! C$		
	TP-02A : Penetration, -50 to 900 ℃		
	TP-03 : Penetration, -50 to 1200 $^{\circ}\!$		
	TP-04 : Surface, -50 to 400 $^\circ\!\! C$		

ELECTRICAL SPECIFICATIONS (23 ± 5 °C)

Measurement		Range	Resolution
Air velocity	m/s	0.4 - 25.0 m/s	0.1 m/s
	km/h	1.4 - 90.0 km/h	0.1 km/h
	MPH	0.9 - 55.9 mile/h	0.1 MPH
	knots	0.8 - 48.6 knots	0.1 knots
	ft/min	80 - 4930 ft/min	1 ft/min
	Temperature	32 to 122 °F	0.1 °F
	( Semiconductor)	0 to 50 ℃	0.1 ℃

Measurement		Range	Resolution
Humidity	% RH	10 to 95 %RH	0.1 %RH
	Temperature	32 to 122 °F	0.1 °F
	( Semiconductor	0 to 50 ℃	0.1 ℃
Light	Lux	0 to 2,200 Lux	1 Lux
		1,800 to 20,000 Lux	10 Lux
* auto range	Ft-cd	0 to 204.0 Fc	0.1 Ft-cd
		170 to 1,860 Fc	1 Ft-cd
Temperature (Typ	eK)	-148 to 2372 °F	0.1 °F
		-100 to 1300 ℃	0.1 ℃

Measurement	Range	Accuracy
Air velocity	0.4 - 25.0 m/s	
	1.4 - 90.0 km/h	$\leq$ 20 m/s : ± 3% F.S.
	0.9 - 55.9 mile/h	> 20 m/s : ± 4% F.S.
	0.8 - 48.6 knots	
	80 - 4930 ft/min	
	32 to 122 °F	± 2.5 °F
	0 to 50 ℃	± 1.2 ℃
Humidity	10 to 95 %RH	< 70% RH :
		± 4 %RH
		<i>≧70% RH :</i>
		: ± ( 4%rdg + 1.2 %RH )
	32 to 122 °F	± 2.5 °F
	0 to 50 ℃	± 1.2 ℃
Light	0 to 20,000 Lux	± 5% rdg ± 8 dgt
	0 to 1,860 Fc	
Temperature	-148 to 2372 $^{\circ}\mathrm{F}$	± (1% rdg + 2°F)
(Type K)	-100 to 1300 ℃	± (1% rdg + 1°C)

Remark :

ft/min: feet per minute MF m/s: meters per second known

MPH : miles per hour knots : nautical miles per hour

km/h : kilometers per hour Ft-cd : feet candle