R, G, B, Hue, Saturation, Luminance

COLOR ANALYZER

Model : RGB-1002   *ISO-9001, CE, IEC1010*

FEATURES

* Measuring sample : no lighting sample (textiles, paper, leathers...).
* Measurement value : RGB value, HSL value (Hue/Saturation/Luminance).
* 45° /0° color measuring geometry.
* Used the spectral analysis method to determine the color of the sample
* Complete set included the color probe and the meter, display the measurement value from
* LCD display, show RGB or HSL value at same time.
* Power : 006P DC 9V battery.
* Meter size : 203 x 76 x 38 mm.

LUTRON ELECTRONIC

The Art of Measurement

RGB/HSL value, no lighting material color analysis

COLOR ANALYZER
Model : RGB-1002

1. FEATURES

* The RGB-1002 is a portable color analyzer equipped with an external sensor probe having a 45° /0° color measuring geometry. The modem, accurate microprocessor technology uses the spectral analysis method to determine the color of the sample. Excellent repeatability due to spectroscopic analysis technique used.

* Friendly operation, just press the operation button will get the color value (R, G, B or H, S, L).

* Relative function, can easy to compare the color value of the different two measurement material.

* The RGB-1002 is designed mainly for measuring the color of no lighting sample such as textiles, paper, leathers, painting materials...... It is the useful tool for the quality control and the wide industrial application.

* The color analyzer also can measure the reference lighting sample color value such as CRT, LCD monitor, LED lamp, lighting lamp.....

* For no lighting sample color measurement, a defined light source illuminates the sample and the reflected surface light is spectrometrically analyzed.

* For lighting sample color measurement, the light source of sample is spectrometrically analyzed directly.

* RS232 computer interface, can store the measuring color value in the computer for recording and the further color analysis.

* Build in CAL (Calibration) button, for no lighting sample measurement, use the included white color calibration card to make the self calibration easily.

* Hand held housing case, easy to carryout.

* Power supply by 006P DC 9V battery or DC 9V adapter.

2. APPLICATION

* To check the color value of textiles, paper, leathers, painting materials.

* The objective quality control of color during production.

* The color measurement and recording of products supplied by supplier to check for conformity specification.

* The comparison of color samples against color standard.

* The interpretation and statistic evaluation of color sample measurement.

* To check the reference color value of CRT monitor, LCD monitor, light lamp.

3. SPECIFICATIONS

Display	LCD size : 59 mm x 34 mm.
Measuring geometry	45° /0° - circular illumination at 45° , measurement at 0° .
Spectral range	400 nm to 700 nm.
Light source	Two white LED lamp.
Measuring principle	For no lighting sample color measurement such as textiles, paper, leathers, painting materials......, a defined light source illuminates the sample and the reflected surface light is spectrometrically analyzed. * For lighting sample color measurement, the light source of sample is spectrometrically analyzed directly.*
Color sensors	3 color photo transistors : *Red photo transistor* *Green photo transistor* *Blue photo transistor*
Calibration	Self calibration. * The calibration white calibration card is included.*

Measurement	**RGB value**	
	R (Red) value : 0 to 1023.	
	G (Green) value : 0 to 1023.	
	B (Blue) value : 0 to 1023.	
	HSL value	
	Hue value : 0 to 1.000.	
	Saturation value : 0 to 1.000.	
	Luminance value : 0 to 1.000.	
Repeatability	R (Red) value	< 3
	G (Green) value	< 3
	B (Blue) value	< 3
	Hue value	< 0.01
	Saturation value	< 0.01
	Luminance value	< 0.01
	* Repeatability is specified under the same sample tested 10 times within two minutes.* * Accuracy is specified under after the instrument is calibrated.*	
Measurement sample material type	Type 1 : No lighting sample material : Such as textiles, paper, leathers... Type 2 : Lighting sample material : Such as CRT, LCD monitor, LED lamp, lighting lamp..... * The RGB-1002 is designed mainly for measuring the color value of type 1 (no lighting sample). For the type 2 (lighting sample) color measurement just for the reference only.*	
Buttons	OP button (Operation button)	
	CAL button (Calibration button)	
	REL button (Relative button)	
	RGB/HSL button (Select RGB or HSL value)	
	Light ON/OFF button * No lighting sample measurement, select the sensor light to on.* * Lighting sample measurement, select the sensor light to off.*	
Power off	Auto shut off saves battery life or manual off by push button. * Power will off automatically after 3 min., if no buttons be pressed.*	
Low battery	Low battery indicator.	
Computer interface	RS 232 PC serial interface.	
Operating Temperature	0 ℃ to 50 ℃ (32 ℉ to 122 ℉).	
Operating Humidity	Less than 80% RH.	
Power Supply	DC 9V battery, Alkaline type 006P, MN1604(PP3) or equivalent. DC 9V adapter input. *@ AC/DC power adapter is optional.*	
Power Current	Standby : Approx. DC 6.3 mA. Measurement : Approx. DC 32 mA. (2 SEC.)	
Weight	478 g/ 1.05 LB. * Main instrument and the sensor probe*	
Dimension	*Main instrument :* 203 x 76 x 38 mm *Sensor probe :* 160x92x45 mm	
Accessories Included	Instruction manual....................... 1 PC. Sensor probe (RGB-1002P).......... 1 PC. White color calibration card........... 1 PC. Carrying case, CA-06.................... 1 PC.	
Optional Accessories	* AC to DC 9V adapter. * RS232 cable, UPCB-02. * USB cable, USB-01. * Data Acquisition software, SW-U801-WIN.	