

## ***Spectrocam the breakthrough in color control***



Technological innovation and breakthrough in fiber optics in the field of color measurements, Spectrocam®.

### **Application**

Color measurement & control in graphic designer, prepress specialist, printers, inks makers, pigments, paints, textile and other color conscious industry.

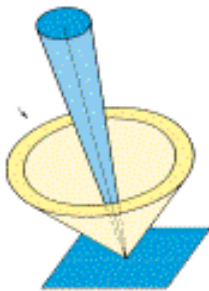
### **Introduction**

Whether you are a graphic designer, prepress specialist or printing press, the spectrocam has been designed to meet your need for fast and accurate color control.

The Spectrocam combines the accuracy of a high-end spectrophotometer with the speed of a spectral scanner in one device. With the spectrocam you can calibrate your printer, monitor or printing press quickly and accurately saving precious time and money.

Spectrocam is delivered with all the necessary tools for scanning and calibration and special color measurement software. The design of all the tools are very simple and user friendly to achieve its expertise.

### **Advance Features**



**Fiber Optics:** spectrocam uses fiber optics to transmit light round the aperture at 45° maintaining ISO standard geometry giving a perfect, reliable and repeatable output as compared to any conventional spectrometer in the market.

**Xenon illumination:** Daylight is better approximated with a Xenon flash tube than with an incandescent lamp used in most spectro-photometers, giving you, for example, a more accurate measurement of fluorescence effects.

**Annular 45°/0° measuring geometry:** Colors are accurately measured of the gloss and orientation of the surface texture, an issue when using spectrophotometers with a different measuring geometry.

**Spectral range of 380 nm to 750 nm:** The near-infrared and ultraviolet are measured so you can better observe significant red spectral lines on CRT monitors as well as the influence of fluorescent whitening agent in papers.

**Optical resolution 5 nm:** The visible color spectrum is measured in 75 steps instead of the more common 36 steps or less, which gives you an even more accurate color value.

**Measurement time 0.03 sec:** 4 to 16 measurement can be averages into one precise measurement value unlike any other spectrophotometer.

## Multifunctional



**Scanning spectrophotometer**, measure color strip quickly and accurately.

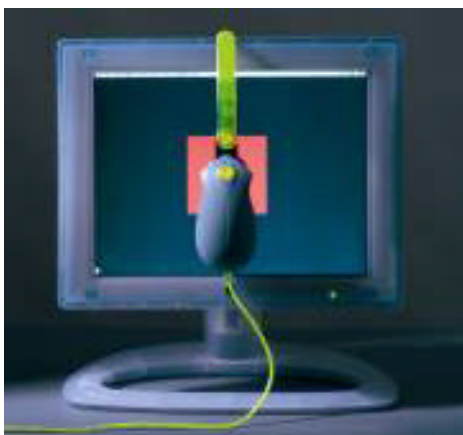
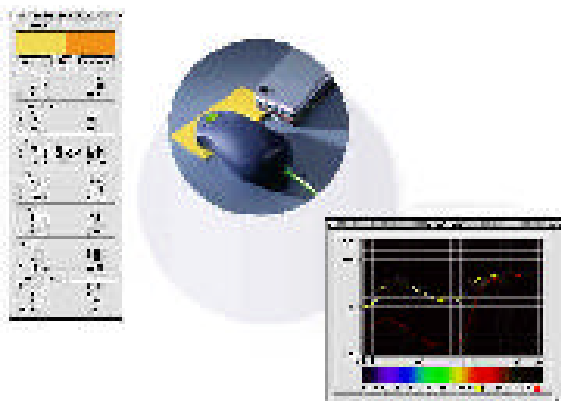
The spectrocam is the fastest miniature spectrophotometer in the market today, available only at a fraction of cost as compared to others available in the market.

Over 100 color patches can be scanned in one minute. No need to cut up your test sheet or to position it precisely on a scan bed. Just position the scan ruler and move the spectrometer through the slot.

**Spectro Colorimeter and Densitometer** measures all colors exactly.

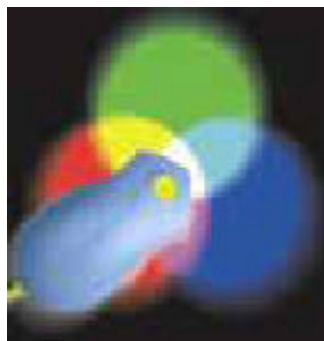
The spectrocam provides the function of colorimeter and densitometer using true spectral data.

The spectrocam features a Xenon daylight flash that was only available in very expensive spectrometers - until now. Xenon enables you to measure fluorescence exactly as it is observed in real daylight. The spectrocam gives you the colorimeter values and densities you needed: CIE XYZ, xyY, Luv, Lab, LCH, HSB, RGB, print densities status A, T, E, I, Din 16536-2



**Monitor Calibrator** calibrates both LCD and CRT monitor.

Whatever monitor you use, get the best and most color true picture on your screen by calibrating your monitor regularly with the spectrocam. And needless to say, it is fast again. Start the calibration program and hold the spectrocam in place on your LCD or CRT screen for total measuring time of 30 seconds: less than the time needed to clean the suction cup stains off your screen after using a conventional monitor calibrating probe.



**Spectral Camera** determines color temperature.

The spectrocam also function as a spectral camera, measuring the color temperature of light emitted from a light source or reflected from an object. With the spectrocam you can determine the light conditions for checking your print materials and slides

## Technical Details

### **SPECTROPHOTOMETER MODULE**

Aperture	: 1.5 x 2 mm
ISO standard geometry`	: 0°(±5°)
Spectral range	: 380-750 nm
Optical resolution	: 5 nm (75 bands)
Bandwidth	: 20 nm
Wavelength calibration	: < 2 nm
Spectral reporting	: 5 nm interval

### **REFLECTION ILLUMINATOR MODULE**

Illuminated aperture (2 options)	: 3.5x4 mm and 5.5x6mm
ISO standard geometry	: Annular 45°
Illumination source	: Pulsed Xenon gas discharged tube
Maximum pulse frequency	: 35 Hz
Reference measuring	: Light output, Voltage, Temperature

### **SOFTWARE FUNCTIONS**

Color spaces	: CIE, XYZ, xyY, Luv, Lab, LCH correlated color temperature, whiteness index, HSB, RGB
Color difference values	: ? E, ? E (94), ? E (CMC).
Observers	: CIE 2° and 10° human observer
Illuminants	: A, C, E, D50, D55, D65, D75
Density functions	: Status A,T,E,I and DIN 16536-2

### **DIMENSIONS AND ACCESSORIES**

Spectrocam	: 130(l) x 70(w) x 50(h) mm
Weight excluding accessories	: 180 grams
Scan plate	: 335(l) x 240(w) x 6(h) mm
Scan plate surface	: ISO standard black backing material
Scan ruler	: 250 mm scan length
Monitor accessory	: For use on LCD and CRT screen
Serial connection plugs	: Apple Mac modem port; IBM PC RS 232 sub-D9
AC adapter	: 90-260 VAC, 50/60 Hz, 12 VDC, 0.5 A

## PERFORMANCE SCAN FUNCTION

Number of reading per patch	: Average 4 to 16 readings
Average scan time per patch	: 0.4 sec. For screen frequencies => 85 lines/inch
Minimum screen frequency	: 45 lines/inch (=1.8 lines/mm)
Target dimensions	: Recommended 10x10mm      Minimum 7 x 8 mm

## SPECTRO COLORIMETER

Reflectance range	: 0 to 160%
Typical measuring time	: 0.4 sec (based upon 12 readings)
Short-term repeatability on white	: Typ. 0.1? E(Max. 0.3? E)
Interinstrument accuracy	: Typ. 0.4? (Max. 0.8? E) Average of 12 BCRA tiles
White calibration traceable to	: European Community Bureau of Reference

## SPECTRO DENSITOMETER

Density range	: -0.200 to+3.00
Measuring time	: Typ. 0.4 sec(based on 12 readings)
Short-term repeatability on white	: Typ. 0.002 (max. 0.004)
Linearity	: Typ. 0.003 (max. 0.005) at D=0.500

## MONITOR CALIBRATOR

Range	: 0 to 100%
Measuring aperture	: 6 mm
Typical calibration time (30 colors)	: 30 seconds
Screen synchronization	: 50 to 250 Hz
Resolution	: 0.03%
Noise	: Typ. 0.1%

## SPECTRAL CAMERA

Field of view	: <=10°
Shutter speeds	: 1/2000 to 1 second
Data transmission rate	: Up to 35 spectral images per second

## Color Management Software

The spectrocams deliver superior measurement performance, making it the ideal tool for color management. Included with the spectrocams is color management software for Windows and Mac OS, which allows you to use the different measurement functions of the instrument. All color measurement standards and illuminants are supported. The measurement values can be either directly used in a color management application or exported as text or MS-Excel file.

### **EasyMatch®**

#### **EasyMatch Pro**

This software is a full laboratory and production package for Quality control, color formulation and correction, colorant characterization.

3 versions very similar but adapted:

- **PrintMatch** for Ink manufacturer and printers
- **PaintMatch** for Paint producers (results displayed to be used in manual volumetric dispensers)
- **EasyMatch** for Plastics compounders and Master Batch producers
  - For Printing on Textiles, Ceramics, Cosmetics

2 to 3 Days training are recommended.

Note: Lafarge is the biggest customer of Simex Technologies.

#### **EasyMatch Auto**

This software is a simplified version of EasyMatch® for Ink and Paint Formulation applications including Color Correction. Optional are the Quality Control and Colorant Characterization modules.

**EasyMatch Auto** full color formulation and correction, a very simplified product which is available since IPEX 2002. This software can be provided with QC package.

Note: for printers, the ink mixtures are made in general by Ink manufacturers, which already have CCM systems.

#### **EasyMatch Basic**

This software is a stripped version of EasyMatch®, not including a color library

**EasyMatch Basic** is a very simplified product, which needs a color library to search the closest color and adjust the formula to match a standard.

2 Versions:

- Paint manufacturer to install work shop offices
- Printer which use Pantone (they will have to measure their Pantone color Guide)

**EasyMatch Basic** can be provided with a QC package. It is module 2 from EasyMatch® where we take off the following modules (Characterization, Formulation and Correction). Very useful in all applications where color is concerned to measure and save colors.

### **EasyMatch Plus**

This software is EasyMatch Basic but with a Color Correction module for small paint manufacturers.

### **QC Package**

Add on for EasyMatch®.

MARKETED BY

***LLOYDS RESEARCH FOUNDATION, INC.***

***Winner Of Three Prestigious National Awards***

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