

## Color Touch 2 will take your quality control program to new levels of excellence

The innovative Color Touch 2 spectrophotometer is the fastest, most productive and accurate way to measure the optical properties of pulp and paper. It provides a wide range of measurements - including Brightness, Color, Color Difference, Fluorescence, Opacity, Whiteness, Tint, and now, Effective Residual Ink Concentration (ERIC) - simply, accurately, and with amazing speed. The Color Touch has been designed by Technidyne, the leading manufacturer of optical properties measuring instrumentation for the pulp and paper industry. The Color Touch 2 conforms precisely to 150 optical standards.

**Color Touch, the first touch screen spectrophotometer designed specifically for the pulp and paper industry, now offers optional ERIC 950 capability, a great advantage when working with recycled materials.**



## Simplicity

Although it provides detailed, accurate, and sophisticated measurements, Color Touch is extremely user friendly. It doesn't use a keyboard. Knowledge of computers is not required. And no decisions need be left to the operator.

- Operators simply point, touch, and let Color Touch do the rest.
- The Color Touch recalibrates at regular intervals, eliminating the need for operator adjustments or additional calibration-
- Complicated measurement sequences may be pre-programmed by a supervisor and assigned to a single, on-screen button.
- The menu key appears on all screens. Touching the menu key returns you to the main menu immediately.
- Optional ERIC capabilities provide high speed analysis of residual ink.



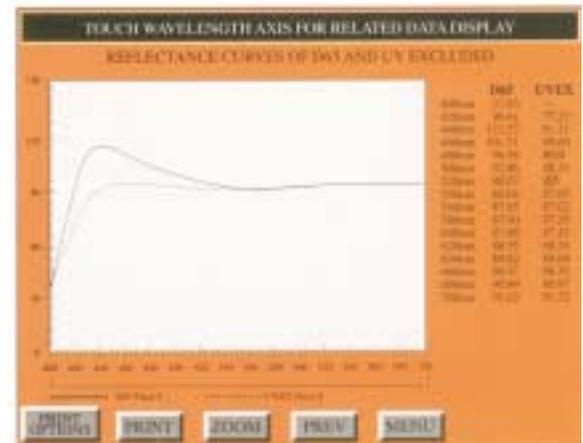
## Accuracy

State of the art halographic grating and scanned array technology provide unsurpassed accuracy and repeatability in even the harshest environments. The very simplicity of Color Touch contributes to the accuracy of its measurements by eliminating complicated routines and opportunities for human error. The following innovative features assure you of reliable results.

- **Automeasure**  
This pre-programmable, password protected feature virtually ends operator error. It also ensures that the same testes are run under the same conditions for consistent, reliable results.
- **Automatic calibration**  
Eliminates the need for manual calibration. Primary calibration, including UV level settings is handled automatically. Insert the calibration diskette and the Color Touch software will do the rest. It is seldom required, however, because Color Touch

frequently recalibrates itself to a built-in standard to provide long term stability. Instrument drift is prevented and daily calibration is no longer needed.

- **Diagnostics**  
A full compliment of diagnostic routines alert you to any problems with the instrument.
- **ISO Standards**  
Color Touch conforms to precise ISO optical standards and a wide range of global national standards.



## Details of Key Measurements

### Brightness

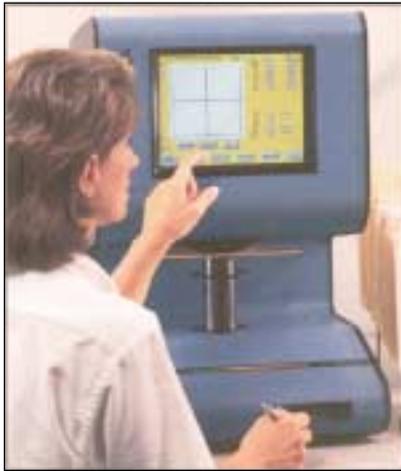
Exact conformance with 150 Standards 2469 and 2470 for the measurement of 150 brightness.

### Color Evaluation

6 different color scales, 10 illuminants, 2 standard observers for color evaluation.

Graphical plots of all opponent color systems and full spectrum curves with zoom function.

Absorption/ scattering (k/ s) data is also provided.



### Metamerism

User can detect metamerism (the phenomenon of two samples matching perfectly under one lighting condition while not matching under another lighting condition) and analyze the data in a simplified form. Illuminant metamerism and observer metamerism may be analyzed independently.

### Fluorescence

Samples may be measured under 3 different calibrated sources -D65 (daylight), C (indoor

light), and UV-EX

(no UV energy). Spectral measurements are made with and without fluorescence excitation. Data may be presented in spectral curves illustrating the effect of the brightener across the entire spectrum. Numerical data and a color difference plot provide instant analysis of the brightness, whiteness and color shift caused by the addition of optical brighteners. These measurements are also valuable for following the progress of color removal from recycled fiber.

### Opacity

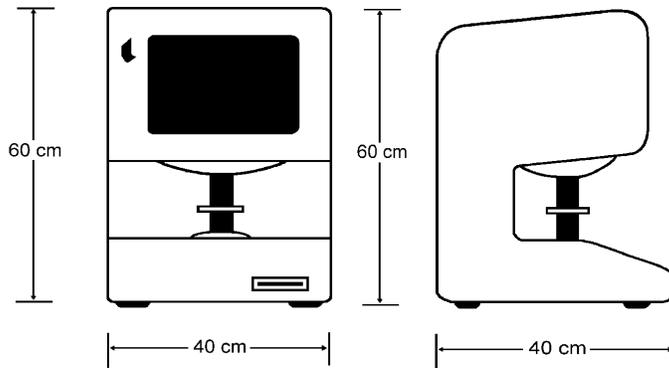
In addition to measuring ISO opacity, you may also have Ro and Roo values at the brightness and tristimulus value positions. Scattering absorption powers and coefficients are also available, along with the contrast ratio (Ro/Roo). Changes in the values as the result of a change in grammage weight are instantly computed.

### Optional -

#### ERIC (Effective Residual Ink Concentration)

By converting the infrared reflectance measurements of paper to a coefficient for light absorption, ERIC technology provides a control parameter specifically to measure the residual ink content. From the residual ink measurement, ERIC provides data for determining how much deinking and/ or bleaching is necessary to achieve a target brightness, and an "inkless brightness" (the resulting brightness if all the ink is removed). Several readings may be averaged automatically for more precise characterization of samples.

**Color Touch 2**  
MODEL ISO  
SPECTROPHOTOMETER



## Specifications:

Light source .....	Pulsed Xenon
Flashes Per Measurement.....	4
Lamp Life(number of measurements).....	500,000
Geometry .....	Dual, Beam, d/O*
SpecimenAreameasured.....	30mm*
PhotometricNonlinearity.....	0.1%*
Repeatability (white tile avg. 20 readings) .....	< 0.01 CIELAB DE**
Reproducibility (Interinstrument Agreement) .....	< 0.20 CIELAB DE***
Measurement Time (typ) .....	2seconds
Measurement Range :Reflectance .....	0-200%
Wavelength .....	400-700nm
Detector .....	Scanning Silicone Diode Array, 256 Elements
Spectrometer .....	Dual Beam Holographic Grating
Bandpass (HPH).....	10nm
Reflectance Data Intervals.....	1nm,5nm, 10nm,20nm
Sources .....	Automatic Control to D65, C & UV-EX Levels
Illuminants .....	A,B,C,D50,D55,D65,D75,F2,F7,F11
Observers.....	CIE 2°, 10°
Color Scales .....	X, Y, Z/R(x), R(y), R(z)/L,a,b/L*,a*,b* /L*,C*,h/DWI,PUR,x,y,Y
Whiteness .....	CIE,ASTM,HUNTER
Tint .....	CIE -HUNTER
Yellowness .....	HUNTER
Warm Up Time .....	None
Display .....	Active Matrix Color TFT, Viewing Area 211mm x 158mm
Communications .....	Serial RS232 Port, Parallel External Printer Port
FloppyDiskDrive.....	3.5", 1.44MByte
Hard Disk Drive.....	1 GByte
Operating Temperature .....	(13-32°C)
Relative Humidity.....	25-90RHnon-condensing
Power Consumption.....	170WattsMax
.....	80WattsPassive
Voltage/ Frequency .....	100-130VAC/49-61Hz
.....	210-250VAC/49-61Hz
Net Weight (unpacked) .....	(30 Kg)
Gross Weight .....	(45Kg)
Warranty .....	One Full Year

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