

ColorEye[®] XTH

Spectrophotometer



...hand-held color accuracy
on the most challenging
sizes, shapes and surfaces.

ColorEye[®] XTH

The only instrument you'll need for reading both large and small samples ... as well as all types of curved surfaces.

Easy to use

intuitive user interface.
Menu-driven operation significantly reduces startup training time.

Compact, hand-held unit

is about half the size and weight of competitive units — a truly hand-held device allowing easy left and right-handed operation.

Simplified Keypad

with dedicated measurement keys.

High-efficiency sphere

with port-sharing technology reduces sample size, eliminates appearance interference, and minimizes sample variability.

A unique 3-D Targeting Technology

with removable target foot provides precision color measurement on the most challenging sizes, shapes, and surfaces.

ColorEye XTH

```
DISP cal options data
****
      Std Trial Diff
L* 55.33 55.32 -0.01
a* -16.3 -16.3 0.02
b* -26.8 -26.9 -0.01
DE          0.02
*** PASS ***
CIE LAB:D65-10 RAY-SCI
S: MEASURED STD
T: MEASURED TRIAL
```

Patented XT5 technology

2-dimensional CCD provides a dual-beam system for simultaneous measurement of SCE (specular component excluded) and SCI (specular component included).

A sophisticated high-speed processor

permits the ColorEye XTH to make one color measurement per second — twice as fast as other units — increasing throughput and saving time.

Advanced power system

delivers thousands of measurements per charge, with gauge showing battery status at a glance.

Xenon flash system

permits greater accuracy and eliminates the need to take multiple readings when measuring dark colors.

Dual apertures

(10mm diameter and 5mm diameter) enable a single unit to accommodate the broadest range of part sizes and shapes, eliminating the expense of multiple instruments.

The ColorEye XTH. The next generation of color control technology. Here today.

We put our 85 years experience in color measurement to work in designing and building a portable spectrophotometer that delivers what our customers asked for.

- **Superior price/performance value** – no other portable instrument gives you all these innovative features at a comparable price.
- **A complete system for color control** – ColorEye XTH is part of the industry's most complete line of color control systems. This full product line enables us to provide solutions for color measurement in your operation.
- **Improved product quality** – better color control means superior color quality. Production lots are no longer rejected because of color problems. And customers are happier with the product you deliver.
- **Less scrap with fewer reworks** – directly adds more profit to your bottom line.
- **Lower operating costs** – simple operation significantly reduces training time and operator errors. A rugged design with no moving parts maximizes reliability and prevents costly down-time.
- **Greater throughput** – a unique power system, which allows continued operation even when charging, increases system availability and operator productivity. In addition, the ColorEye XTH is easily mounted on robotic equipment for automated operation.



Dual apertures 5mm and 10mm in diameter enable convenient measurements of both large and small products.



Removable targeting foot enables easy measurement of curved and flat samples.





Light-years ahead of conventional color control technologies.

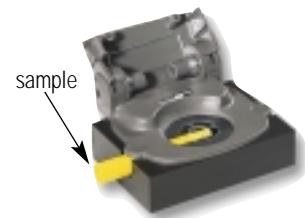


When you need a productivity boost, ColorEye XTH is up to twice as fast as competitive systems. An advanced 2-dimensional, 5-channel optical system enables greater accuracy with fewer flashes, more signals per flash. And the Xenon flash eliminates the need to take multiple readings to measure dark colors.

Conventional single-aperture instruments can only measure parts within a narrow size range. You used to have to buy another instrument to handle bigger or smaller parts. But not with ColorEye XTH, where optional dual apertures enable a single unit to accommodate the broadest range of part sizes...eliminating the expense of multiple systems.

Unique 3-D Targeting Technology

The ColorEye XTH enables you to measure color on the actual product, not just a flat sample or swatch. That's because the instrument incorporates a unique 3-D Targeting Technology providing precision color measurement on even the most challenging sizes, shapes and contours.



Contour measurement capability increases customer approvals on final product.

Patented 3-D targeting templates let you precisely measure contoured parts. Use your existing part drawings to machine the block to exact part size.

Targeting templates make it easier for all operators to obtain consistent measurements time after time.



Lightweight ColorEye XTH weighs only 1.8 pounds (.81kg) and fits easily in the operator's left or right hand, eliminating strain.

Snap-on design makes it fast and easy to change between multiple templates for various parts.

Improve gauge R & R by eliminating measurement inconsistency.



There are many reasons you get costly rejects. Now color won't be one of them.



Dedicated buttons for standard and trial measurements speed and simplify operation.

Customers have always been demanding when it comes to color. They're quick to reject a lot that fails to match their color specs. Rejects take money right out of your bottom line ... and may jeopardize customer relations.

Fortunately, now there's a solution. ColorEye XTH from GretagMacbeth.

ColorEye Technology transforms the art of color control into a science.

The ColorEye XTH is the world's only hand-held color measurement device capable of accurately, consistently measuring color on the most challenging sizes, shapes, and surfaces — curved or flat, large or small, smooth or textured.

About half the size and weight of other portables, the ColorEye XTH fits easily in your hand and clips conveniently to your belt. So you can carry it with you anyplace in your facility.

A unique operator-friendly design makes the ColorEye XTH as easy to use as turning on a flashlight. Just point the ColorEye XTH at the sample. Then push the button. You get an instant, precise measure of hue, chroma, and value.

And, ColorEye XTH's advanced power system gives you extended battery life. It operates up to eight times longer per charge than other portables. You can continue to use your ColorEye XTH even while it's charging, further maximizing productivity.

Instinct vs. Instrumentation.

To one observer, two greens may look exactly the same; to another, they seem slightly different. Now, with the ColorEye XTH, you get a quantitative color reading that indisputably verifies and proves the accuracy of your own color judgment.

ColorEye XTH generates accurate, repeatable measurements consistent with the readings you get from our popular benchtop ColorEye 7000 series and compact ColorEye 2180. We engineer all our color systems for close inter-instrument agreement — ensuring that you, your customers, and your vendors are working with the same colors and standards.



ColorEye[®] XTH hand-held portable spectrophotometer performance specifications

Repeatability (white tile) (typical) (maximum)	0.05 RMS ΔE CIELAB 0.10 RMS ΔE CIELAB
Inter-Instrument Agreement (typical) (maximum)	0.15 Avg. ΔE CIELAB** 0.25 Avg. ΔE CIELAB**
Illumination Lamp life	Pulsed Xenon >3,000,000 flashes
Measurement Cycle Time	1 second
Spectral Range	360nm to 750nm
Wavelength Interval	10nm
Photometric Ranges (selectable)	0.0% to 120% reflectance 0.0% to 200% reflectance
Photometric Resolution	0.01%
Apertures: Regular area of view Illuminated/Measured Small area of view Illuminated/Measured	10mm circular diameter/5mm circular diameter 5mm circular diameter/2mm circular diameter
Optical Configuration	Diffuse/8° (illumination/measurement) Diffraction Grating Simultaneous Specular Component Excluded/Specular Component Included 38mm diameter integrating sphere Dual beam
Dimensions Height Width Depth	19.5cm (7.7 inches) 8.0cm (3.1 inches) 7.0cm (2.8 inches)
Weight	.81kg (1.8 lbs.)
Temperature (operating)	10° C to 35° C
Relative Humidity (operating)	20 to 80%, non-condensing
Battery (Nickel Metal-Hydride) Life Charge Time (idle) Charge Time (in use) Power Conservation Charging	Up to 3000-4000 flashes per charge Less than 3 hours Less than 6 hours Automatic sleep mode Internal and external
Electrical Requirements	117 VAC/50-60Hz 230 VAC/50-60 Hz
Serial Interface	RS-232 (2400-38400 baud)
Data Storage	400 records
Languages Available	French, Italian, English, German, Spanish, Japanese

All specifications given at 120% photometric range for regular area of view aperture. **Average Delta E of 13 BCRA Series II ceramic standards relative to GretagMacbeth standardized values under lab conditions. Specifications subject to change without notice.

Color Measurement Features

Color Spaces

CIE 94	CMC	XYZ, xy
CIELCH	FMC-II	
CIELAB	Lab	

Illuminants

A	CWF(F2)	TL83
C	DLF(F7)	TL84
D50	NBF (F11)	TL85
D55	SPL D50	U30
D65	SPL D65	
D75	SPL D75	

Observers

2 degrees 10 degrees

Data Displays

Colorimetric Assessments
Indices
60 degree correlated gloss
Munsell notation
Spectral Data

Other Features

Averaging
Auto save
Auto standard selection
Battery status
Multi-lingual capability
Pass/fail indication
Shade search
Tolerancing



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