



Cie L*59.57 a*40.62 b*36.58

Bringing Color to the Material World

Solutions for plastics color management



Color Makes a Distinctive Difference

Color is power. Whether establishing a corporate identity, a brand, a new product, color illuminates, engages, and creates a memorable first impression that separates your image or product from everyone else's. It is, for many, the defining element of your product and corporate personality.

Defining color and consistently ensuring its accuracy is fundamental to product success. X-Rite is a global leader in quantitative color measurement and visual analysis. We pioneer innovative solutions that are scalable from a single location to a global, multi-facility enterprise. The results are improvements in productivity, reduced time-to-market, and profitability.

X-Rite's product portfolio offers solutions that communicate color accurately throughout the entire process. Ultimately, accurate color measurement produces numerous immediate and long-term benefits — cost savings through reduced product scrap, minimal production downtime, elimination of off-color product shipments and rework, seamless management of the color process through a global supply chain or multiple locations, and the prevention of bid list exclusions because of poor quality ratings.

Accurate color measurement produces numerous immediate and long-term benefits



An Illuminating Approach to Color and Materials Applications

Plastics are everywhere. Cars, appliances, toys, building materials, nanotechnology, artificial skin — most every product we use is made with some form of plastic. The versatility of plastics makes allows for intricate designs and complex shapes while maintaining structural integrity. It is this versatility, however, that poses challenges when developing and evaluating color. There are a number of key issues to consider:

Design and development: Determining whether, and how, materials will be used or integrated with each other demands a color measurement system that provides for consistent reproduction throughout the process.

New materials: The evolving range of innovative composites requires new methods of evaluating, measuring, and communicating color to ensure process quality and eliminate waste.

Complex shapes: Designers and manufacturers need ways to ensure that color remains stable within each design as well as matches with complementary parts and components.

Color harmony: As plastics are integrated with woods, metals, and other plastics, repeatable color formulation and precise process QA are critical to producing consistent, and consistently appealing, products.

Formulation harmony: In-plant formulation technology requires non-contact batch analysis to ensure color integrity. Automated in-line color analysis systems ensure objective measurement and process continuity.

Material consideration: Just as coating formulations differ, so may the materials on which they're applied — wood, metals, plastic, and variations of each may be integrated in a design or product. Each has a different composition that may require a different coating system to achieve a color match. Accurate color standard and measurement tools are necessary to achieve these matches.

Process methodology: Is reground product being incorporated with new? Is color molded in or applied after production? Which type of molding and painting process is used? Each process requires a different chemistry along with color analysis tools that ensure colors remain consistent regardless of application.

Multiple source uniformity: Products may often be produced at different plants, or even by different suppliers, before becoming part of a supply chain. A precise color program avoids mismatched colors and costly mistakes.

Color measurement technology provides a vital solution



The plastics industry continues to evolve at an accelerated rate, exerting pressure on manufacturers to provide new designs, new production methodologies, and new products to meet demand. Responding to this challenge requires creative thinking and efficient solutions, such as color measurement technology — a practical, common-sense approach to improving quality control, reducing waste, and increasing overall efficiency. Consider just these few advantages:

- Eliminate common visual errors caused by inadequate lighting or random visual inspection
- Integrate consistent, precise color quality control into your operation
- Reduce scrap and rework caused by mismatched colors
- Achieve color harmony among locations and suppliers
- Reduce production time
- Improve quality analysis and overall control

Tools for Monitoring Color at Every Step.

Software Applications. State of the art solutions for quality control, color matching, color management, and instrument profiling. Web-based editions are also available for server-based environments requiring simultaneous data viewing and communication around the globe.

Solutions: Color iQC, Color iMatch, X-RiteColor Master, NetProfiler

Benchtop Instruments. Primarily used in the central lab for validation of incoming goods. They are also often used for research projects and where special requirements exist, such as the need to measure transparent products or confirm the whiteness control of UV-including materials.

Solutions: Color i7, Color i5, Color-Eye® 7000A

Portable Instruments. Convenient, hand-held units that allow real-time color measurement anywhere in the process. This avoids the need to take samples — and waste material — as well as reduces waiting time.

Solutions: SP64, SP62, SP60, 964, 962

Non-Contact In-Line Solutions. Choose from basic color verification systems to robot-based multi-angle devices to ensure the integrity of the painting process and vehicle color quality.

Solutions: VeriColor System, VeriColor Solo, VeriColor Spectro, Color iScan, TeleFlash, TeleFlash Compact

Visual Products. X-Rite offers two daylight simulation technologies — SpectraLight filtered tungsten halogen technology for critical color decisions, and seven-phosphor fluorescent technology for relative color assessment. Both offer unparalleled precision, enabling your entire supply chain to deploy lighting products and

Solutions: SpectraLight III, Judge IIS, Munsell Color FM 100 Hue Test

Software Applications



Color iQC Color Quality Control Software

A flexible, job-oriented software package that streamlines color measurement, reporting and recording to maintain a centralized, cost-efficient process. Whether in the lab, in production, or in finished goods, Color iQC adapts to your workflow to make color fast and easy.

Color iMatch

Match more samples from opaque to transparent or from coatings to plastics to textiles. Multiple match engines provide more color formulation latitude. Available in a choice of three versions to optimize formulas for cost and color accuracy and make best use of lab resources.

X-RiteColor Master

A versatile color formulation and quality assurance software package that provides immediate access to essential color control data throughout the manufacturing process. The package includes the ability to access, analyze, and report data from multiple angles of color information from various types of instruments.

NetProfiler

An exclusive advance in color measurement, NetProfiler enables customers to exchange spectral color data with confidence. By minimizing the variance between color measurement data — either from one instrument to the next or from one year to the next — NetProfiler controls the critical variable in managing the color reproduction process.

Benchtop Instruments



Color i7 Benchtop Spectrophotometer

A full-featured reference instrument for reliable digital workflow and error-free measurement of textile, plastic, coated, liquid, and brightened samples. An embedded NetProfiler system combines with self-diagnostic, and auto-configure functions ensuring consistent, precise performance.

Color i5 Benchtop Spectrophotometer

A flexible instrument for accurate, high-volume production measurement of a wide variety of samples sizes, shapes, textures, and opacity levels. An embedded NetProfiler system combines with self-diagnostic, and auto-configure functions ensures consistent, precise performance.

Color-Eye 7000A Benchtop Spectrophotometer

Color-Eye 7000A is a premium reference grade spectrophotometer known for its superior inter-instrument agreement and reliability. Used by leading color suppliers worldwide, Color-Eye 7000A makes the ideal foundation for a color management system, especially for those who want to establish digital color standards for their supply chains.

Portable Instruments



MA68II Multi-Angle Spectrophotometer

The ultimate portable, multi-angle instrument for accurate measurement of metallic, pearlescent, and special effect finishes. It's the accepted standard of the global automotive industry.

SP Series of Portable Sphere Spectrophotometer

The SP series offers a full line of spherical hand held spectrophotometers designed to meet the performance and feature capabilities necessary for diverse color measurement applications.

900 Series of Portable 0/45 Spectrophotometer

A series of 0/45 handheld spectrophotometers designed to address a wide range of industry specific color needs, ensuring consistent color quality in the plant, laboratory or field.

Non-Contact In-Line Solutions



VeriColor Spectro

The VeriColor Spectro is a cutting-edge, non-contact spectrophotometer that delivers in-line, non-contact, absolute (L*a*b*) color measurement and identification.

VeriColor™ Color Verification and Identification System

Designed to meet the exacting color process control requirements of automotive parts suppliers, the VeriColor system merges the non-contact advantages of industrial grade color sensors with the precision of laboratory spectrophotometers. VeriColor is a complete system that features a programmable hub to interface with up to six sensors.

VeriColor™ Solo

VeriColor solo is a single “hubless” standalone industrial grade color sensor that allows color measurement in assembly and sorting operations.

Color iScan

A network-based system that allows multiple users to evaluate multiple in-line color anywhere within the network. Well suited to a variety of applications, particularly made-to-order goods.

TeleFlash Non-Contact Spectrophotometer

Eliminate costly production line color errors with this automated online quality control system that provides non-contact measurement and continuous reporting.

TeleFlash Compact Non-Contact Spectrophotometer

Accurately measure color and evaluate color deviation through an exclusive instrument design that accommodates textured, finely patterned, dry, or wet samples.

Visual Products



SpectralLight® III Color Viewing Booth

The most accurate simulation of natural daylight available, this patented filtered tungsten halogen light source is available in single, dual, or multiple overhead luminaire configurations.

The Judge® IIS Color Viewing Booth

A patented seven-phosphor design that provides the closest match to natural daylight available in a fluorescent source.

Harmony Rooms

Sometimes referred to as fit and finish areas, these custom-designed viewing rooms simulate the consumer experience and allow for the evaluation of final product for color harmony between parts and components coming from multiple vendors.

Munsell Color FM 100 Hue Test

The Farnsworth-Munsell 100 Hue Test from Munsell Color is the industry standard for determining color discrimination and identifying color deficiencies. This portable, 15-minute test and scoring software analyze how accurately your visual evaluators see color.

Comprehensive Laboratory Service

For evaluating color performance and measurement standards and X-Rite maintains fully accredited laboratories throughout the world. Each is accredited in accordance with the recognized International Standard ISO / IEC 17025 and also meets additional program requirements in the field of calibration.

In accordance with the A2LA evaluation process, accreditation is granted to laboratories to perform a wide range of units, including:

- Model 962, 964, 939 968, 948, 938
- Model SP61, SP62, SP64
- Model 504, 508, 518, 528, 530
- Model MA68 & MA68II
- Model Color i7, Color i5
- Optical Radiation for 2300 K and 2856 K lightboxes (SPL family)



The Color of Success

The plastics industry offers both challenges and opportunities. Color continues to play a significant role. X-Rite offers you the expertise and technology to make the most of your color opportunities...right from the start.

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For more information, visit xrite.com.

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