HunterLab Agera L2 Integrated 60° Gloss Measurement

Bringing Color and Surface Finish Together for Complete Appearance Control

1. Introduction

When evaluating color, what we see is not just pigment—it's pigment interacting with **surface texture and gloss**. Two samples made with the same colorant can look entirely different if one is glossy and the other matte. Gloss affects how light reflects from the surface, changing perceived depth, darkness, and saturation.

The **HunterLab Agera L2** recognizes that color and gloss are inseparable components of appearance. Its **integrated 60° gloss measurement**, conforming to **ASTM D523** and **ISO 2813**, captures both properties simultaneously, creating a complete and consistent representation of how a product truly looks.

By integrating gloss directly into the color measurement process, Agera L2 eliminates the need for separate instruments or workflows—providing faster, more reliable, and visually correlated results for **appearance-critical materials** such as plastics, coatings, films, decorative surfaces, and consumer goods.

2. Purpose

The purpose of **Agera L2's integrated 60° gloss measurement** is to bring **objective, quantifiable control** to the visual dimension of surface finish. While color measurement determines hue and saturation, gloss defines how the surface reflects light—dramatically influencing perceived depth and richness.

Agera L2's 60° gloss measurement represents the **universal standard angle** for general industrial surfaces, as defined by **ASTM D523** and **ISO 2813**. This angle provides the ideal balance, neither too shallow (which exaggerates mirror-like reflections) nor too steep (which underrepresents gloss differences).

By capturing **color and gloss simultaneously**, the Agera L2 ensures that manufacturers can measure the *total appearance* of a product—its color, brightness, gloss, and texture—all in one data set.

This integration reduces subjective evaluations, improves communication between suppliers and customers, and ensures consistent visual performance across global production networks.

3. Why It Matters

In industries where **appearance defines brand identity**, visual inconsistency between gloss levels can be costly. A product that "looks off" under certain lighting or finish conditions can trigger unnecessary reformulation or rejection—even if the color is technically correct.

Gloss impacts perception in three key ways:

1. **Brightness and Depth:** Glossy surfaces reflect light more directionally, often appearing darker and more saturated than matte finishes.
2. **Contrast and Texture:** Variations in gloss alter how fine surface details are perceived, changing apparent smoothness or texture.
3. **Color Accuracy:** Gloss differences can distort instrumental readings if gloss and color are measured separately.

The Agera L2 eliminates these discrepancies by combining both measurements in a single operation. Users no longer need to cross-reference color data from one instrument and gloss data from another. The result: true-to-eye correlation, faster approvals, and improved brand consistency between formulations, substrates, and suppliers.

4. Technical Overview

The Agera L2's **integrated 60° gloss system** is engineered for precision, stability, and seamless integration with its color measurement optics.

Key Technical Features:

1. Integrated 60° Gloss Geometry
    - Fully compliant with ASTM D523 and ISO 2813.
    - Measures specular reflectance at a 60° incidence—ideal for medium-gloss industrial materials.
2. Simultaneous Color + Gloss Measurement
    - The instrument captures **reflectance color (0°/45° geometry)** and **60° gloss** in one measurement event, reducing time and eliminating data mismatch.
3. Optimized Optical Path Design
    - Gloss and color measurements share alignment and calibration, ensuring precision even across textured, matte, or semi-gloss surfaces.
4. Universal Surface Compatibility
    - The 60° configuration is equally effective for dark and light colors, smooth or textured finishes, and transparent or opaque materials.
5. Data Integration via EasyMatch Essentials 2.0

- Color and gloss data are stored, displayed, and reported together, allowing full correlation and visual traceability within one unified software environment.

5. Applications and Industry Impact

- Plastics and Polymers – Ensures that molded, extruded, or coated components achieve uniform color and gloss, especially in high-visibility consumer or automotive parts.
- Paints and Coatings – Validates gloss levels in matte, satin, and high-gloss finishes; supports product differentiation and appearance consistency.
- Films and Packaging – Measures reflective and matte finishes in packaging, ensuring color and gloss remain within brand tolerances.
- Decorative Surfaces and Consumer Goods – Maintains consistent appearance across varying textures and finishes in appliances, electronics, and home goods.
- Automotive and Industrial Components – Confirms finish uniformity on painted, plastic, or coated surfaces where perceived quality is critical.

6. Advantages

- Comprehensive Appearance Control: Measures both color and gloss in one step for a complete understanding of product appearance.
- Universal 60° Standard: Complies with ASTM D523 and ISO 2813 for globally consistent gloss measurement.
- Better Visual Correlation: Connects instrumental data directly to perceived finish differences, reducing subjective disagreement.
- Faster QC Decisions: Eliminates the need for separate instruments or workflows—reducing testing time and complexity.
- Enhanced Brand Consistency: Aligns color and finish across suppliers, plants, and global production networks.

7. Conclusion

The **HunterLab Agera L2 Integrated 60° Gloss Measurement** feature transforms color measurement into **appearance measurement**—quantifying not just color, but the way that light, texture, and finish combine to create what the eye truly sees.

By uniting **0°/45° circumferential color geometry** with **standardized 60° gloss measurement**, Agera L2 provides manufacturers with a complete, objective, and repeatable assessment of total appearance. The result is fewer subjective evaluations, faster approvals, and more confident decisions—ensuring that every material, from matte to mirror-gloss, meets visual and brand expectations worldwide.