dgtechnologies

Reference material for reflectance and fluorescence readers

Lumi Control

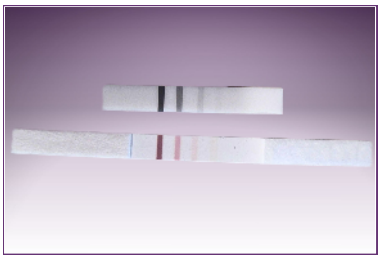
Lumi Control is a reference material used in optical instruments to provide the detection system with a stable, non-drifting signal response.

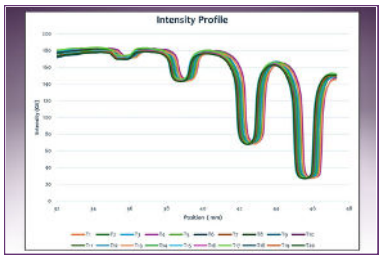
It provides highly stable optical response for years and serves as relative reference for monitoring and performance checks. **These are not absolute calibration standards but robust relative references for production monitoring.**

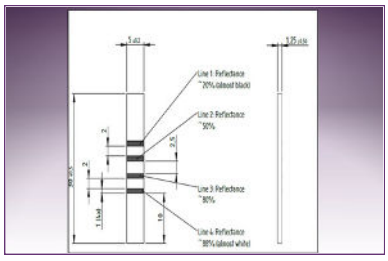
Two Versions to Support Different Measurement Modes:

Lumi Control is available in two versions – each optimized for its measurement principle and integrable into your consumable or holder mounted inside the instrument

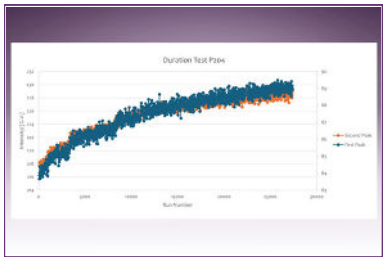
Lumi Control-R is designed for reflectance-based measurements, featuring an opaque glass substrate with lines covering the full dynamic range of a colorimetric lateral-flow assay.

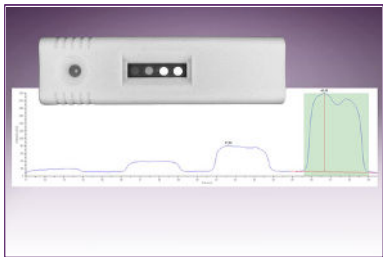






Lumi Control-F targets fluorescence-based measurements for Europium or Q-dot readers, providing stable interaction with the reader. It is integrable into most common lateral-flow cassettes and offers a lifetime of 5+ years. Over >30,000 measurement cycles, Lumi Control-F shows minimal intensity deviation, validated with Lumi Flex Fluo, supporting reliable comparison measurements and long-term monitoring.





Key Features

- Extraordinary stability: <0.5% CV (R), <1% CV (F)
- Easy integration into existing cassette systems
- Hard-coated, solvent-resistant surface
- Serial number and batch documentation for traceability
- Easy to clean, service-friendly, lifetime > 5 years

Integration & Customization

Our streamlined integration process ensures a precise fit and verified optical performance in three simple steps.

Step 1 — Send the cassette sketch
For mechanical integration, a cassette sketch (STEP/DXF) or physical sample is required.

Step 2 — Perform R&D compatibility check
Compatibility check by R&D, followed by optical performance test after integration.

Step 3 — Run optical performance test
Optical performance is verified through standard inspection and testing after integration.

Lumi Control provides consistent, traceable performance verification for your optical instrument throughout its service life. Serial number documentation and batch traceability ensure reliable comparison measurements and long-term monitoring across instruments and locations.

Available as a stand-alone (ISRT-R) or customer-integrated (ISRT-F) solution.
Included with every delivery: ISRT-R or ISRT-F unit • Protective case or integrated cassette (as applicable) • Cleaning accessories

Detailed Specifications

Lumi Control-R

Measurement Principle: Reflectance (colorimetric)
Substrate: Opaque glass
Lines: Full dynamic range coverage
Spectral Range: 400–900 nm
Stability: <0.5% CV
Temperature Range: +10 to +40 °C
Lifetime: ≥ 5 years
Size: Standard 30 × 5 mm; thickness 1.25 mm ± 0.5 mm
Mounting: Stand-alone or integrated
Packaging: Protective box or cassette type
Traceability: Serial number & batch documentation
Integration: Most common lateral-flow cassettes

Lumi Control-F

Measurement Principle: Fluorescence (Europium / Q-dot)
Response Type: Fluorescence emission target
Substrate: Fluorescent material
Interaction: Stable reader interaction
Spectral Range: Broad, including UV
Stability: ≤1% CV
Temperature Range: +17 to +31 °C
Lifetime: ≥ 5 years
Size: Customer-specific, ideal for direct integration
Mounting: Integrated cassette mounting
Packaging: Protective box or cassette type
Traceability: Serial number & batch documentation

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