

F10-ARc

Thin-Film Analyzer



Anti-Reflection and Hardcoat Testing at a New Level of Simplicity and Affordability

Automated testing of ophthalmic coatings is quick and easy with the Filmetrics F10-ARc. Now everyone from line operators to R&D personnel can test and record coating performance in seconds.

Compare Multiple Spectra

Plot and compare multiple reflectance spectra to target spectra – automatically evaluating reflectance levels, minima/maxima locations, and generating unambiguous good/bad readings.

Quantify Residual Color

Residual color can be displayed visually as well as in all of the common color space systems, such as CIELAB and CIEXYZ.

Use the Hardcoat Upgrade to Measure Thickness

The optional Filmetrics FFT algorithm is used in hundreds of hardcoat applications worldwide. Measure hardcoat and primer layers simultaneously, all with a single click.

All with Unprecedented Simplicity

Simply plug the F10-ARc into your computer's USB port and you're ready to go.* Adjustments common to other spectrometers, such as integration time and baselining, have been virtually eliminated due to proprietary Filmetrics advances. And with a 40,000-hour internal light source* and automatic on-board wavelength calibration, maintenance is nil and measurement confidence is high.

* F10-ARc-UV requires separate UV light source

The Filmetrics Advantage

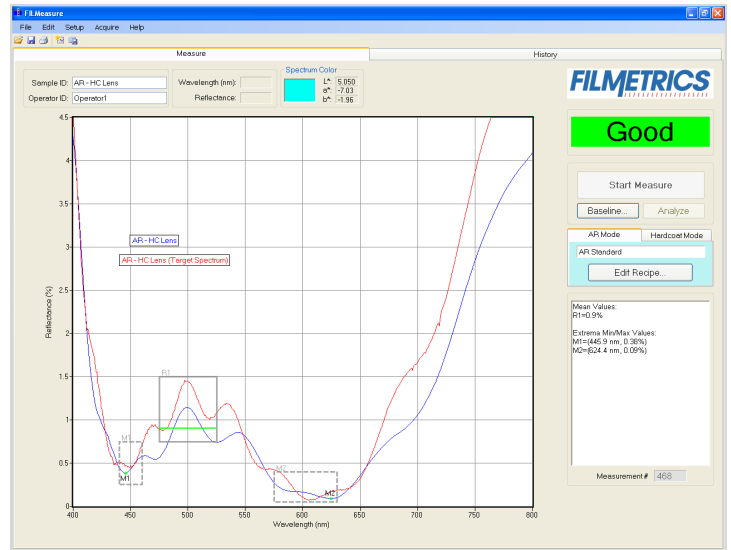
- World's leader in tabletop thin-film measurement
- 24-hour phone, e-mail, and online support
- Intuitive analysis software standard with every system

Additional Features

- Built-in online diagnostics
- Standalone software included
- Sophisticated history function for saving, reproducing, and plotting results

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The F10-ARc makes automatic quantitative assessment of lens coatings quick and easy.

General Specifications	F10-ARc-UV	F10-ARc
Wavelength Range:	190 nm - 1100 nm	380 nm - 1050 nm
Spot Size:	100 μ m	100 μ m
Light Source:	External, D2 + Halogen	Internal, 40k-Hour MTBF

Thickness ¹ (with Hardcoat option)	
Thickness Measurement Range:	0.2 μ m - 15 μ m
Min. Thickness to Measure n and k ² :	100 nm
Accuracy: The greater of	0.01 μ m or 0.2%
Precision ³ :	0.001 nm
Stability ⁴ :	0.001 nm

Spectrometer	
Wavelength Accuracy:	< 0.5 nm
Wavelength Reproducibility:	0.1 nm
Reflectance Accuracy for $R \leq R_{Std}$ ⁵ :	$0.01 * R_{Std}$
Reflectance Accuracy for $R > R_{Std}$ ⁵ :	$0.01 * R_{max} / R_{Std}$
Photometric Accuracy:	0.005 A
Noise:	< 0.0002 A rms
Stray Light:	< 0.25% at 500 nm

General Requirements	
Power, F10-ARc:	2 W, USB-Supplied
Power, F10-ARc-UV:	100 - 240 VAC, 70 W max
Computer Interface:	USB 2.0
Processor Speed:	1 GHz min.
Certifications:	CE EMC and safety directives

Operating System	
PC:	Windows XP (SP2) - Latest Windows (64-bit)
Mac:	OS X Lion - Latest Mac OS running Parallels



LS-DT2 light source used with F10-ARc-UV

¹ With optional software upgrades, material dependent.
² Index measurements require UPG-Thickness-to-n&k.
³ 1 σ of 100 measurements of 500 nm SiO₂-on-Si. Average of 1 σ over 20 successive days.
⁴ 2 σ of daily average of 100 measurements of 500 nm SiO₂-on-Si over 20 successive days.
⁵ R_{Std} is reflectance of the reflectance standard. R_{max} is the maximum measured reflectance over the wavelength range.