

MultiSpec RTP: Spectrometer System for Reflection/Transmission Measurements on Coated Glass

The MultiSpec RTP spectrometer system guarantees fast and reliable quality control in the lab. It is designed to collect color info and spectral data from transmission and reflection measurements of coated glass and other highly specular material. The integrated spectrometers are high-quality

modules from Carl Zeiss without moving parts and with outstanding long-term stability. The internal electronic multiplexer performs simultaneous measurements of transmission and specular reflection data. The RTP head with S(diffuse)/8° geometry is connected by fiber-optics.

Spectrometer Module

MultiSpec systems are based on the monolithic spectrometer modules from Carl Zeiss. Their high light sensitivity and extreme stability, in combination with the tec5 15/16-bit electronics, allow very accurate measurements with high dynamic range. Various wavelength ranges and resolutions are available.



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Main Features

- Simultaneous transmission and reflection measurements
- Color determination acc. CIELAB
- S(diffuse)/8° geometry (RTP)
- Spectral range from 360 – 1000 nm (optional up to 1700nm)
- Fast, precise, robust, non-destructive
- Modern detector array technology without moving parts
- Standard fiber-optic connection

Software MultiSpec® Pro

- MultiSpecPro is a modular software package with various data acquisition modes and data display/processing and output options
- Color determination according to CIELAB, CIE94, CMC 10 standard illuminants and predefined 2° and 10° standard observer
- System control module with user management (access control) and log file
- The photometric calibration is automatically calculated using the data of a calibrated first surface mirror

Systems

Product Information MultiSpec® RTP

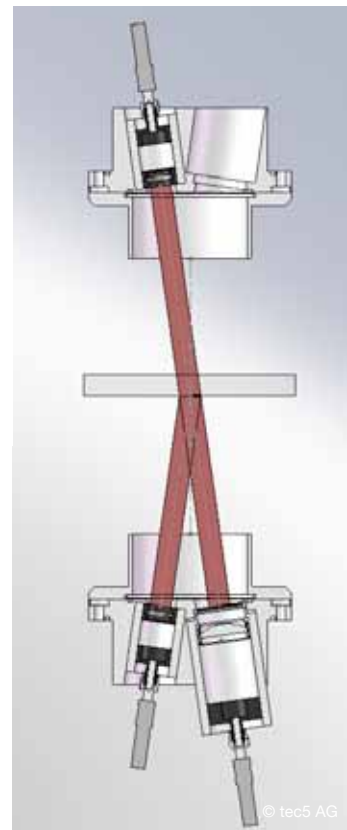
Technical Data

Measuring speed	30 ms / scan
Measuring heads	1 x transmission / 1 x reflection
Measuring geometry	Transmission: Parallel optics / diffuse illumination Reflection: S(diffuse) / 8°; agrees closely with diffuse/8° geometry (sphere) instruments
Measuring spot	approx. 10 mm
Glass thickness	up to 15 mm
Light source	Halogen, 20W, approx. 4000 h service life (with diffuser optics)
Max. distance to host computer	> 100 m , High speed Ethernet
Spectrometer	Diode array, high quality MMS 1 spectrometer from Carl Zeiss
Wavelength range	approx. 360 - 1000 nm (optional up to 1700 nm with additional InGaAs detector)
Data point interval	3.3 nm (effective bandwidth: < 10 nm)
Repeatability	
Wavelength	< 0.05 nm (accuracy: < 0.5 nm)
Transmission	< 0.1 % T (400-900nm) dE < 0.15
Reflection	< 0.2 % R (400-900 nm)
Inter instrument agreement	
Standardization	External reference mirror
Operating temperature	5 – 40°C
Power supply	110/220V, 50/60Hz
Dimensions (HxWxD) (Standard enclosure)	180 x 427 x 411 [mm] (3 HE / 84TE)
Weight	12 kg – 15 kg



Measuring Head RTP

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Optical Setup

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