



OUTSTANDING SPECTRAL MEASUREMENTS OF OPTICAL COATINGS

PHOTON RT

UV-VIS-MWIR SPECTRAL MEASUREMENTS OF PLANO OPTICS AND PRISMS





PHOTON RT

THE ONLY INSTRUMENT DESIGNED SPECIFICALLY TO TEST OPTICAL COATINGS

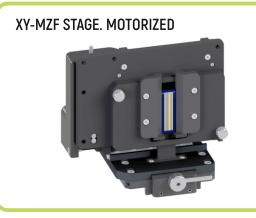


UNIQUE DESIGN

- Unique optical design measurement from 185 nm up to 5200 nm in one instrument
- Multi-axis movement of the measurement channel testing of sophisticated cemented prisms at any angles of incidence with variable off-set or arbitrary direction of the outgoing beam
- Special low-noise detectors are selected to qualify coatings with extreme specifications
- Optional sample stages designed for fast, complex or batch measurements
- Improved monochromator generates a highly collimated beam, produces low stray light and gives a high signal-to-noise ratio

AUTO-DETECT MOTORIZED STAGES







Offers baseline calibration and subsequent test without user intervention

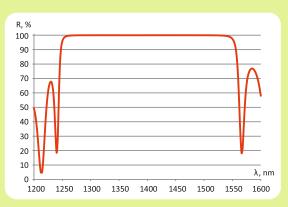
Designed for testing a sample at multiple surface points

Designed for fully automatic testing of multiple samples including baseline calibration



*The example results shown are ONLY obtainable by using the PHOTON RT

◆ 1392 nm BROADBAND NEAR IR LASER MIRROR

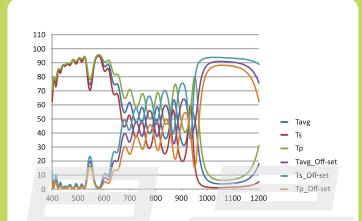


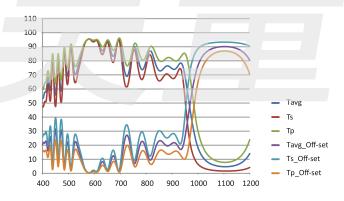
Max measured absolute specular reflectance:

99,9953%

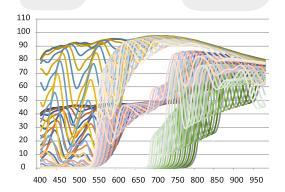
UNIQUE **RESULTS***

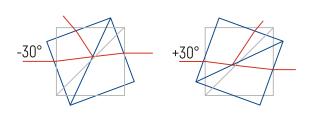
MEASUREMENT OF COMPLEX PRISMS WITH BEAM OFFSET





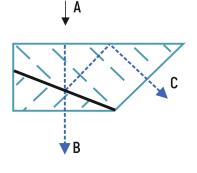
BEAM SPLITTER MEASUREMENTS AT VARIABLE AOI





Designed specifically for optics used in AR and **VR** devices

CEMENTED PRISM WITH BEAM OFF-SET



Measurement of beams B and C in one run without moving the sample

SPECIFICATIONS



PRODUCT SPECIFICATIONS			PHOTON RT	Spectrophotometer			
MODEL	0217	0235	0252	0 4 1 7	0435	0452	
OPTICAL CONFIGURATION	0217	0200	0202	0117	0 100	0.102	
Photometric functions	%T, %R						
Effective wavelength range, nm	185 - 1700	185 - 3500	185 - 5200	380 - 1700	380 - 3500	380 - 5200	
Built-in polarizers, nm	220 - 1700	220 - 3500	220 - 5200	380 - 1700	380 - 3500	380 - 5200	
		220 - 3300	220 - 3200	300 - 1/00	300 - 3300	300 - 3200	
Optical scheme of monochromator	Czerny-Turner						
Optics	Mirror MgF ₂						
Reference channel	Yes						
Wavelength sampling pitch, nm	0,25 - 100						
Spot size on the measured sample, mm	6 x 2 > 2 x 2						
Turning pitch angle of sample stage	0,01 deg	, C					
Turning pitch angle of photodetectors	0,01 deg	, 0					
Variable angle measurements	2. 8 - 75 deg for a 3. Detector rotation	ransmittance (up to 85 deg wit bsolute reflectance (up to 85 d on range: 300 deg 180 deg otation range: -85 deg 0 deg	deg with 7085 sam 16 deg				
Wavelength subranges, nm	Ultimate spectral reso (non-polarized light)	Ultimate spectral resolution, nm (non-polarized light)		Wavelength accuracy, nm		Wavelength repeat accuracy, nm	
185 - 350 nm	0,3				+/- 0,06		
350 (380) - 990 nm	0,6	0,6 +/- 0,24		· · · · · · · · · · · · · · · · · · ·	+/- 0,12		
990 - 1700 nm	1,2				+/- 0,24		
1700 - 2450 nm	1,2				+/- 0,24		
2450 - 5200 nm	2,4				+/- 0,48		
Stray light level, % at 532 nm	<pre>2,4</pre>						
Angle of beam divergence							
0 0	+/- 1 deg			(MMD)			
Photometric accuracy	NIST SRM 1930: +/- 0.003 Abs (0.33 Abs); +/- 0.006 Abs (2 Abs) +/- 0.0011 Abs (0.8 Determined using			NRC NG11 SRM: +/- 0.0013. +/- 0.0011 Abs (0.82 Abs); + Determined using 0,1 seco 10 subsequent measurem	-/- 0.005 Abs (1.0 Abs) and accumulation, maxi		
Photometric repeat accuracy (VIS range)	(VIS) NIST SRM 930e: 0.0004 Abs (1 Abs) NIST SRM 1930: 0.0001 Abs (0.33 Abs); 0.005 Abs (2 Abs) NIST SRM 1930: 0.0001 Abs (0.33 Abs); 0.005 Abs (2 Abs) +/- 0.0022 Abs (0.82 Abs); +/- 0.0034 Abs (1 Determined using 0,1 second accumulation 10 subsequent measurements				+/- 0.0034 Abs (1.0 Abs and accumulation, maxi		
Stability of baseline, % / hour (VIS range)	< 0,1 (One hour warm-	-up time)					
	1. S, P, (S+P)/2						
Unattended polarization measurements with	1. 3, P, (3+P)/Z						
Unattended polarization measurements with built-in polarizers		P ratio for incident beam (20/8	30, 30/70 etc)				
		P ratio for incident beam (20/8	80, 30/70 etc)				
built-in polarizers Zero order / Green beam	User defined S: Built-in, automatic		80, 30/70 etc)				
built-in polarizers	User defined S: Built-in, automatic Halogen lamp: 1	l ea				=	
built-in polarizers Zero order / Green beam	User defined S: Built-in, automatic Halogen lamp: 1			'		IR source: 1 ea	
built-in polarizers Zero order / Green beam Light sources, preinstalled	User defined S: Built-in, automatic Halogen lamp: 1 HgAr wavelengt Deuterium lamp: 1 ea	l ea th calibration verification lamp Deuterium lamp: 1 ea	:1ea Deuterium lan IR source:1ea			IR source: 1 ea	
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built-in polarizers Zero order / Green beam Light sources, preinstalled Light sources, spare SAMPLE COMPARTMENT Dovetail baseplate for sample stages	User defined S: Built-in, automatic Halogen lamp: 1 HgAr wavelengt Deuterium lamp: 1 ea Halogen lamp: 2 ea (in Designed for mountin	l ea th calibration verification lamp Deuterium lamp: 1 ea ncluded into shipment). Other g of motorized and non-moto	:1ea Deuterium lan IR source:1ea light sources can	be ordered as spares as well	ures instant detection		
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