

PHOTON RT 0420 Ultra

**VIS-NIR TRANSMISSION MEASUREMENT OF CUTTING-EDGE COATINGS
WITH STEEP SLOPES AND HIGH OPTICAL DENSITY**



UNIQUE MEASUREMENT CAPABILITIES:

- **Broadband measurement with one click**
- **Optical density: up to OD8**
- **Filter bandwidth: down to 0,1 nm FWHM**
- **Slope steepness: down to 0,02 %**

SPECIFICATIONS

PARAMETER	DESCRIPTION
MODEL	0420 Ultra
OPTICAL CONFIGURATION	
Optical scheme of monochromator	Double Additive Czerny-Turner
Optics	Mirror, protected Ag
Reference channel	Yes
Wavelength sampling pitch, nm	0,01 to 100
Spot size on the measured sample, mm	4 x 3
Photometric functions	%T, OD
Effective wavelength range, nm	340 - 2000
Ultimate spectral resolution, nm	
340-990 nm	0,06
990-2000 nm	0,13
Wavelength accuracy, nm	
340-990 nm	+/- 0,02
990-2000 nm	+/- 0,04
Wavelength repeat accuracy, nm	
340-990 nm	+/- 0,01
990-2000 nm	+/- 0,02
Ultimate optical density, -log ₁₀ (T)	
340-420 nm	6
420-925 nm	8
925-2000 nm	7
Stray light level, % at 532 nm	< 0,000001
Angle of beam divergence, deg	+/- 0,2
Photometric accuracy	(VIS) NIST SRM 930e: +/-0.003 Abs (1 Abs) NIST SRM 1930: +/-0.003 Abs (0.33 Abs); +/-0.006 Abs (2 Abs)
Photometric repeat accuracy	(VIS) NIST SRM 930e: 0.0004 Abs (1 Abs) NIST SRM 1930: 0.0001 Abs (0.33 Abs); 0.005 Abs (2 Abs) Determined using 0,1 second accumulation, maximum deviation for 10 subsequent measurements
Stability of baseline, %/hour	< 0,2 (one hour warm-up time)
Light sources	High energy plasma source, HgAr wavelength calibration lamp. All sources built-in and pre-configured
SAMPLE COMPARTMENT	
Standard sample stage (included)	Measurement of transmission of plano samples with size greater than 8 x 10mm
Size of samples	Min. 6x4 mm Max. sample size: <ul style="list-style-type: none"> up to 55 (90) mm x 120 mm with closed lid for standard sample stage up to 152,4 mm (round) with closed lid for optional motorized sample stage
INTERFACE, DIMENSIONS AND WEIGHT	
Interface	USB 2.0, Windows-based, English
File saving options	res (txt), xls, pdf, csv
Power consumption, Watt	250
Power input	110-220 V, 50-60 Hz
Width x Depth x Height, mm (inches)	820 x 545 x 360 (32 2/5" x 25 2/5" x 14 1/5")
Net weight, kg (lbs)	55 (121)
Values measured after 60 minutes warm-up time	