



We make
measuring optics easy

PHOTON RT 7514

HIGH-PERFORMANCE LWIR SPECTROPHOTOMETERS FOR OPTICS



WAVELENGTH RANGE

• 7500 - 14000 nm

SPECIFICATIONS

PARAMETER	DESCRIPTION
MODEL	7514
OPTICAL CONFIGURATION	
Photometric functions	%T, %R
Effective wavelength range, μm	7,5 - 14,0
Built-in polarizers, μm	7,5 - 14,0
Optical scheme of monochromator	Czerny-Turner
Optics	Mirror: Au, Lenses: ZnSe + AR
Measurement of Transmission	Variable angle measurements: 0 - 60 deg angles of incidence
Measurement of Reflection	Interchangeable sample stages with fixed angles of incidence: 10, 30, 45 and 60 deg. Reference sample: gold mirror
Turning pitch angle of sample stage, deg	0,01
Beam displacement compensation, mm	40
Unattended polarization measurements with built-in polarizers	S, P, (S + P) / 2
Wavelength sampling pitch, nm	5 - 100
Spot size on measured sample (non-polarized light), mm	2,0 $\times$ 6,0 (W x H)
Ultimate spectral resolution (non-polarized light), nm	15
Wavelength accuracy, nm	+ / - 4,0
Wavelength repeat accuracy, nm	+ / - 2,0
Photometric accuracy (47% T, $\lambda_0 = 10,6 \mu\text{m}$, AOI = 4°, 3,0 mm thick sample)	+ / - 0,2%
Photometric repeat accuracy	+ / - 0,1%
Stability of baseline (7,8 μm - 13,0 μm), % / hour*	+ / - 0,3%
Scattered light level (7,5 μm - 12,0 μm), %	< 0,2
Light sources	IR lamp, HgAr wavelength calibration verification lamp
SAMPLE COMPARTMENT	
Maximum sample size, mm	150 $\times$ 200
Maximum sample thickness, mm	40
Planar sample stage	For measurement of transmission and reflection of planar samples with size bigger than 8,0 mm x 12,0 mm
Synchronized positioning	Synchronized computer controlled positioning for sample stage and photodetectors unit (transmission)
INTERFACE, DIMENSIONS AND WEIGHT	
Interface	USB 2.0
Power consumption, Watt	110
Power input	110 - 220 VAC, 50 - 60 Hz
Width x Depth x Height, mm (inch)	760 $\times$ 380 $\times$ 350 (30" x 15" x 13 3/5")
Net weight, kg (lbs)	51 (112)

* 60 minutes warm-up time