

Optical Monitoring Systems for Vacuum Coaters

AKRA Single Wavelength Optical Monitoring System

AKRA Single Wavelength Optical Monitoring Systems are designed for single wavelength monitoring of the deposition processes of all major types of coatings in the spectral range from 200nm up to 5000nm. The final spectral control range can be chosen in accordance to the actual needs and applications. Additionally, the user can scan the entire measured spectrum after the deposition of each layer and compare the obtained spectrum with calculated one. The AKRA systems give the field-proven possibility to control the deposition process of the complex coatings in the infrared range. It means the direct control in the range of 1.5µm up to 5.0µm and the second-order control up to 14µm.



AKRA Technical Specifications (single wavelength, monochromator)

	AKRA 0211	AKRA 0411	AKRA 0217	AKRA 0417	AKRA 0426	AKRA 1550	AKRA 0450
spectral range, nm	200-1100	380-1100	200-1700	380-1700	380-2600	1500-5000	380-5000
spectral resolution, nm	2.4	2.4	2.4 (<1050) 4.8 (>1050)	2.4 (<1050) 4.8 (>1050)	2.4 (<1050) 4.8 (>1050)	4.8 (<3000) 9.6 (>3000)	2.4 (<1000) 4.8 (<3000) 9.6 (>3000)
spectral reproducibility, nm	0.25	0.25	0.25	0.25	0.5	1.0	0.5 (<1000) 1.0 (>1000)
accuracy of wavelength setting, nm	0.5	0.5	0.5	0.5	1.0	2.0	1.0 (<1000) 2.0 (>1000)
measurement accuracy, $\Delta T/T$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
reproducibility of measurement, $\Delta T/T$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01
stability, %/hour	<1	<1	<1	<1	<1	<1	<1
scattered light level, $\Delta T/T_{\max}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01
measurement time, single line, ms	100	100	100	100	100	100	100
measurement time, complete range, s	60-150	20-30	60-150	60-150	60-150	60-150	150-300
power consumption, W	80	50	80	50	50	50	50
power supply, VAC	100-240	100-240	100-240	100-240	100-240	100-240	100-240
power supply, Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60
weight net, kg	10	12	14	14	10	12	10
communication port	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232