

HYT 70XE/70XEL VACUUM PARTICLE SENSORS



*For high temperature
deposition environments*

Features

- High power laser diode for 0.17 micron sensitivity and large detection area
- Heated sapphire windows to protect the sensor from corrosion or deposition
- Reduced laser operating power for extended MTBF
- CE marked for heavy industrial use

Configurations

- Applied WxZ™ CVD
- Applied WxL™ CVD
- KSEC (BTI) Apogee™ LPCVD
- ASM Vertical LPCVD
- SVG-Thermco LPCVD
- Novellus C2 and C3 Altus™
- 40, 50, 80 and 100 Standard manifold configurations
- TEL LPCVD
- LAM Rainbow 4400
- Applied HDP clean port

The highly reliable, versatile HYT 70XE and 70XEL sensors have been specifically designed for in situ particle monitoring (ISPM) of particle levels in vacuum processing equipment. Used in conjunction with an HYT controller, the sensor provides continuous feedback during critical processing steps. This real-time feedback enables a timely response to possible process deviations. Protected optics enable the HYT 70XE and 70XEL sensors to withstand corrosive or depositing effluents found in LPCVD processes.

Their rugged, modular design allows the HYT 70XE and 70XEL sensors to be integrated into large pump line configurations. Particles flowing through the pump line scatter light from the laser beam. The scattered light is collected by the sensor's photodetector, converted to a voltage, and then binned by the controller into size ranges. The patented Machine Trigger™ input into the controller synchronizes the particle count interval with specific process steps. Particle Vision® software collects and displays the particle counts for process monitoring and statistical analysis.

The HYT product line from Hach Ultra offers an extensive series of manifold configurations to accommodate most CVD and process LPCVD equipment.

www.hachultra.com



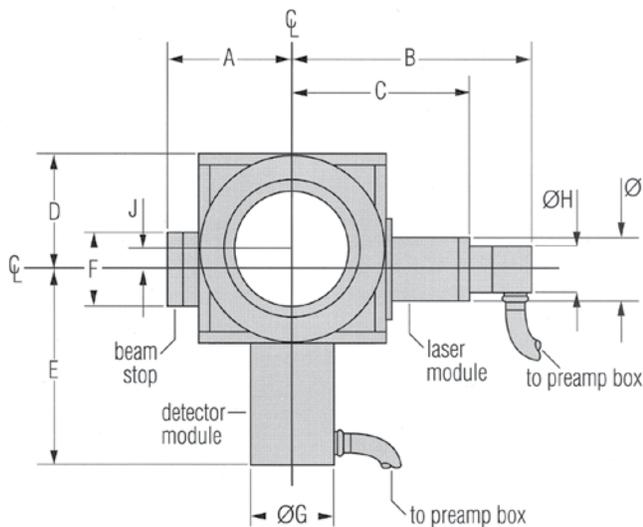
EXCELLENCE IN PROCESS ANALYTICS

Performance Specifications

Sensitivity	0.17 μm minimum detectable size	
Detection Area (on 50/50 manifold)	143 mm^2 @ .36 μm	
	183 mm^2 @ .502 μm	
Laser	810 nm, 350 mW emitted	
	Laser Safety Class I laser product when used in a closed vacuum system. Complies with FDA radiation performance standards, 21 CFR 1040.10 and 1040.11 and with IEC 825-1:1993.	
	10 ⁻⁸ torr to 100 psi	
Pressure Range	10 ⁻⁸ torr to 100 psi	
	Temperature Ranges	Operating
	Storage	-40 to 85°C (-40 to 185°F)
Controller	PM-250E, PM-255E or PM-450	
Pump Line Manifold	Standard pump line sizes (see configurations below)	

Configuration	A	B	C	D	E	F	G	H	I	J
70XE/70XEL 40/40, 50/50	2.25	5.74	4.25	1.57	4.65	1.75	2.00	1.10	1.50	N/A
70XE/70XEL 80/80	2.63	5.74	4.25	2.75	4.65	1.75	2.00	1.10	1.50	0.50
70XE/70XEL 100/100	2.63	5.74	4.25	3.56	4.65	1.75	2.00	1.10	1.50	1.00

Note: All dimensions are in inches. Pump line length for all configurations is 4 inches.



This product is certified for use in environments classified as heavy industrial when used with an HYT PM-250E or PM-255E sensor controller. Complies with EN50082-2 condition "A" (immunity test). Do not use it in residential, commercial, or light industrial areas.



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