Q-pod ™

Thin Film Deposition Rate/Thickness Transducer

► **Simplest & least expensive QCM available anywhere.**

► **Connect directly to your PC's USB ports - up to 8 Q-pods.**

► **Windows®-based software included for operation and data logging.**

► **Weighs less than 2 ounces and small enough to fit in a shirt pocket!**

Description

Looking for a Quartz Crystal Monitor (QCM) to measure thin film deposition rate and thickness? Sigma Instruments' new Q-pod™ transducer is your small, inexpensive, and accurate solution.

Setup and operation couldn't be easier. Connect the Q-pod BNC connector to the signal cable from a QCM sensor. On the other side, a standard USB cable connects to your PC. No external oscillator or power source is required.

Load the free Q-pod software on your PC and you're ready to go.

The Q-pod software displays rate, thickness, frequency, crystal life, and a graph of rate versus time, for up to 8 Q-pods simultaneously. Q-pod readings can be logged to disk in spreadsheet friendly comma-delimited format.

Sigma's Q-pod provides the capabilities of a traditional QCM at a fraction of the size and cost.

Q-pod™ - *Another advanced thin film solution from Sigma Instruments, your innovation leader in thin film measurement.*

Specifications

Sensor	Compatible with any QCM sensor
Frequency Range	1 to 10 MHz
Frequency Resolution	0.05 Hz at 6 MHz
Frequency Accuracy	0.002 %
Frequency Stability	$\pm$ 2 ppm total, over 0° to 50° C
Input	BNC
Interface & Power	USB, v2.0 or later
Size	1" x 2" x 2.5" (25 x 50 x 64 mm)
Weight	2 oz (32 gm)
Software included	Provides display and setup of all operating parameters
Computer requirements	Any PC running Windows® xP or 2000, with one available USB port for each Q-pod

Advanced Thin Film Solutions
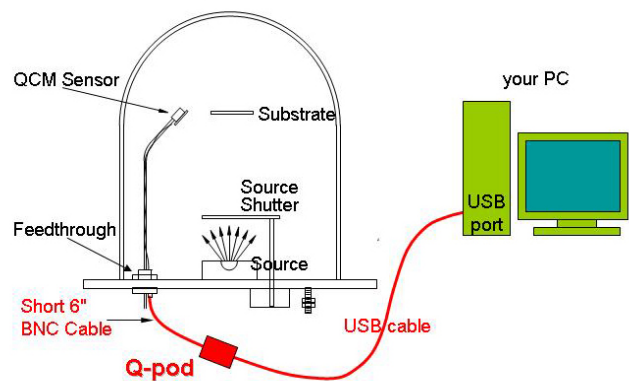
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The block diagram at right shows typical thin film deposition system.   A complete Q-pod system consists of the Q-pod, a sensor and feedthrough, and, of course, your computer.

Could we make a QCM any simpler ?

Typical Q-pod system:

Q-pod	transducer
932-009	sensor
930-011	feedthrough, 1" bolt
934-000	crystals, 10-pack

Thin Film Deposition System

QCM Sensor

Substrate

your PC

USB port

Source Shutter

Feedthrough

Source

Short 6" BNC Cable

USB cable

Q-pod

Q-pod™ Software

Σ Q-pod

File   Setup   About

Start   Pause

| | Run Time 00:00:30 | Run # 5 | DataLog ⊙ On ○ Off | | 11/9/2006 12:34:43 PM |

	Rate (A/s)	Thick (kA)	Zero	Freq (Hz)	Life (%)	Density	Z Factor	Tooling
Sensor 1	22.34	0.407		5857666.12	97.6	8.93	0.437	92.00
Sensor 2	26.17	0.519		5754810.27	95.9	7.30	0.841	80.00
Sensor 3						3.00	1.000	100.00
Sensor 4						4.00	1.000	100.00

Copper   Indium   Channel 3   Channel 4

Rate

Time (Min.)

The screenshot at left shows the main setup and operating screen of the software included with the Q-pod. The software supports up to 8 Q-pods on one PC.   (Each Q-pod requires one available USB port.)

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