

Model 4240 Wafer Inspection System

The THÔT Wafer Inspection System was developed to provide a wide band, frequency domain, multipurpose tool for wafer and substrate inspection.

The tool can detect and measure defects from flatness to isolated sub-micron contamination and defects. Multiple channels of optical defect detection allow single pass testing for all features.

This tool is also capable of accepting many additional options including reflectivity, wavelength filter, surface finish and profilometry testing capabilities.

Features:

- 100% testing & certification for flatness, bow, warp, finish, contamination, scratches and handling damage in one pass.
- Detection capability down to 0.2 micron particles and defects.
- Height / depth measurement capabilities down to sub-Angstrom.
- Scan times as fast as 10 seconds.
- Up to 16 channels of data capture.
- Flatness, reflectivity, waviness, μ -waviness, surface finish (Ra) and profilometry detection options.
- Capture and measure up to several thousand defects per scan, over 32,768 scans per wafer or substrate.
- Air bearing spindle and slides for precision measurement.
- Laser/Doppler vibrometer with sub-Angstrom noise floor.
- High speed PC based computer with dual high speed data processors.
- Fully compatible programs, files and data with Model 4240M defect analysis station.
- Windows 2K operating system.



Model 4240 Wafer Inspection System (continued)

Available Options:

- Reflectivity option. Measures reflected energy to detect stains, color changes, hazing & other defects that have no height or depth information. This option also eliminates the need for an oscilloscope to focus the laser beam.
- Wavelength filter option. The option adds an additional optical defect channel and front-end filter that allows user to select defect wavelength range (bandpass) for measurement. This feature is used to examine small surface features in the presence of highly distorted, bowed or warped surfaces. Up to two bandpass filters per system.
- Profilometer option. Adds a displacement output to allow radial measurement capabilities. This profilometer has a 32nm step resolution. This option requires a special laser system and must be ordered at the time of original system purchase.
- Workstation analysis software option. This is a standalone software package that allows a properly configured PC to analyze data from any THôT tester. This program also allows a PC to write test parameters and sequences for loading onto the testers. Turns a desk top PC into a data analysis station.
- Probe options. Standard probe size is 10 μ m. Secondary lenses are available to reduce the beam to 5 microns or 2 microns.
- Chuck options. Chucks are available to fit all standard size wafers including fiberoptic filter substrates. Chuck types include vacuum plate, vacuum ring, elastomer and solid clamp. Chuck Option Prices: See Chuck Options price sheet.
- Safety cover. Most users mount the unit under an enclosed hood or behind a safety shield, if a safety cover is required, there are two versions available, normal (1/4" Lexan) and heavy duty(1/2" Lexan). Heavy duty is recommended for applications where large samples will be rotated at high speeds (i.e. 300mm X 10mm thick at 2000 rpm and greater). The full enclosure cover includes interlocks and two access doors, one for test samples one for microscope access.



THôT Technologies, Inc

271 East Hacienda Avenue, Campbell, California 95008-6616
Tel: (408) 370-4600 / Fax: (408) 370-4609 / www.thot-tech.com