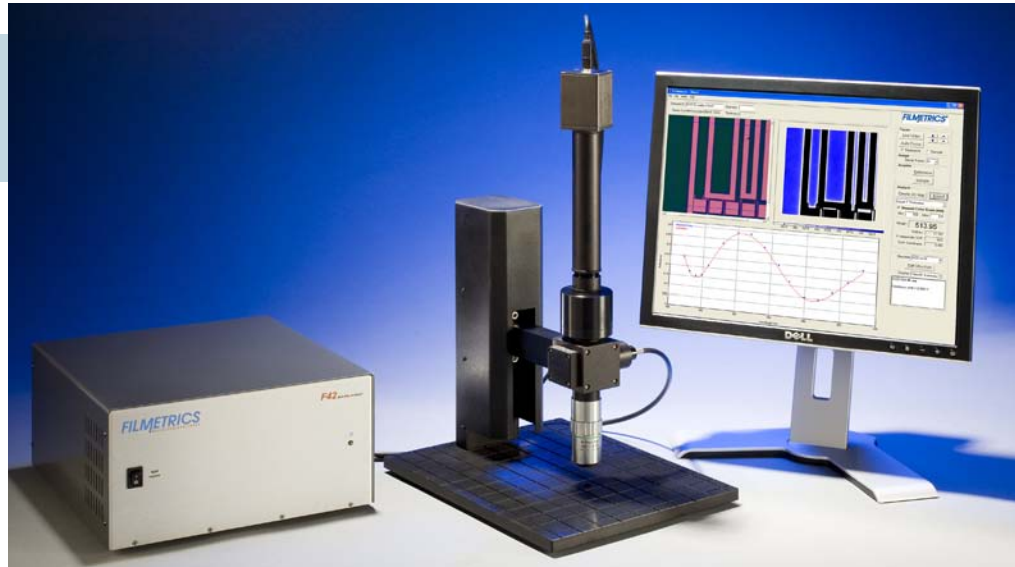


# F42



## Map Thicknesses of Microscopic Areas

Thickness is easily mapped using the Filmetrics F42 spectral-reflectance-based system. The self-contained desktop unit sets up quickly and can measure many types of thin films on various substrates.

### Find Features Quickly

Using the integrated CCD camera, live video makes it easy to pinpoint the exact measurement location. Users can easily find and highlight the structures of interest on a sample. Once the feature is in the field of view, simply draw a box around it to analyze it.

### Pixel-Width Spot Size

A thickness measurement is made at every single pixel on the screen, yielding spot sizes as small as 3 microns. This allows measurements to be made in even the narrowest of channels and cavities.

### Mapping

Uniformity can be checked on these structures with the F42 system's mapping capability. With one click, over a million individual thicknesses can be calculated and displayed in an easy-to-read gradient map. Average thickness and other statistics are automatically reported while notifying the user of any out-of-range thickness measurements. Using goodness-of-fit criteria, the features of interest can be mapped while excluding all other areas.

## APPLICATIONS

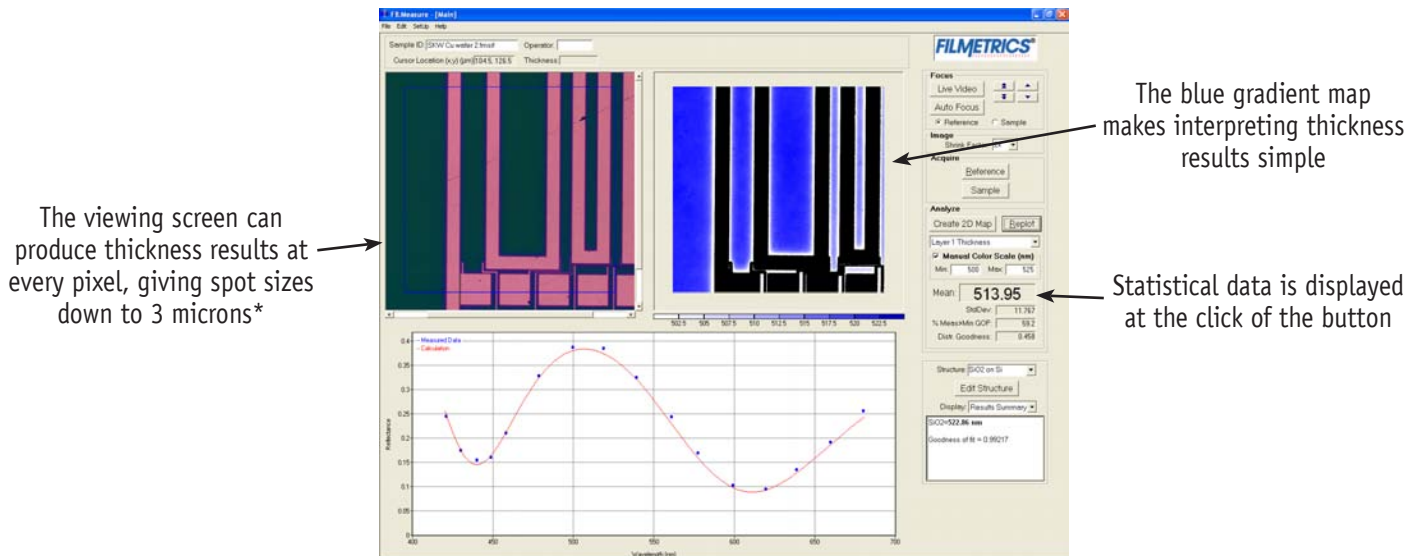
SEMICONDUCTOR  
FABRICATION

LIQUID CRYSTAL  
DISPLAYS

PRINTED CIRCUIT  
BOARDS

# F42

The F42 is a multipurpose thickness measurement tool which combines spectral reflectance with advanced analysis software.



### Specifications:

#### Performance:

Thickness Measurement Range:  
350 Å to 3 µm

#### Spot Size:

5x objective	5 µm
10x objective	4 µm
20x objective	3 µm

Thickness Accuracy<sup>1</sup>:  
0.5%

#### Precision<sup>2</sup>:

3.0 Å for a single pixel,  
0.5 Å for a 64-pixel area\*

#### System Dimensions:

Stage: 25Wx30Dx46.5H (cm)  
Controller: 27.5Wx20.7Dx14.5H (cm)

#### Weight:

Stage: 6.6kg (14.5lbs)  
Controller: 5.7kg (12.5lbs)

#### System:

Wavelength Range:  
400-800 nm

#### Light Source:

Regulated Tungsten Halogen

#### Computer Requirements:

Windows XP  
Pentium D or Pentium 4 Processor with HT Technology  
Clock Speed ≥ 3.0 GHz  
Front Side Bus (FSB) Speed ≥ 800MHz  
Hard Drive Capacity ≥ 80 GB  
Memory ≥ 1 GB DRAM  
Monitor: 1280 x 1024 Min  
2 USB 2.0 Ports

#### Power Requirements:

100-240 VAC, 50-60 Hz, 230W Max

\* When using a 20x objective.

<sup>1</sup> For 7300Å of SiO<sub>2</sub> on Si.

<sup>2</sup> One sigma, as measured on 7300Å of SiO<sub>2</sub> on Si, for 30 sequential measurements.



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Filmetrics, Inc. was founded in 1995 with the goal of providing major advances in thin-film measurement technology. From our factory in San Diego, California we supply users worldwide through a network of international resellers. Please contact us directly or visit our website ([www.filmetrics.com](http://www.filmetrics.com)) to locate your nearest supplier.