

FOURTH GENERATION EUV REFLECTOMETER

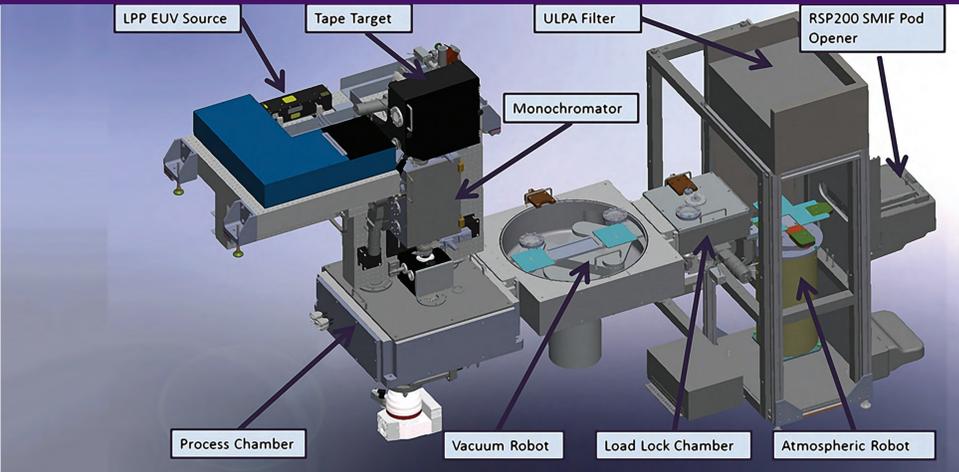
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Introduction

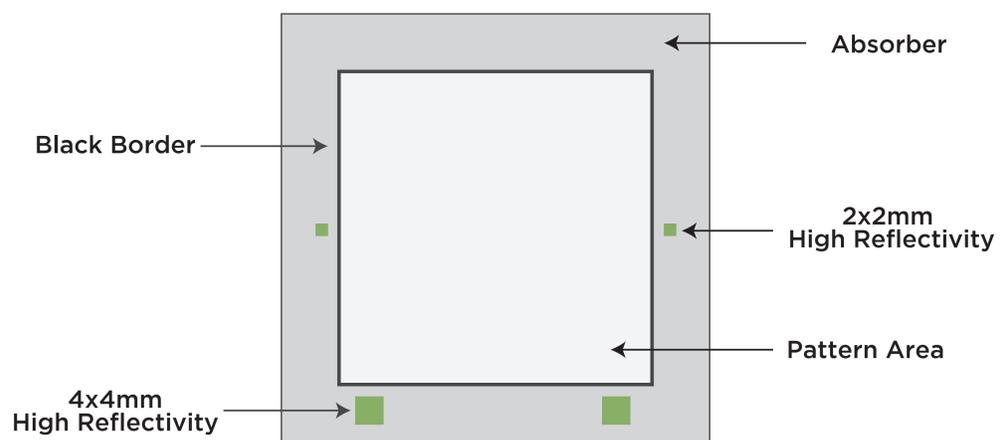
EUV Tech is the world's leading manufacturer of at-wavelength EUV metrology equipment. Founded in 1997, EUV Tech, provides research centers and major semiconductor companies with EUV Reflectometers, EUV resist out-gassing measurement tools, hydrogen radical cleaners, and other custom equipment. EUV Tech's resist outgassing tool and hydrogen radical cleaners have been ASML certified and are the principal tools used for NXE platform resist qualification. In 2014, EUV Tech successfully delivered its 12th EUV Reflectometer and is currently developing the next generation HVM EUV Reflectometer for customer delivery in mid-2015. EUV Tech has been successful in delivering at-wavelength EUV metrology and research equipment and can customize our platforms for a variety of specific customer requirements. Please visit www.euvtech.com or contact sales@euvtech.com for more information.



Specifications

- Measurement area - 147 mm x 147 mm of the mask blank
- Positioning/Reporting accuracy of 0.1 mm to mask edges
- Measurement spot size (dark to dark) - 1.8 X 1.8 mm
- Data rate - 2 point/sec at 1 laser shot per point
- Multiple measurements on a single reticle
- Complete reflectance measurement in 25 seconds
- Over 7,000 reflectance measurements without changing the laser target
- Laser target can be replaced in less than 30 minutes
- Footprint of the instrument is about 2.0 m by 2.5 m
- Measurement specifications have evolved over time.

4G Tool can measure all areas of the mask

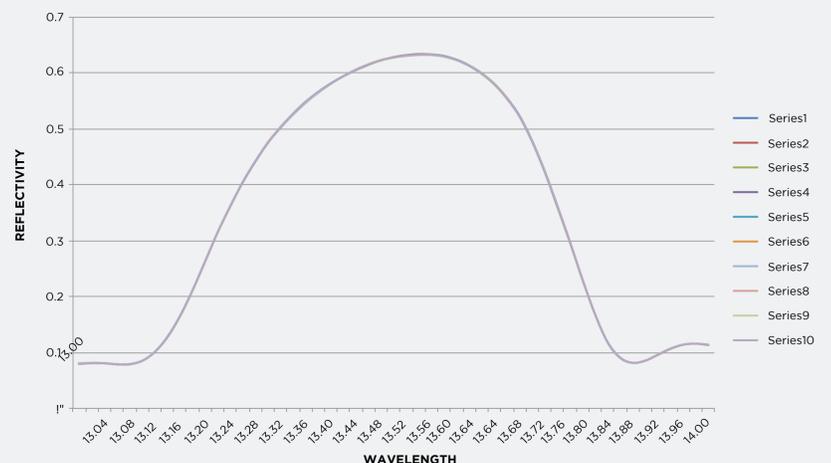


LOCATION	PEAK REFLECTIVITY (ABS)	PEAK REFLECTIVITY PRECISION	PEAK WAVELENGTH (NM)	PEAK WAVELENGTH PRECISION (NM)
Absorber	1.49%	3σ = 0.009%	13.553	3σ = 0.0009%
Pattern Area	25.79%	3σ = 0.05%	13.556	3σ = 0.0009%
Black Border	0.035%	3σ = 0.0032%	N/A	N/A
2x2mm High Reflectivity Window	61.25%	3σ = 0.15%	13.553	3σ = 0.0006%
4x4mm High Reflectivity Window	61.25%	3σ = 0.10%	13.553	3σ = 0.0006%

Measurement specifications have evolved over time

ITEM	1ST GEN SEMATECH (2004)	2ND GEN (2009)	3RD GEN (2013/14)	4TH GEN (2014/15)
EUV Peak Precision (Rp -60% abs)	3σ ≤ 1.5%	3σ ≤ 0.7%	3σ ≤ 0.35%	3σ ≤ 0.30%
EUV Peak Reflectivity Accuracy (Rp -60% abs)	≤ 1.5%	≤ 1.0%	≤ 0.5%	≤ 0.5%
EUV Peak Reflectivity Precision (Rp -0.3% abs)	N/A	3σ ≤ 0.05%	3σ ≤ 0.02%	3σ ≤ 0.01%
EUV Peak Reflectivity Accuracy (Rp -0.3% abs)	N/A	≤ 0.1%	≤ 0.08%	≤ 0.07%
EUV Median Wavelength Precision	3σ ≤ 0.015nm	3σ ≤ 0.01nm	3σ ≤ 0.003nm	3σ ≤ 0.003nm
Average EUV Median Wavelength Accuracy	≤ 0.015nm	≤ 0.01nm	≤ 0.008nm	≤ 0.006nm
Spot Size (mm x mm)	5 x 5	3 x 3	2 x 2	1.8 x 1.8

10 measurements on the same spot



Additional Features

- Improved measurement capabilities
- Optional Integrated Dual Pod/RSP200 reticle handling system
- Continued reduction in spot size
- *Field Upgradable* - Ability to change the angle of incidence from the current 6 degree measurement angle to any fixed angle between 5 and 10 degrees (Not tunable)
- *Field Upgradable* - Upgrade to the HVM design

Purchase Information

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