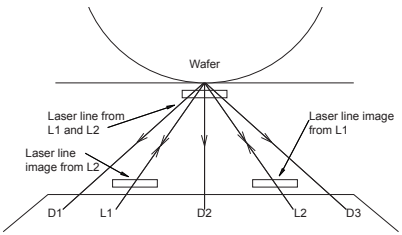
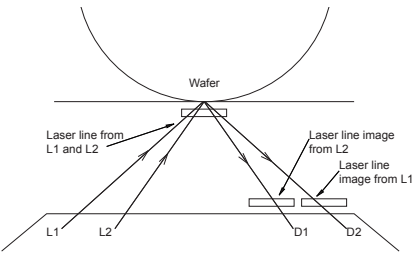
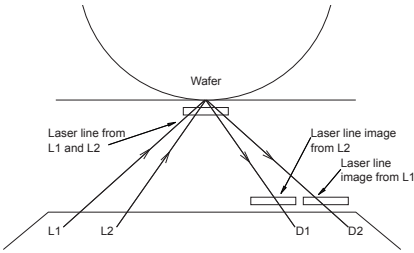


Wafer Mapping Sensor Comparison

The EX-Q Wafer Mapping Sensor has better detection of dark/coated and ultra-thin wafers, improved cross-slot detection, plus it is less sensitive to stray reflections and ambient lighting.

- Improved electrical gain
 - Sensitivity increased by 17X to result in greater detection headroom
- Improved detector geometry
 - Provides more constant response with angle
 - Less sensitive to alignment during setup
 - Able to scan on or off axis
 - Triggering from spurious reflections eliminated
- Ambient light filter is standard
- Decreased laser stripe thickness
 - More light hits wafer edge simultaneously improving precision
 - Allows for smaller stripe at wafer edge
- Increased laser collimator focal length
 - More precise location measurement
- Added three laser collimator apertures
 - Decreased noise above and below the stripe
- Higher quality optics
 - Less scatter from surfaces
- Available in four standoff distances

Feature	WX	EX	EX-Q
Laser Wavelength	2 @ 780nm	2 @ 850nm	2 @ 850nm
Sensitivity	Relative Gain = 1.0	Relative Gain = 6.0*	Relative Gain = 17.4*
Detector Geometry	 <p>WX detector configuration when sensor is positioned on the wafer radial axis</p>	 <p>EX detector configuration when sensor is positioned on the wafer radial axis</p>	 <p>EX-Q detector configuration when sensor is positioned on the wafer radial axis</p>
Ambient Light Filter	Optional	Standard	Standard
Laser Stripe	0.4mm	0.13 - 0.17	0.05mm
Laser Collimator Focal Length	4mm	12mm	12mm
Laser Collimator Apertures	None	3	3
Standoff Distances Available	-43 (1.5")	-43 (1.5"); -73 (2.2")	-43Q (1.5"); -73Q (2.2"); -83Q (3.0"); -93Q (4.5")

* At factory setting.



13555 SW Millikan Way, Beaverton, OR 97005
 Phone: 800.366.9131, 503.495.2200
 Fax: 503.495.2201
 E-mail: CSsales@cyberoptics.com
 Website: www.CyberopticsSemi.com