

# Reflective Mapping Sensor Product Evolution

*Same package. Improved performance.*

HAMA Sensors



CyberOptics Semiconductor



## ZX - Released 2000 (Discontinued)

- Developed to detect nitride/oxide wafer coatings
- 1.5X as sensitive as the WX
- Ambient light filter option
- Class 1 laser
- Laser stripe 0.4 mm



## WX - Released 1998

- Detects "mirror-surfaced objects" at a wide angle
- Multiple standoff distances (1.5" and 2.2")
- Ambient light filter option
- Class 1 laser
- Laser stripe 0.4 mm



## DD - Released 1994 (Discontinued)

- Detects "mirror-surfaced objects" at a wide angle
- Class IIIb laser
- Laser stripe 0.4 mm



## EX - Released 2002

- Developed to detect newer coatings
- 6X as sensitive as the WX
- Ambient light filter standard
- Able to scan on- or off-axis
- Class 1 laser
- Laser stripe 0.15 mm



## EX-Q - Released 2003

- Developed to provide consistent detection performance for all wafers - mixed dark, bright and thin
- Over 17X as sensitive as the WX
- Dynamic range of 10,000:1 at factory gain setting to detect all 200 and 300 mm wafers at one gain setting
- Ambient light filter standard
- Added longer stand-off distances 3.0" (-83) and 4.5" (-93)
- Impervious to stray reflections from wafer carriers
- Able to scan on- or off-axis
- Class 1 laser
- Laser stripe 0.05 mm



## EX-QS - Released 2005

- EX-Q performance repackaged in a smaller case
- Stand-off distances 1.5" (-43) and 2.2" (-73)