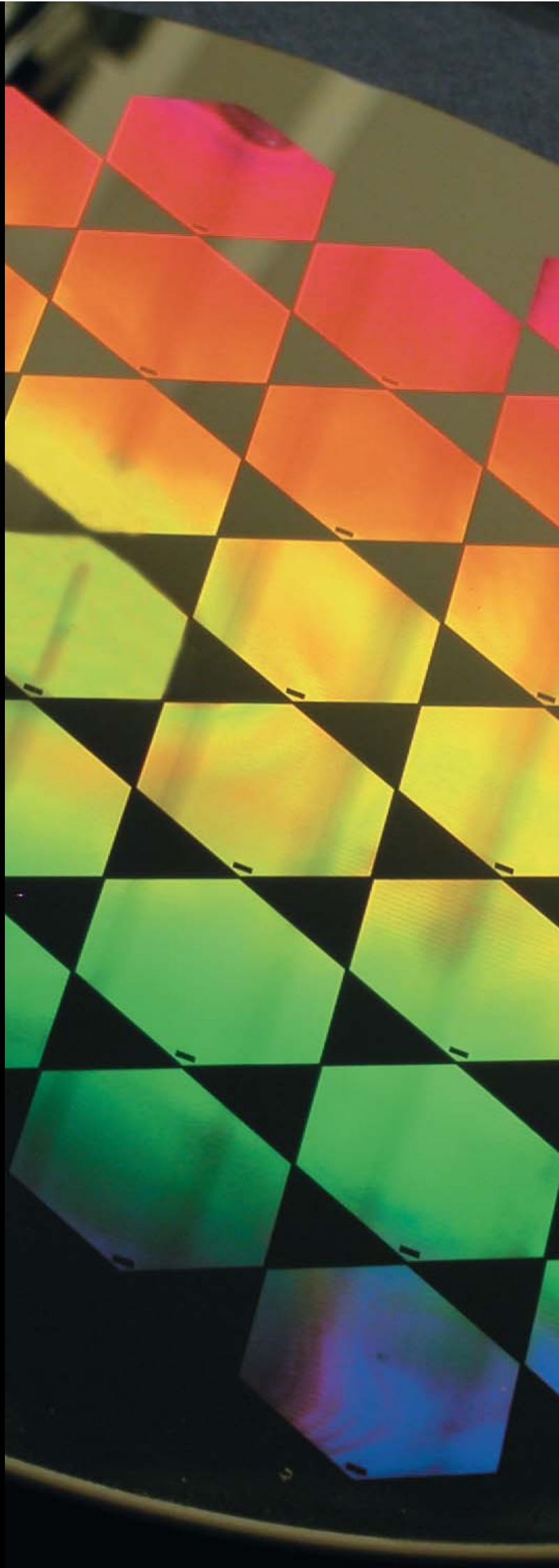


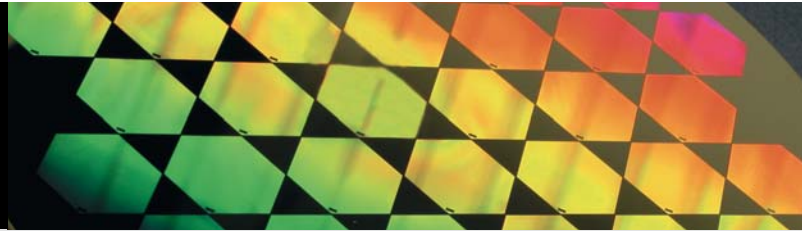
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The Microsystems Division of Leister

Diffraction Optics

Diffraction Gratings

LEISTER





Diffractive Optics

Diffraction Gratings

Lithographic binary diffraction gratings

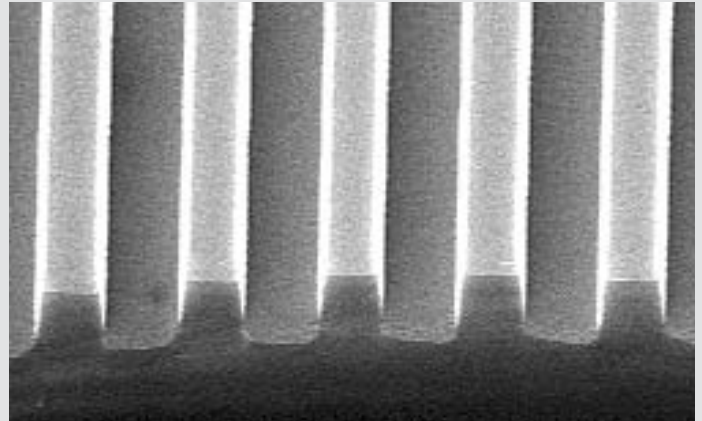
Phase or amplitude
Transmissive or reflective

Benefits

- Controlled zeroth order intensity
- Sub-micron period control
- Rectangular grooves
- For wavelengths 193nm to IR
- Chirped (variable period) gratings
- High precision dicing with superior verticality tolerances

Applications

- Optical Sensors
- Beam Sampling
- Metrology and Measurement Equipment
- IR Spectroscopy



Leister Process Technologies offers high quality diffraction gratings in a wide parameter range. Excellent etch depth control, low surface roughness and a high uniformity are key advantages. Our experienced optics design experts cooperate closely with customers to find optimal solutions from optics design via prototyping to volume production.

Well-controlled ISO 9001: 2000 certified production processes, dedicated equipment and specialized characterization tools, combined with 50 years of manufacturing experience, make us a reliable supplier.

Grating Parameter Ranges		
Optical function	Transmissive or reflective grating	
Materials	Fused Silica Optical Silicon	UV grade available
Grating periods	3µm to > 1mm	Minimum feature size = 1.5µm
Period accuracy	± 0.25µm	No cumulative errors
Surface roughness	< 5 nm rms	
Fill factor	0.5	Or custom
Groove shape	Binary, rectangular	
Substrate thickness	Fused Silica: 0.6mm, 1.0mm, 1.6mm Silicon: 0.38mm, 1.0mm	Other thicknesses possible
Grating substrate shape	Rectangular	
Options	Metallization with Au, Cr, Al Structured metallization AR coatings	Other metals available



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