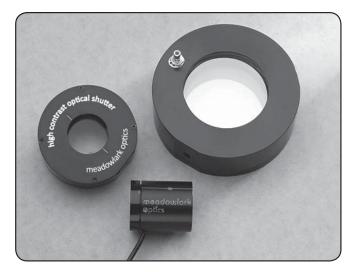
NEW High Contrast Optical Shutter

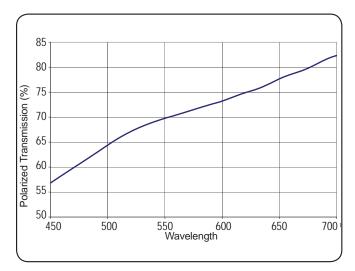


SPECIFICATIONS			
Liquid crystal configuration	Twisted nematic		
Substrate Material	Optical quality synthetic fused silica		
Polarizer Material	Dichroic Polymer		
Wavelength Range	450-700 nm		
Contrast Ratio (average)	1,000:1		
Angular Field of View	25° incidence angle with some reduction above 10°		
Switching Time (10% to 90%) at room temperature			
Closed to open: Open to closed	5 milliseconds 0.4 milliseconds		
Transmitted Wavefront Distortion (at 632.8 nm)	≤λ/2		
Surface Quality	60-40 scratch and dig		
Reflectance (per surface)	≤ 0.5% at normal incidence		
Beam Deviation	≤ 5 arc min		
Recommended Safe Operating Limit	1 W/cm², CW		
Glass Thickness	0.48 — 0.52 inches		
Polarization Direction	Vertical on input face, horizontal on output face		
Storage temperature	-20° C to +80° C		
Operating temperature	0° C to +50° C		

Key Benefits

- High Contrast
- No mechanical motion
- Computer control capability
- No vibration

This liquid crystal shutter is a vibration-free alternative to mechanical shutter that is especially convenient for use in polarized light beams. The liquid crystal switches between a state that rotates the input polarization by 90° with no voltage applied and a state that makes no change in the input polarization with 8 to 10 volts applied. The applied voltage is 2 kHz AC as supplied by our 4010, 3040 or 3050 liquid crystal drivers. The liquid crystal configuration is twisted nematic. The shutter is supplied with integral dichroic visible polarizers that function over the wavelength range of 450 nm to 700 to provide an average contrast ratio of better than 1,000:1 over this wavelength coverage to 2.1 microns are available on a custom basis. Please call with your special requirements.





ORDERING INFORMATION			
Diameter, D (in.)	Clear Aperture,CA (in.)	Thickness t (in.)	Part Number
1.00	0.37	1.23	LCS - 100
2.00	0.70	0.75	LCS - 200
3.00	1.60	1.00	LCS - 300