

MEMS Optical Shutter

1. Key Specifications

- Shutter size: Ø0.5; 0.15x0.16 mm
- Max. shutter displacement: 1.0 mm
- Electrostatic actuation and Electrothermal actuation

2. Specifications

Parameters	Conditions	Unit	Specifications		
			Min	Typical	Max
<i>Shutter Diameter</i>	Circular and rectangular	mm		Ø0.52; 0.15x0.16	
<i>Shutter Flatness</i>	ROC	m	0.8	1	5
<i>Reflectivity (Al or Au reflector)</i>	1260-1660 nm	%	96		99
<i>Power Handling</i>		mW			500
<i>Damage Voltage</i>		V	70		110
<i>Actuation Power</i>	Voltage	V	5		100
	Current	Amperes	0.01		0.04
<i>Max Shutter Displacement</i>		mm	0.2		1.0
<i>Resonant Frequency</i>		Hz	300		6,000
<i>Response Time</i>	From neutral to max displacement using a step function input	ms			1
<i>Temperature Stability</i>	Over -5 to 75 °C	deg.			0.001
<i>Durability</i>	Hermetically sealed	Cycle		10 ⁹	
<i>Operating Temperature</i>		°C	-5		75
<i>Storage Temperature Range</i>	5% humidity	°C	-40		85
<i>Baking Temperature</i>	Less than 3h	°C			110
<i>Wire Bond Temperature</i>	Less than 5min	°C			150