

Model LST50 Laser Shutter Specifications

This model is designed for use in higher speed processing and for safety. The 6.3 mm aperture can accommodate most lower power lasers. The body is nickel plated. Internal components are chosen for low out-gassing, allowing use in critical applications, especially with UV sources. Modest switching speed and repetition rate are achieved using low electrical power. The standard mirror is aluminum for broadband use. Other mirrors available for OEM applications. Absorber is broadband from UV to 3 microns. A purge port is designed in for clean-room use.

Compatible system controllers include user-built circuits based on 24 VDC, CX3000B, CX1100, CX2450B.

Options are available using a suffix code system. Many options cannot be installed after manufacture, so choose carefully. Special cables, including Teflon, can be specified. Contact our staff.

See the "Mechanical Drawing" tab for dimensions. Also see the "Application Notes" tab on the home page menu for important operational issues including: thermal mounting, user-built circuits, polarization, lifetime, jitter, vacuum operation, and contamination. See the "Accessories" tab for useful system components.

Special Considerations for this model include handling as a clean component. This model is typically used in OEM clean room equipment. Thermal mounting must be made on bottom surface.

Restricted use for this model include gravity considerations. Mounting orientation can influence electrical drive requirements. Not an effective CO₂ absorber in the standard configuration.

Recommended Controller to Achieve Specs	24 V PWM, Our Controllers
Aperture Diameter	6.3 mm
Typical Beam Diameter used for Specs	4.0 mm
Maximum Shutter Repetition Rate	20 Hz
CW and Quasi-CW Optical Power Handling	10 W
Typical Damage Threshold, Aligned Polarization	200 mJ/cm ² (PW=10 ns)
Delay to Begin Opening after Command Open	10 ms
Opening Time Switching Speed	10 ms
Delay to Begin Closing after Command Close	5 ms
Closing Time Switching Speed	10 ms
Minimum FWHM Exposure Capability	30 ms
Thermal Power Dissipation Holding Open	3 W
Thermal Power Dissipation, Repetitive Cycling	8 W @ 10 Hz
Nominal Magnetic Winding Impedance	32 Ohms
Cable/Wire Type and Length	Teflon leads, Jacket, 22 g., 3 feet
Mounting Surface for Thermal Sinking	Bottom, Threaded
Position Sensors	N/A
Weight	7 Oz.
Size (see mechanical drawing)	3.25 x 1.75 x .75 Inches