

300W 激光斩波器

产品应用:

High Energy Pulses

Interlock

Thin Zones

Multi-line Lasers

产品特点:

Optical Power: 1-300 W

Aperture Size: 14 mm

Optics: Dielectric

Optics Options

Switching Speed: 40 ms

Position Sensors



This model is designed for use primarily as a safety interlock shutter for YAG and similar solid-state lasers with high Q-Switched energy per pulse. It uses dielectric optics from world-leading coating suppliers, providing damage thresholds of 5 J/cm² at 355 nm to 15 J/cm² at 1064 nm for low ns laser pulses. The redirected energy is diffused thru UV grade fused silica, then absorbed inside the shutter. The 40 msec switching speed allows it to extract single pulses from lasers pulse trains up to 10 Hz. Closing settling time depends on orientation w/r to gravity. For fastest closure, use the CX3000B or CX4000B controller PCB. Options are available using a suffix code system. Many options cannot be installed after manufacture, so choose carefully. Standard 1.000" round dielectric optics on 1 mm substrates are used from major industry suppliers. Mirrors are bonded into moving assembly. Use suffix -1 for 1064 nm, -2 for 532 nm, -3 for 355 nm, -4 for 266 nm, and -12 for 532+1064 harmonic mirror (lower damage threshold). Use -C2 for CO₂ use. Additional mirrors are available for specific laser lines. Contact our application engineers. **Referring to the plane of the Base Plate, the CX3000B or CX4000B controller can be calibrated for horizontal or vertical calibration. Horizontal is the default (as shown in product photo).** Circuits not using dampening on closure will generate longer settling times for closure spec, up to 100 msec maximum.

Specifications

Aperture Diameter	14.0 mm
Typical Beam Diameter used for Specs	10.0 mm
Maximum Shutter Repetition Rate =	3 Hz
CW and Quasi-CW Optical Power Handling	300 W chiller plate
Typical Damage Threshold, Aligned Polarization	5-15 J/cm ²
Delay to Begin Opening after Command Open	10 ms
Opening Time Switching Speed	40 ms
Delay to Begin Closing after Command Close	10 ms
Closing Time Switching Speed	40 msec using CX3000B, 100 msec w/o dampening
Minimum FWHM Exposure Capability	60 msec using CX3000B
Thermal Power Dissipation Holding Open	6 W
Thermal Power Dissipation, Repetitive Cycling	15 W @ 3 Hz
Nominal Magnetic Winding Impedance	8 Ohms
Cable/Wire Type and Length	6 Ft Cable, PVC Jacket Cable

customize

Aperture Size Range	14mm to 15mm
Optics	Aluminum, Coated aluminum, Dielectric, and Gold
Wire Length	Any length
Wire/Cable Type Wire Gauge	6-C CABLE
Connector	Any 6 pin connector
Size	4 x 6 x 1 in., note: minimal size change can be designed
Identification	Engraving, Labels

Standard Shutter Format, Mechanical Microswitches for Position Sensors:

White	+Power to Winding
Black	-Power to Winding
Red/Orange Pair	Open Switch, Reads Continuity when Shutter Open
Blue/Green Pair	Closed Switch, Reads Continuity when Shutter Closed

Switches rated for 1 A at 24 VDC.

