

Uniblitz® ES6B

6mm Bi-Stable Laser Shutter

Overview

The Uniblitz ES6B is a 6mm bi-stable laser shutter with a very low-profile construction and **guaranteed lifetime of 50,000,000 actuations**. Its lack of an external protruding actuator makes it very slim and flexible for system integration. Precision exposure control and laser switching are applications that benefit greatly from the precise, highly repeatable characteristics of the ES shutter series. Bi-stable shutter devices, like the ES6B, require no power to hold the blades in either the open or closed state.

Key Features

- 6mm aperture
- **50,000,000 actuation guarantee**
- Configured for the [VED24 Shutter Driver](#)
- **RoHS Compliant**
- Transfer time on opening:
1.9 milliseconds
- Transfer time on closing:
3.7 milliseconds

Specifications

Electrical Specifications

Coil resistance	8 OHMS
Voltage to Open ¹	+10.7 VDC
Hold Voltage (Nominal)	N/A

Mechanical Specifications

Weight	9.2 g
Operating Temp.	-10 - +65 °C
Max. Opening Bounce	5%
Max. Closing Bounce	5%
Max. Freq. of Operation ²	15 Hz / 45 Hz
Number of Shutter Blades	1

¹ Peak voltage as provided by the VED24 Driver.

² (Continuous/Burst) Continuous frequency rating specified at shutter's minimum exposure pulse. Burst frequency rating specified for four (4) seconds maximum with one (1) minute minimum between bursts.

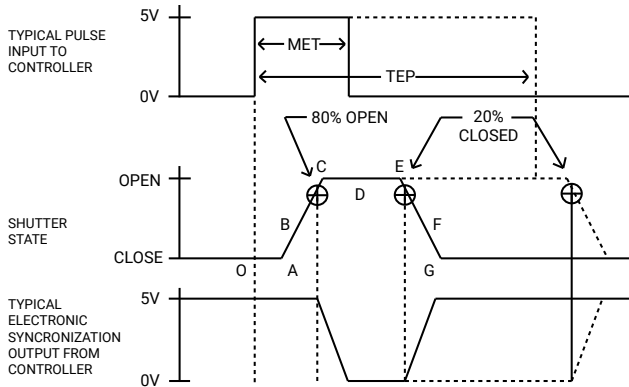


Need Support? Please visit our website or email us at info@uniblitz.com.

Tel: +1 585-385-5930 | Fax: 585-385-6004 | 803 Linden Ave. Rochester, NY 14625

Updated 2/24 | Document Version 6.0 | ©2024 Vincent Associates

Shutter Timing Data



¹ Under no circumstances should any type of lubricant be applied to the shutter blade area. Lubricating the shutter blades will likely slow the shutter down and may eventually render it inoperable.

ES6B (w/ Uniblitz driver and "T" blades) ¹

Time (msec.)

Parameter	Time (msec.)	
O - A	Delay time on opening after current applied	1.8
A - C	Transfer time on opening	1.9
O - C	Total opening time	3.7
C - E	Min. dwell time with min. input pulse	9.4
B - F	Min. equivalent exp. time	11.0
D - E	Delay time on closing after current applied	1.8
E - G	Transfer time on closing	1.9
A - G	Total window time	13.2
MET	Min. exposure time	11.0
TEP	Typical exposure pulse	>11.0

Product Options

ES6B **2** **3** **4** **5**

Ex: ES6B1T0L

1 Shutter Series:

ES6B

2 Housing:

1: Un-Housed

3 Blades: ²

T: Low Energy (Teflon®)

Z: High Energy (AlSiO) ³

ZM: High Energy (AlMgF2) ³

4 Electronic Sync:

0: Omitted

1: Included

5 Connector:

L: 2 wire bare leads attached to a 4" flex connector

Leave blank for 2-pin JST connector

² Other blade coating options may be available by special order.

³ Input side only; Teflon® coating is on opposite side to protect shutter blade surface. Light source must be input to the reflective side only.

Uniblitz® ES6B Technical Drawings

Shutter Layout

