

Uniblitz® DSS20B

20mm Bi-Stable Optical Shutter

Overview

The Uniblitz DSS20B is a 20mm bi-stable optical shutter with an extremely low-profile construction. Its lack of an external protruding actuator makes it very slim and flexible for system integration. The inherent reliability of the DSS20B comes from the fact that it contains only two moving parts: the drive ring and the blades. It is guaranteed to operate for 2,000,000 operations. Bi-stable shutter devices, like the DSS20B, require no power to hold the blades in either the open or closed state.

Key Features

- 20mm aperture
- **2,000,000 actuation guarantee**
- Configured for the [VED24 Shutter Driver](#)
- **RoHS Compliant**
- Transfer time on opening:
12.5 milliseconds
- Transfer time on closing:
12.1 milliseconds

Specifications

Electrical Specifications

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

Mechanical Specifications

Weight	15.5 g
Operating Temp.	-10 - +65 °C
Max. Opening Bounce	15%
Max. Closing Bounce	5%
Max. Freq. of Operation ²	10 Hz / 20 Hz
Number of Shutter Blades	4

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.

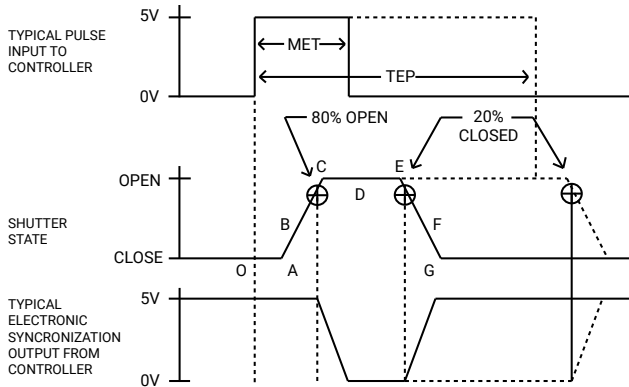


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Shutter Timing Data



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.

DSS20B (w/ VED24 and "T" blades) ¹

Time (msec.)

O - A	Delay time on opening after current applied	7.8
A - C	Transfer time on opening	12.5
O - C	Total opening time	20.3
C - E	Min. dwell time with min. input pulse	14.7
B - F	Min. equivalent exp. time	27.0
D - E	Delay time on closing after current applied	10.0
E - G	Transfer time on closing	12.1
A - G	Total window time	39.3
MET	Min. exposure time	25.0
TEP	Typical exposure pulse	>25.0

Product Options

DSS20B **2** **3** **4** **5**

Ex: DSS20B1T0L

1 Shutter Series:

DSS20B

2 Housing:

1: Un-Housed

3 Blades: ²

T: Low Energy (Teflon®)

ZM: High Energy (AlMgF₂) ³

4 Electronic Sync:

0: Omitted

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® DSS20B Technical Drawings

Shutter Layout

