

DSS10 10mm Bi-Stable Shutter Specifications

Features

- The DSS series is the latest technology available from **UNIBLITZ**®. This device has eliminated the external protruding actuator and contains no other interfering components.
- Requires no power to hold the shutter in either the open or closed state.
- Flat mounting surfaces on both sides of the device.
- Easily integrated into various applications.
- Can act as a replacement for existing flag shutters.
- Coated blades available for infrared applications dealing with lasers and high intensity light sources.
- The DSS10 is designed for use with the ED12DSS driver
- All of the DSS Shutters are RoHS compliant in their standard configuration. No special option is required.

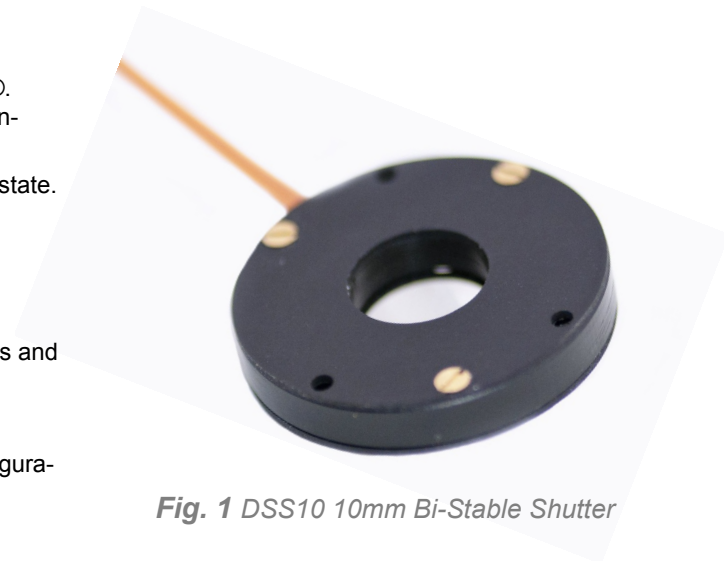


Fig. 1 DSS10 10mm Bi-Stable Shutter

Timing

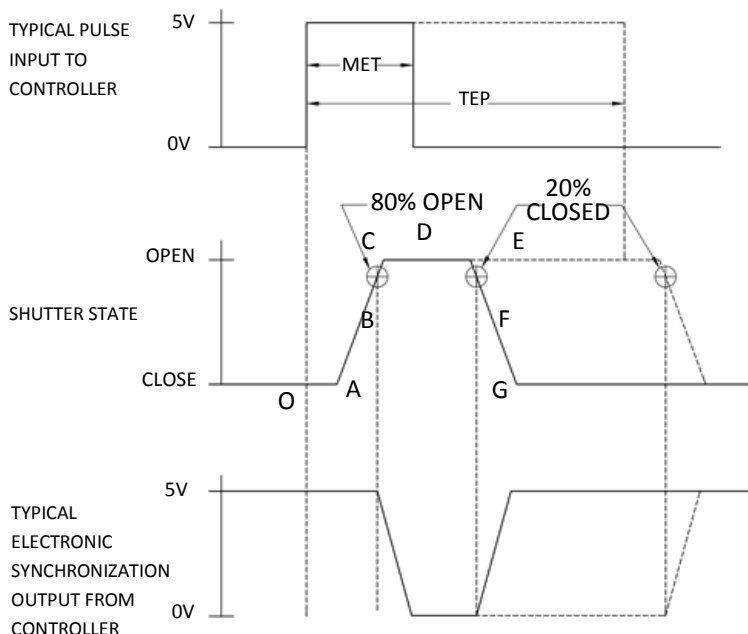


Fig. 2

¹ Timing data recorded with ED12DSS driver with drive pulse equal to MET.

DSS10		Time (msec.) ¹
O-A:	Delay time on opening after current is applied	3.6
A-C:	Transfer time on opening	5.0
O-C:	Total opening time	8.6
C-E:	Min. dwell time with min. input pulse	5.0
D-E:	Delay time on closing after current is applied	3.6
B-F:	Min. equivalent exp. time	10.0
E-G:	Transfer time on closing	5.0
A-G:	Total window time	15.0
MET:	Min. exposure time	15.0
TEP:	Typical exposure pulse	>15.0

Electrical

COIL RESISTANCE	PULSE VOLTAGE TO OPEN
8 OHMS	+12 VDC

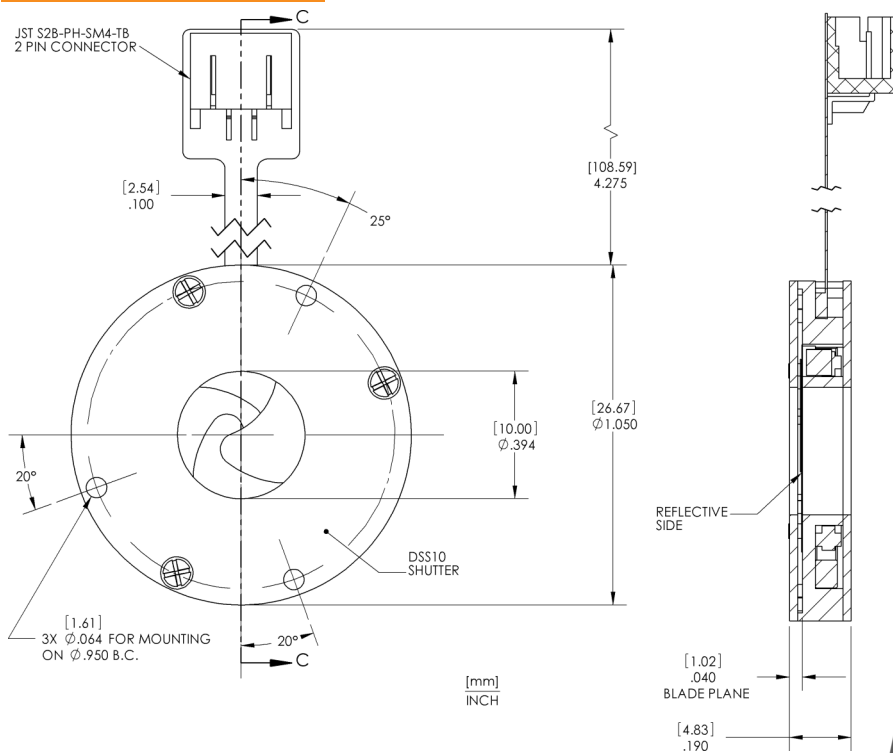
An electronic sync. for the DSS10 will be available in the future. Please contact us for additional information.

Mechanical

SERIES	WEIGHT	OPERATING TEMP. (DEGREES)	MAX. OPENING BOUNCE	MAX. CLOSING BOUNCE	MAX. FREQUENCY OF OPERATION ¹	NUMBER OF SHUTTER BLADES
DSS10	4.9g	-10 to +65°C	15%	5%	5 Hz / 20 Hz	4

² (CONT/BURST) CONTinuous frequency rating specified at shutter's minimum exposure pulse. BURST frequency rating specified for (4) four seconds maximum with (1) one minute minimum between bursts. Frequency measurements are taken in free air, 25°C ambient, actuator coil equipped with heat sink. For additional information on maximum sustained frequencies obtainable, please contact one of our technical representatives.

Un-Housed Style



- The DSS10 shutter device weighs 4.9g and is only 1.050" in diameter.
- There are no other interfering components that will impede mounting the unit to any flat surface.
- It is easily mounted into an optical system via the three .064 inch diameter mounting holes at the locations shown in **Fig. 3**.
- Presently the unit will terminate to a 2-pin JST connector (S2B-PH-SM4-TB) via a 4 inch flex interconnect.
- For operation with the VDM1000 driver, use a 5M203D Cable Adapter.

Fig. 3





Optical Blade Finish

SHUTTER SERIES	ULTRAVIOLET .3-.4µm (microns)		VISIBLE .4-.75µm (microns)		INFRARED .75-10.6µm (microns)	
	(Z) AlSiO	(ZM) AlMgF ₂	(Z) AlSiO	(ZM) AlMgF ₂	(Z) AlSiO	(ZM) AlMgF ₂
DSS10	N/A	2.5 W/mm ²	5 W/mm ²	2.5 W/mm ²	2.5 W/mm ²	2.5 W/mm ²

For reflectance graph, please visit <http://www.uniblitz.com/optical-shutters-comparison-chart.aspx>

Blade Samples are available upon request.

Product Options

Part Number: **DSS10B**    - 

1
2
3
4
5

Example Part Number:
DSS10B1TOL

<p>1 Aperture Size\Type: DSS10B: 10mm</p>	<p>3 Blade Finish:² T: Teflon® Coated S.S. Blades ZM: AlMgF₂ Coated BeCu Blades¹ Z: AlSiO Coated BeCu Blades¹</p>	<p>4 Electronic Sync: 0: Omit Sync.³</p>
<p>2 Housing: 1: Un-housed</p>		
<p>5 Connector: L: 2 Wire bare leads attached to 4" flex connector ▪ Leave blank for 2-Pin JST Connector with 4" flex harness</p>		

¹ Input side only, Teflon® coating is on opposite side. Intended to protect the shutter blade surface, light source must be input to the reflective side only.

² Other blade options are available through special order.

³ An electronic sync is currently unavailable for this device.

For information regarding applicable intellectual property, please visit www.uniblitz.com/company-info/patents.

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