

# **RS20B** 20mm Bi-Stable Shutter System

#### **Features**

- A new device based on proven technology, the RS20 is a bi-stable shutter system containing all drive components within the shutter housing.
- The single-bladed 20mm (diagonal) rectangular aperture is designed to maximize space when paired with the appropriate imaging sensor.
- Overall device is flat and has a uniform thickness.
- Accepts voltage ranges from 5-12 VDC.
- Bi-stable operation, no holding power required.
- Integrated connector.
- Perfectly suited for OEM and system integration: The user merely provides a supply voltage and open/close pulses (TTL) to control the shutter state.





#### Fig. 2

<sup>1</sup>This chart lists preliminary timing values with a 12 VDC supply voltage, connected to the driver IC: ON Semi LV8548MC. For timing with other supply voltages contact Vincent Associates.

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Fig.	1 RS20	20mm	(diagonal)	<b>Bi-Stable</b>	Shutter

	Time (msec.) <sup>1</sup>	
<b>O-A</b> :	Delay time on opening after current is applied	8.2
A-C:	Transfer time on opening	10.6
D-E:	Delay time on closing after cur- rent is applied	11.4
E-G:	Transfer time on closing	9.8
МТР	Minimum Trigger Pulse	25
МЕТ	Minimum exposure time	26
TEP	Typical Exposure Pulse	100

### Electrical

COIL RESISTANCE	SUPPLY VOLTAGE <sup>2</sup>	TRIGGER PULSE TO OPEN <sup>2</sup>	TRIGGER PULSE TO CLOSE <sup>2</sup>	OPEN/CLOSE PULSE WIDTH (msec.) <sup>2</sup>
8 OHMS	+5-12VDC	+5V Active High TTL	+5V Active High TTL	25.0

<sup>2</sup> See Fig. 3 for connector pin-outs.

Standard configuration RS20B is a RoHS compliant device

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#### **Mechanical**

SERIES	WEIGHT UNCASED	OPERATING TEMP. (DEGREES)	MAX. FREQUENCY OF OPERATION <sup>2</sup>	NUMBER OF SHUTTER BLADES
RS20	0.29 oz (8.1g)	-10-65° C	10 Hz	1

Measurements are taken in free air, 25°C ambient with a 12V supply voltage. For additional information on maximum sustained frequencies obtainable with different drive voltages, please contact one of our technical representatives.



## Optical

The standard shutter blade is made of a carbon impregnated PET (polyethylene terephthalate) base material that is ideally suited for optics applications requiring high emissivity and optical density. See uniblitz.com for specific emissivity data. Because the material is a thermoplastic polymer, maximum surface temperature should not exceed 100°C. For applications requiring higher heat resistance please contact a technical representative for alternative blade materials.



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