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## FEATURES

- Small form factor, a 45 mm aperture fits into a 4-inch diameter housing!
- Multi-bladed design in combination with the **UNIBLITZ** actuator provide increased speed over other designs of this type.
- State of the art damping system for increased reliability and speed.
- Opening time exceeds that of the VS45!
- Reflective blades available as with Vincent LS and VS series.
- Can be driven with our existing VMM drive units. Special driver not required.
- Available housed or un-housed for OEM applications.
- Mounting adapters available for "F" mounts (i.e. the #17 mount) and when configured with a #17 mount the **CS45** is adaptable to the Camelia camera utilizing the new #125 camera adapter.
- Electronic Synchronization System option available.
- Exposure repetition rates from DC to 5 Hz.
- Design, accuracy, and reliability that you have come to know as with all other **UNIBLITZ** products!

The **CS45** is the first release in the new **UNIBLITZ**<sup>®</sup> **CS** series. With its improved size to aperture ratio, the **CS** series is designed to "fit" into applications not presently accessible with existing **UNIBLITZ** VS series shutters. As with the VS series, the **CS** series has been designed to provide accurate, repeatable exposures for a wide variety of applications. The small form factor allows a 45 mm aperture to be installed into a four-inch diameter housing! The same size footprint as the VS25, our 25 mm shutter! To increase the unit's flexibility, the shutter can be supplied in an un-housed version for OEM applications or in situations inaccessible to most shutters due to spatial limitations.

The **CS45**, along with its state of the art damping system, provides increased reliability over other designs of its type. In addition, the system provides the reliable actuator system found in all other **UNIBLITZ** shutter designs allowing it to be driven with our existing VMM drive units. As an option, the shutter can be equipped the electronic synchronization system.

When gating high intensity light sources, the **CS45** can be equipped with polished stainless steel reflective blades. This option protects the shutter blades from the light source's damaging effects by reflecting the energy away from the blade surface. Look for future availability of "Z" (AlSiO) and "ZM" (AlMgF<sub>2</sub>) coated blades in this device.

To further enhance the flexibility of the **CS** series, we offer an optional #17 mount for adapting the shutter into video applications. In addition, we offer a #125 Camelia adapter to adapt the **CS45** shutter (configured with the #17 mount) specifically to this camera type. (Please review the new "LVDS" adapter data sheet, this new product is also available for use in these applications.) For non-specific mounting installations, the #101 mounting ring can be used for universal mounting into many applications. Additional information regarding the #101 ring can be found in the specific data sheet entitled "MICROSCOPE & VIDEO MOUNTING SYSTEMS".

## ELECTRICAL

Coil Res.:	12 ohms
Pulse Voltage to Open	+70VDC
Hold Volt.:	+7VDC/5VDC*

\*VMM dual hold level driver system included in UNIBLITZ VMM/VCM shutter controller.

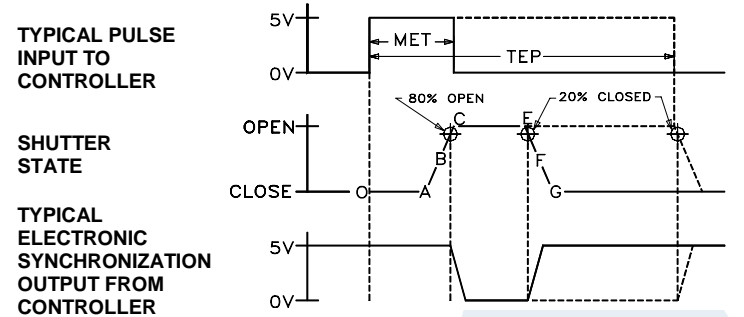
## MECHANICAL

Wgt. Un-Cased	3.17 oz (0.09 kg)
Wgt. Cased	9.15 oz (0.26 kg)
Operating Temp.	0°C to +80°C
Max. Frequency of Operat.	5Hz
Max. Opening Bounce	15%
Max. Closing Bounce	5%
Number of Blades	5

## TIMING

Typical timing values (msec.) using UNIBLITZ drive equipment and measured with UNIBLITZ shutters equipped with standard TEFLON<sup>®</sup> coated shutter blades.

TIMING OF PULSE INPUT AND SYNCHRONIZATION OUTPUT RELATIVE TO SHUTTER STATE



(Timing in msec.)

O-A Delay time on opening after current is applied	6.0
A-C Transfer time on opening	14.0
O-C Total opening time	20.0
B-F Min. equivalent exp. time	31.0
C-E Min. dwell time with min. input pulse	12.0
E-G Transfer time on closing	24.0
A-G Total window time	50.0

MET: Min. exposure time	25.0
TEP: Typical exposure pulse	>25.0

The question regarding enhancement of shutter speed with the application of user supplied lubricants has been repeatedly asked. It is our experience that lubricating the shutter blades will actually slow the shutter down and eventually render the shutter inoperable. UNDER NO CIRCUMSTANCES SHOULD ANY TYPE OF LUBRICANT BE APPLIED TO THE SHUTTER BLADE AREA.

## HOW TO ORDER

**CS45S 3 T 0 -101**

APERTURE SIZE	HOUSING	BLADE FINISH	SOLID STATE SYNCHRONIZATION	MOUNTING OPTIONS
CS45S - 45mm	1 - UNCASED 3- #3 CASE	T - TEFLON COATED S - POLISHED STAINLESS STEEL BLADES ZM - AlMgF <sub>2</sub> COATED BeCu BLADES Z - AISIO COATED BeCu BLADES	0 - OMIT SYNC. 1 - SOLID STATE SYNC.	-17 F TYPE VIDEO ADAPTER - 101 MOUNTING RING -125 CAMELIA ADAPTER

