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Find the *Vincent / UniBlitz LS6T2* at our website: ***Click HERE***

LS2, LS3, LS6 SHUTTER SPECIFICATIONS

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web www.uniblitz.com **e-mail** vincentassociates@uniblitz.com **toll-free** 800.828.6972

UNIBLITZ® BY VINCENT ASSOCIATES

FEATURES

- Three aperture sizes available
  - 2mm diameter - Model LS2
  - 3mm diameter - Model LS3
  - 6mm diameter - Model LS6
- Laser energy ratings up to 5W/mm² with "Z" or "ZM" shutter blade coating options
- Exposure repetition rates from DC - 400Hz
- Electronic synchronization available

The *UNIBLITZ*® LS series shutters are especially well suited for laser use, with applications including low level chopping, pulse gating, selection, and modulation to 400Hz. Precision exposure control in the areas of holography and microscopy are additional application that benefit from the precise, repeatable characteristics of the LS shutter series.

For information on typical laser damage thresholds see "OPTICAL" information in our "COMPARISON SPECIFICATION" sheet. For further information see our application note "LASER APPLICATION REFERENCE" sheet in the resource section of our web site, www.uniblitz.com

The LS shutter series is comprised of three models. The model LS2 features a 2mm aperture, with typical rise time of 300µsec. The LS3 and LS6 models feature a 3mm and 6mm aperture, respectively. All three styles are offered mounted in a black anodized aluminum housing, and are equipped with the electronic synchronization system. In addition to the standard housing illustrated on the opposite side, several customized microscope and video mounts are available as options for use with this series. Additional information can be found in the data sheets entitled "MICROSCOPE, VIDEO, and UNIVERSAL MOUNTING SYSTEMS".

[1]Voltage level required across actuator coil when being hold in the open position.
[2]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.

*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.

ELECTRICAL

Coil Resistance	48 ohms
Pulse Voltage to Open	+65VDC
Hold Voltage[1]	+10VDC

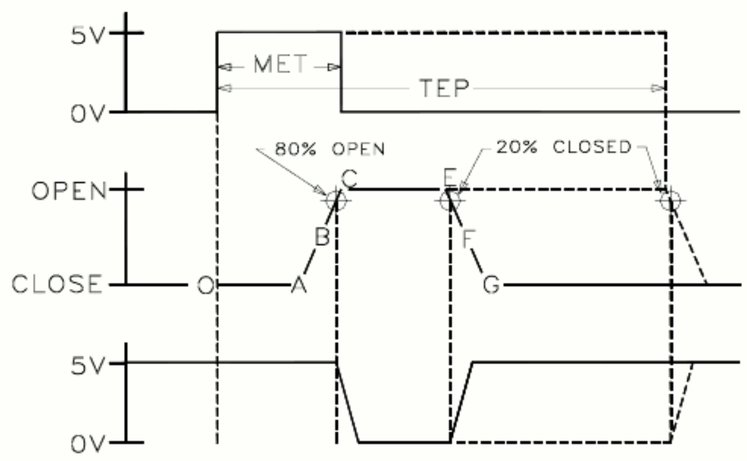
MECHANICAL

Wgt. Cased		7.41 oz (.211 kg)
Operating Temp.		0°C to +80°C
Max. Opening Bounce		15%
Max. Closing Bounce		5%
Max. Frequency of Operation (CONT/BURST)[2]	LS2:	100 Hz /400 Hz
	LS3:	50 Hz / 200 Hz
	LS6:	20 Hz /150 Hz
Number of Blades	LS2:	1
	LS3/6:	2

TIMING

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

TIMING OF PULSE INPUT AND SYNCHRONIZATION OUTPUT RELATIVE TO SHUTTER STATE



(Timing in msec.)

	LS2	LS3	LS6
O-A Delay time on opening after current is applied	0.7	1.0	1.0
A-C Transfer time on opening	0.3	0.5	0.7
O-C Total opening time	1.0	1.5	1.7
B-F Min. equivalent exp. time	1.1	1.5	1.5
C-E Min. dwell time with min. input pulse	0.7	0.8	0.8
E-G Transfer time on closing	0.5	0.6	0.8
A-G Total window time	1.5	1.9	2.3
MET: Min. exposure time	1.0	2.0	2.0
TEP: Typical exposure pulse	>1.7	>2.3	>2.5

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.

PRODUCT OPTIONS

LS2 T 2 -100

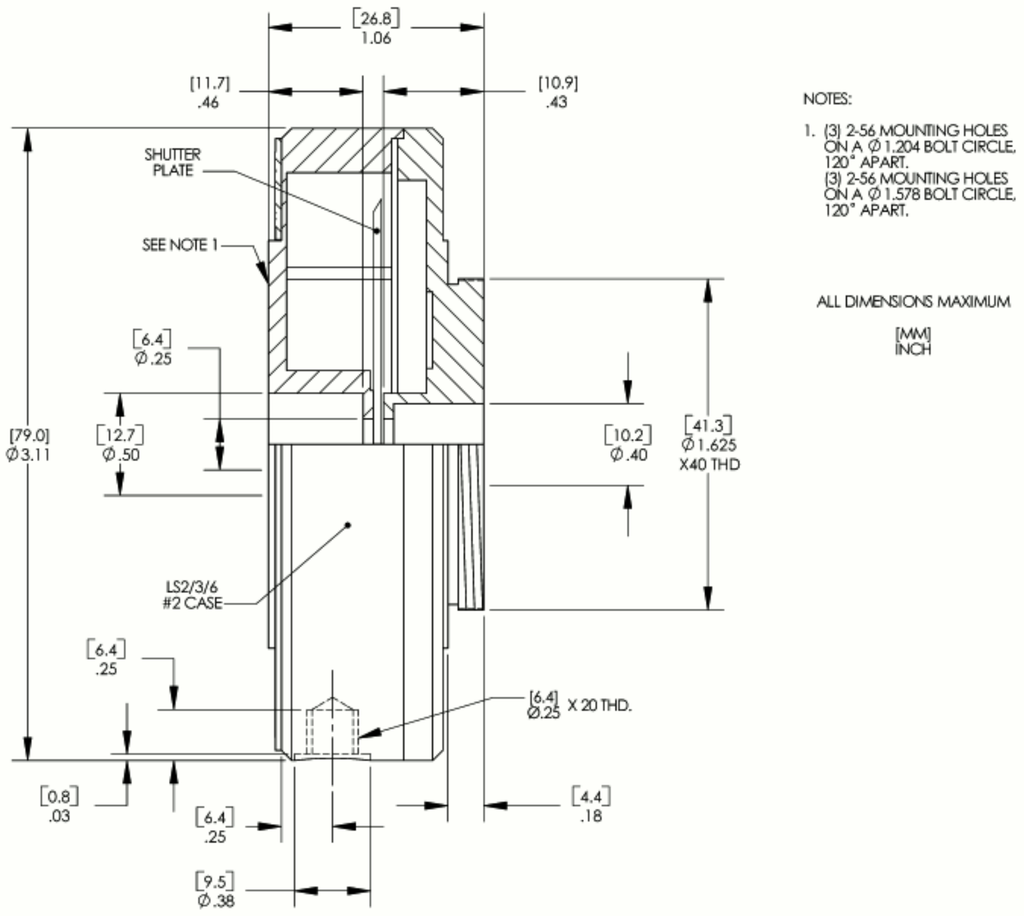
Aperture Size	Blade Finish	Housing	Mounting Options
LS2 - 2mm **LS3** - 3mm **LS6** - 6mm	**T** - Teflon® Coated S.S. Blades **ZM** - AlMgF2 Coated BeCu Blades* **Z** - AlSiO Coated BeCu Blades*	**2** - #2 Housing (Electronic Synchonization is Included.	**-21** Zeiss Axiovert Type **-22** Nikon SBX type **-23** Olympus BH/IMT type **-24** Olympus BX/IX type **-26** Leica Type **-27** Nikon Type **-28** Olympus IX Transmitted Type **-29** Nikon TE Type **-30** Leica DM/DMIR/DMIRB Type **-31** Nikon Confocal Type **-32** Nikon 80i Type **-100** Mounting Ring **-105** C-Mount Adapter (Male) **-106** C-Mount Adapter (Female) **-110** T-Mount Adapter

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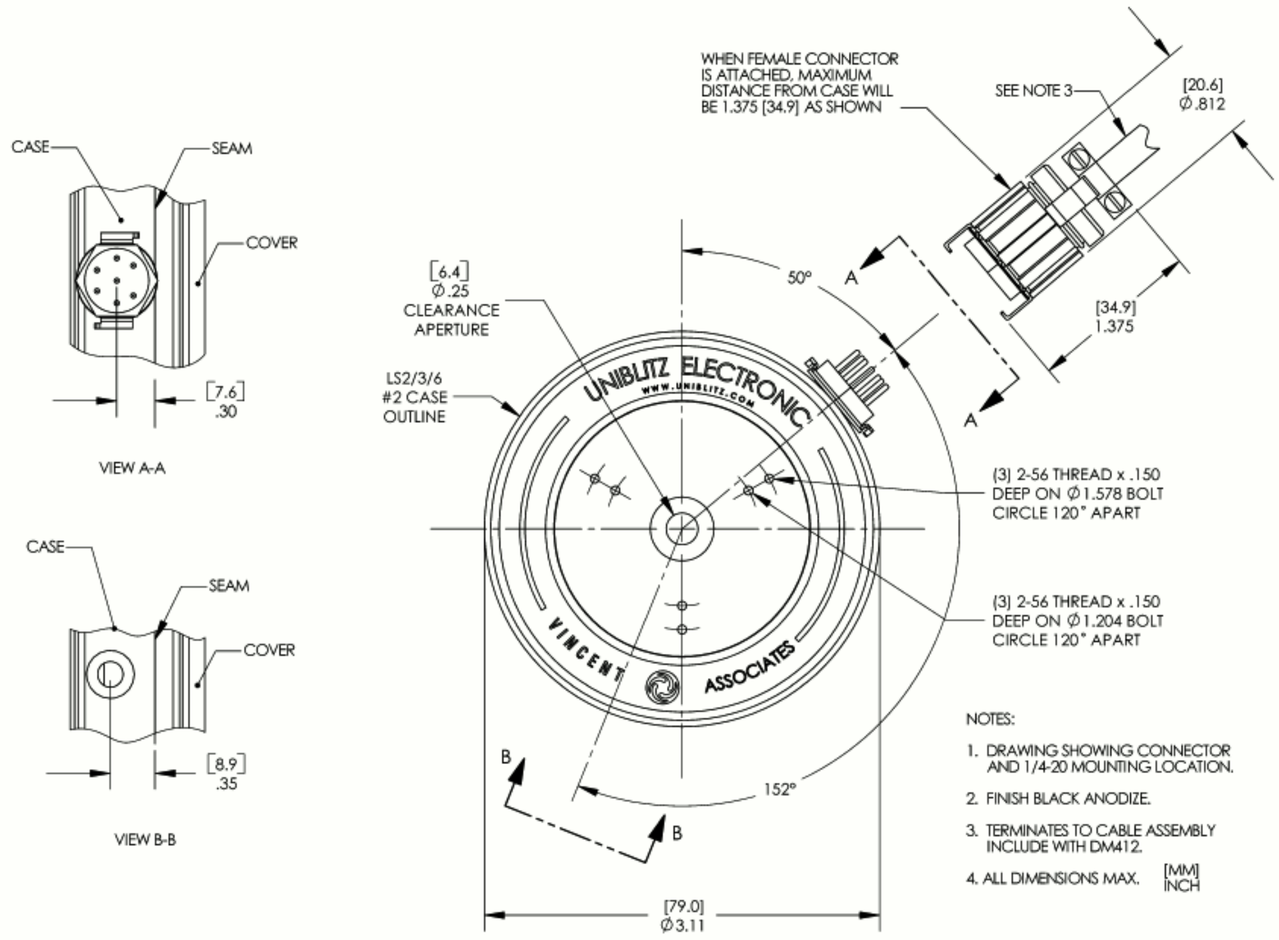
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HOUSED STYLE



The LS #2 housing style allows a number of mounting configurations. A ¼-20 threaded hole is provided for post mounting. The 1.625 inch x 40TPI external thread located on the rear side, and the six 2-56 threaded holes located on the front side (see Figure 1 and Figure 2) can be interfaced directly into your application or fitted with a variety of specific mounting options. See "MICROSCOPE, VIDEO and UNIVERSAL MOUNTING SYSTEMS" data sheets for additional information. The unit terminates with a 7-pin male

HOUSING/CONNECTOR LAYOUT



This drawing illustrates 7-pin connector and ¼-20 threaded hole layout for the LS2/3/6 series #2 housed style.

Due to our ongoing product development program, Vincent Associates reserves the right to discontinue or change specifications or designs at any time, without incurring any obligations. Teflon is a registered trade mark of E.I. Dupont. U. S. Pat. No. 3,427,576; 3,595,553; 3,967,293; 6,652,165. Drawing shown for illustrative purposes only.
Updated 07/2004

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