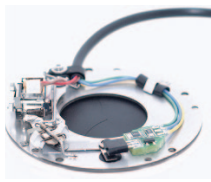


CHAPTER 3 PHOTONICS

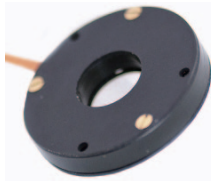
SHUTTER SYSTEMS



CS Series (Unique Patented Design)

- Applications: Video Imaging, Telescopy, Microscopy, and Holography
- Long Lifetime
- Small Size to Aperture Ratio

Model	Aperture	Time to Open
CS25	25 mm	9.0 msec
CS35	35 mm	12.0 msec
CS45	45 mm	14.0 msec
CS65	65 mm	29.0 msec
CS90HS	90 mm	70.0msec



DSS Series

- There are no protruding components allowing flush mounting on either side of the device.
- Circular envelope and concentric aperture allow for easy and fast integration into customer specific applications.
- Simplicity of design allows for unprecedented ease of scaling from apertures as small as 10mm.

DSS10B	10 mm	5.0 msec
DSS20B	20 mm	12.5 msec
DSS25B	25 mm	12.6 msec



LS Series (Laser Switching)

- Applications: Video Imaging, Telescopy, Microscopy, and Holography
- Operation Frequency up to 400 Hz

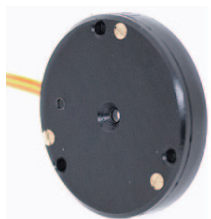
LS2	2 mm	300 µsec
LS3	3 mm	500 µsec
LS6	6 mm	700 µsec



NS Series (N-CAS® Patent Pending Design)

- Features patent pending Non-Contact Actuation System (N-CAS) to provide accurate and reliable shutter operation
- Versatile design allows for shutters to be easily configured bi-stable, normally open or normally closed
- Five bladed design minimizes outside diameter to fit where space is at a premium
- Machined aluminum body allows for direct mounting to flat surfaces

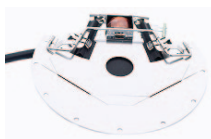
NS15B	15 mm	3.0 msec
NS25B	25 mm	5.0 msec
NS25S	25 mm	5.0 msec
NS35B	35 mm	12.0 msec
NS45B	45 mm	12.0 msec
NS65B	65 mm	22.0 msec



TS Series

- Single bladed design along with bi-stable configuration, only requiring power to change state
- Alternate blade material can be made available by special order for x-ray or other unique customer applications
- There are no protruding components allowing flush mounting on either side of the device.
- Circular envelope and concentric aperture allow for easy and fast integration into customer specific applications.

TS2B	2 mm	0.68 msec
TS6B	6 mm	1.7 msec



VS Series

- Applications: Video Imaging, Telescopy, Microscopy, and Holography
- Ideal For Custom Applications
- Fast Open Times

VS14	14 mm	1.5 msec
VS25	25 mm	3.0 msec
VS35	35 mm	13.0 msec



XRS Series (X-RAY Shutter)

- Applications: X-Ray Switching
- Capable of Blocking up to 30 keV Continuously

XRS6	6 mm	4.4 msec
XRS14	14 mm	25.0 msec
XRS25	25 mm	16.0 msec

COATING AND MOUNTING OPTIONS FOR SHUTTER SYSTEMS

SHUTTER MODEL	ULTRAVIOLET .3-.4µm (microns)		VISIBLE .4-.75µm (microns)		INFRARED .75-.106µm (microns)	
	AlSiO	AlMgF2	AlSiO	AlMgF2	AlSiO	AlMgF2
CS25	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
CS35	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
CS45	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
CS65	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
CS90HS	N/A	N/A	N/A	N/A	N/A	N/A
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
DSS20	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
DSS25	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
LS2	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
LS3	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
LS6	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
NS15B	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
NS25B	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
NS25S	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
NS35B	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
NS45B	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
NS65B	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	5 W/mm ²	5 W/mm ²
TS2B	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
TS6B	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
VS14	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	10 W/mm ²	5 W/mm ²
VS25	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	10 W/mm ²	5 W/mm ²
VS35	N/A	5 W/mm ²	10 W/mm ²	5 W/mm ²	10 W/mm ²	5 W/mm ²
XRS14	N/A	N/A	N/A	N/A	N/A	N/A
XRS25	N/A	N/A	N/A	N/A	N/A	N/A
XRS6	N/A	N/A	N/A	N/A	N/A	N/A

Mounts by Type

* 100 Mounting Ring,	* 101 Mounting Ring	* 102 Mounting Ring
* 103 Mounting Ring	* 105 Male C Mount Adapter	* 106 Female C Mount Adapter
* 110 T Mount Adapter	* 125 Camelia Adapter	* 126 F Type Male Adapter
* 127 Dalstar Adapter	* 128 Cooke Adapter	* 17 CS25 F Type Female Video Adapter
* 17 CS35 F Type Female Video Adapter	17 CS45 F Type Female Video Adapter	* 17 VS14/25 F Type Female Video Adapter
* 17 VS35 F Type Female Video Adapter	* 21 Zeiss Axiovert Type Microscope Mount Set	* 22 Nikon Type Microscope Mount Set
* 23 Olympus Type Microscope Mount Set	* 24 Olympus Type Microscope Mount Set	* 26 Leica Type Mount Set
* 27 Nikon Type Microscope Mount Set	* 28 Olympus Type Mount Set	* 29 Nikon Type Mount Set
* 30 Leica Type Mount Set	* 31 Nikon/Confocal Type Mount Set	* 32 Nikon Type Microscope Mount Set
* 90 Mounting Ring		

If you have questions for coating and mounting on shutter systems, please contact ONSET sales members.