

## Applications

- Standard Series Monochromators
- High-resolution monochromators
- Single-channel detectors at monochromator output
- Slits for vacuum chambers

## Features

- Precision machined brass or stainless steel jaws
- High resolution micrometer head
- Optional motorized upgrade
- Adjustable slit height using curtain slider
- Available fixed slits for repeatable results

# Slit Assemblies

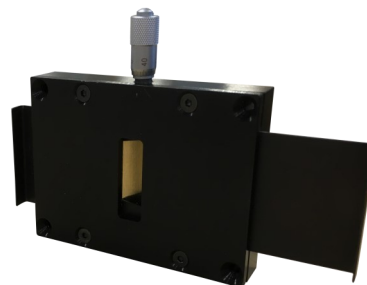
## SS-80, SS-84, and SS-F Series



# Slit Assemblies

## OVERVIEW & SPECIFICATIONS

Sciencetech offers manually and motorized adjustable as well as fixed slits. Slit assemblies are designed to be attached to monochromators but may also be used as standalone apertures for other purposes. Adjustable slits come in standard resolution and high resolution formats, both of which are designed to handle high flux levels. Adjustable slits include three user configurable manually adjustable vertical curtains. Fixed slits are user changeable, and a variety of widths as well as notch type filters are available.



SS-80 Bilaterally Adjustable Slit—Manual Control

### Specifications

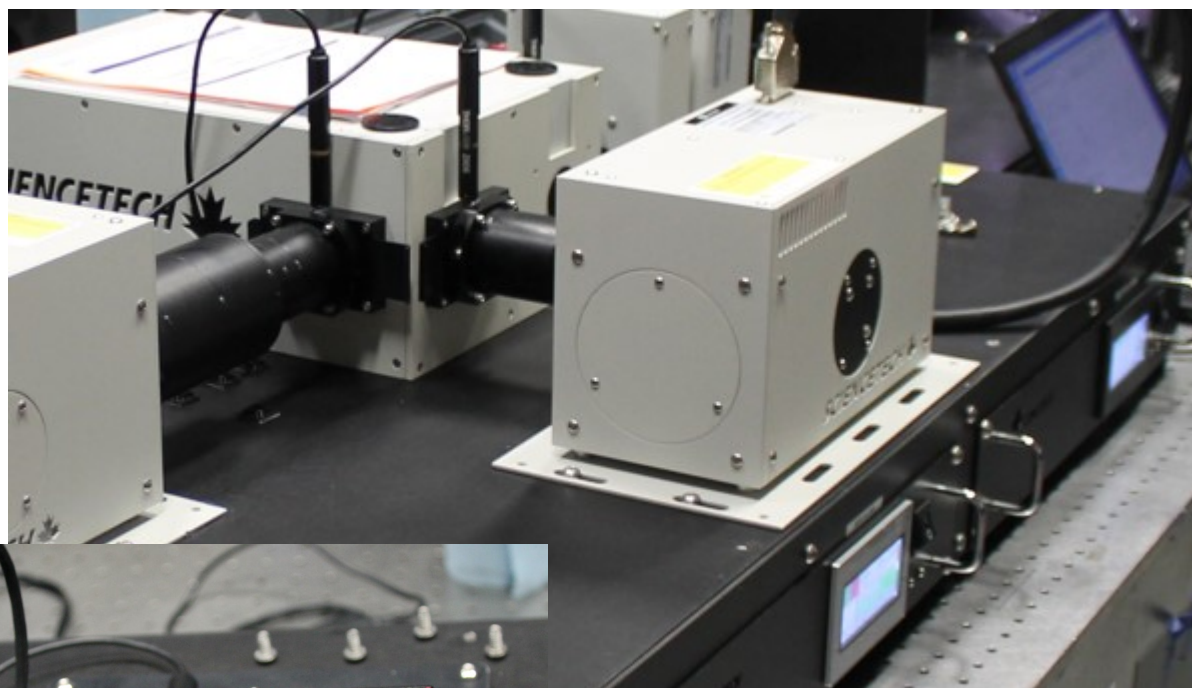
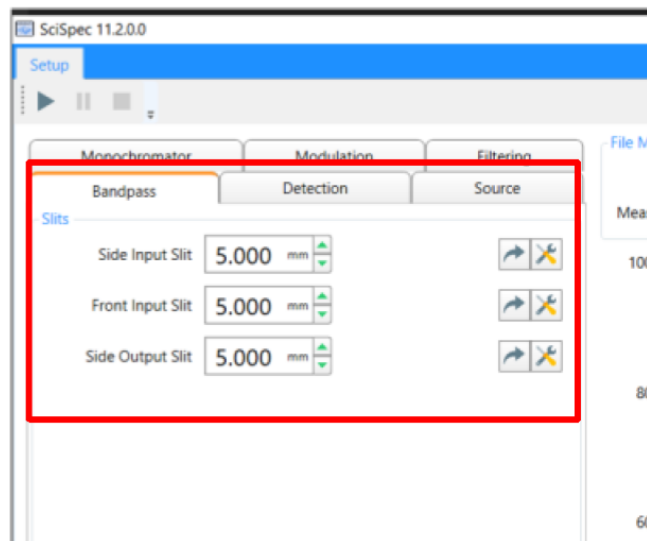
Model	Standard Resolution Slit		High Resolution Slit		Fixed Slit
	SS-80	SS-80-M	SS-84	SS-84-M	SS-F
Slit Width	0-6 mm continuously adjustable , micrometer head				Various available
Slit Width Resolution	10 $\mu\text{m}$		2 $\mu\text{m}$		N/A
Slit Height	Three manually adjustable vertical curtains included: 0-10 mm, 10-20 mm, 20-30 mm				20 mm
Adjustment Mechanism	Manual / Micrometer	Motorized Actuator	Manual / Micrometer	Motorized Actuator	N/A
Motor Minimum Repeatable Incremental Movement	N/A	0.20 $\mu\text{m}$	N/A	0.20 $\mu\text{m}$	N/A
Motor Minimum Achievable Incremental Movement	N/A	0.05 $\mu\text{m}$	N/A	0.05 $\mu\text{m}$	N/A
Compatible with	9072, 9055, 9057, 9040, 9490, 9150			9030, 9072, 9055, 9057, 9040, 9490, 9150	
Jaw Material	Brass		Stainless Steel		Stainless Steel
Light sealing	O-ring				
Dimensions*	86 × 61 × 13 mm (3.4" × 2.4" × 0.5")		86 × 61 × 17 mm (3.4" × 2.4 × 0.65")		86 × 61 × 7.95 mm (3.4" × 2.4" × 0.313")

Due to our continuous improvement system, all specifications are subject to change without notice.

# Motorized Slits—Software

Motorized slits can be controlled in SciSpec, Sciencetech’s full automation spectroscopy desktop software solution. Additionally, motorized slits may be controlled thru standalone applications or integrated into LabView using SciAX software (purchase required) or with the SciencetechCOM API (purchase required)

Motorized slits include a controller connected to the actuator by HD15 interface. Controllers are USB interfaced to a controlling PC.



Motorized slits integrated in a TLS system



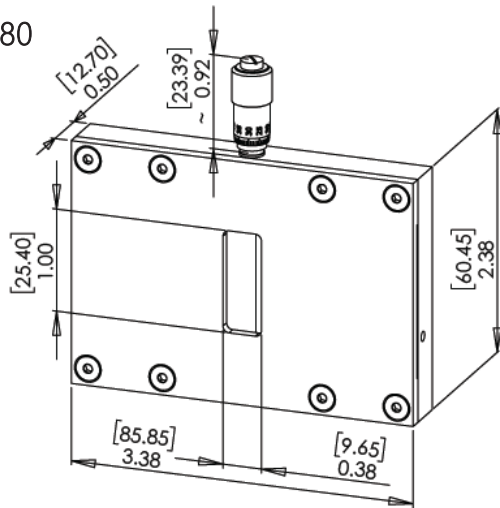
Motorized Slit actuator controllers mounted on TLS System

# Slit Assemblies

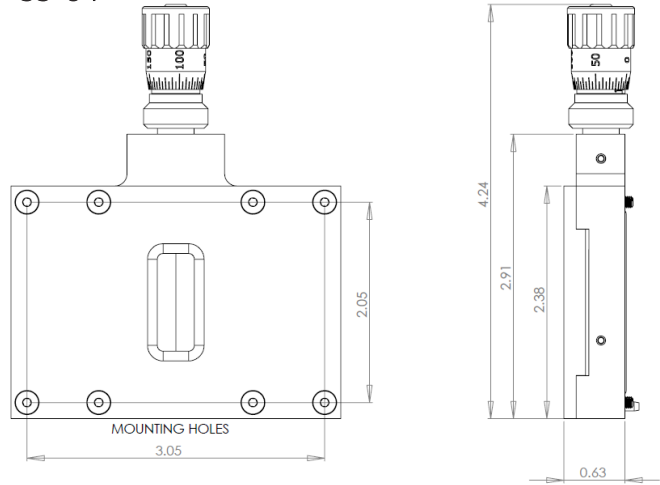
## DIMENSIONS

SS-80 and SS-84 Dimensions (in & mm)\*

SS-80

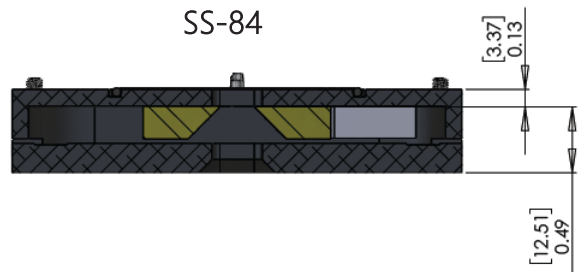
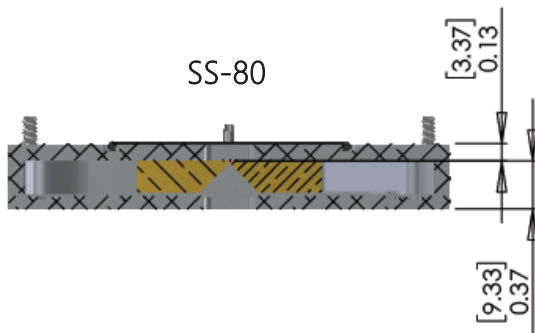


SS-84

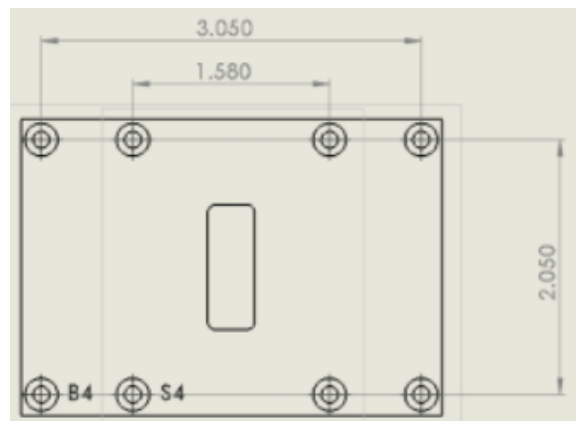


\*Dimensions not valid when the slits are used as middle slits between double-monochromators

Top View, Cross Section - Distance from the front and back surfaces to the slit jaws



Standard Hole Pattern for SS-80 and SS-84 Slits, units in Inches



Notes:

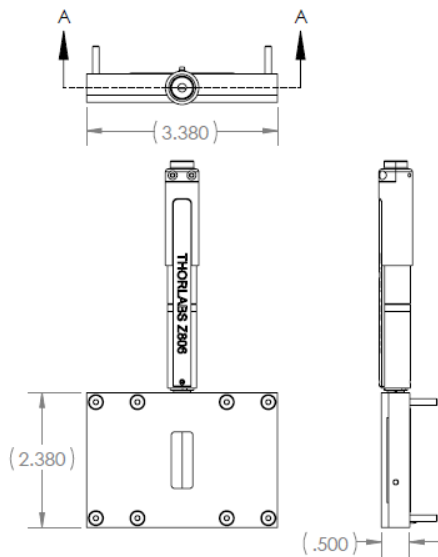
- B4 (3.050 x 2.050") is thru-hole for M3 sized screw, counter sunk and should be used for mounting the slit.
- S4 (1.580 x 2.050) is tapped M3, counter sunk and is used for mounting accessories to the slit.
- At least 2x screws in either B4 or S4 must be used to keep the slit cover attached to the slit frame.

# Slit Assemblies

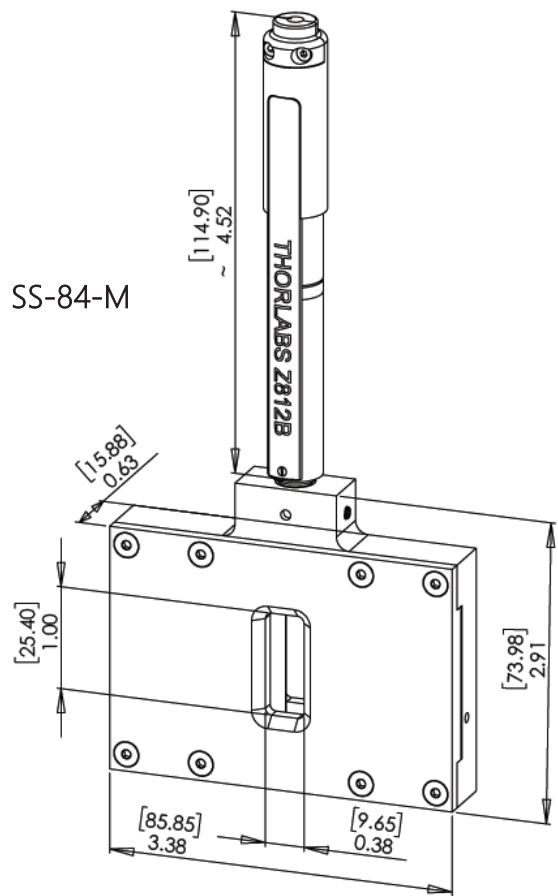
## DIMENSIONS

SS-80-M and SS-84-M Dimensions (in & mm)\*

SS-80-M

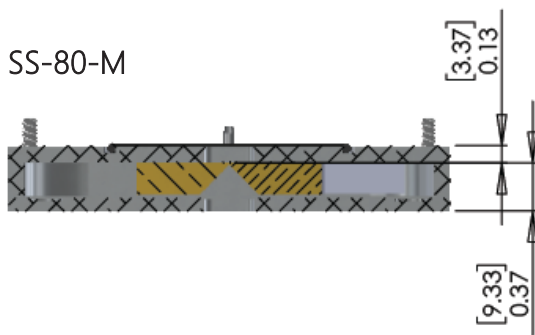


SS-84-M

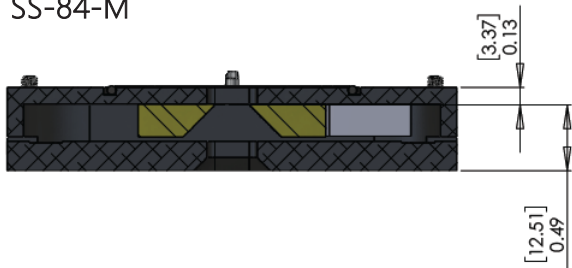


Top View, Cross Section - Distance from the front and back surfaces to the slit jaws

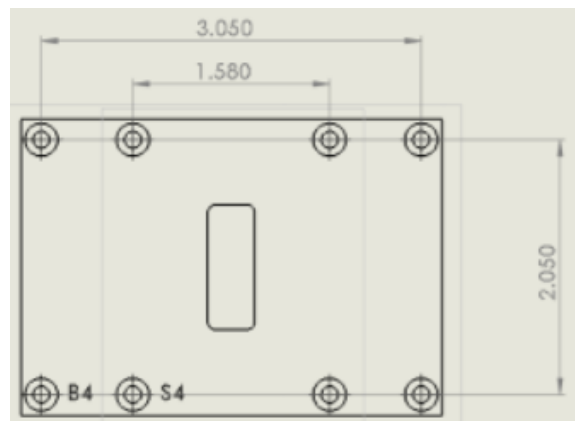
SS-80-M



SS-84-M



Standard Hole Pattern for SS-80 and SS-84 Slits, units in Inches



Notes:

- B4 (3.050 x 2.050") is thru-hole for M3 sized screw, counter sunk and should be used for mounting the slit.
- S4 (1.580 x 2.050) is tapped M3, counter sunk and is used for mounting accessories to the slit.
- At least 2x screws in either B4 or S4 must be used to keep the slit cover attached to the slit frame.

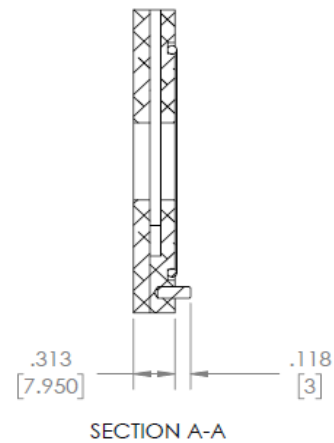
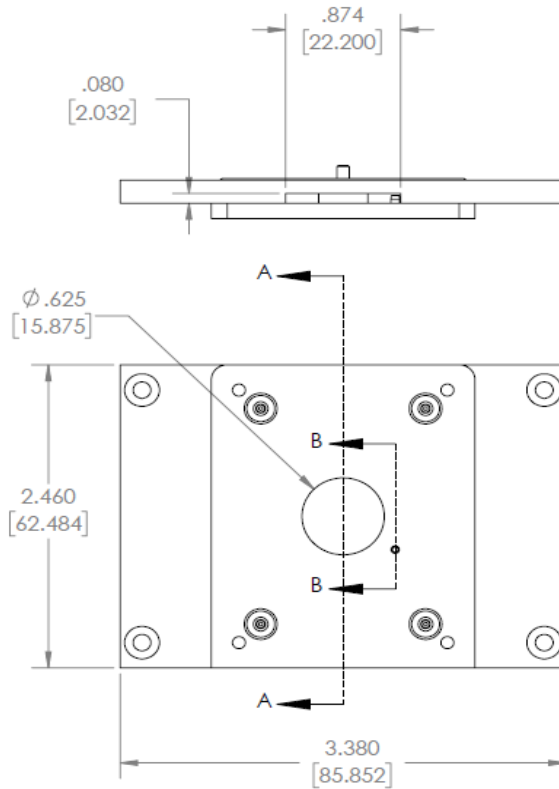
\*Dimensions not valid when the slits are used as middle slits between double-monochromators



# Slit Assemblies

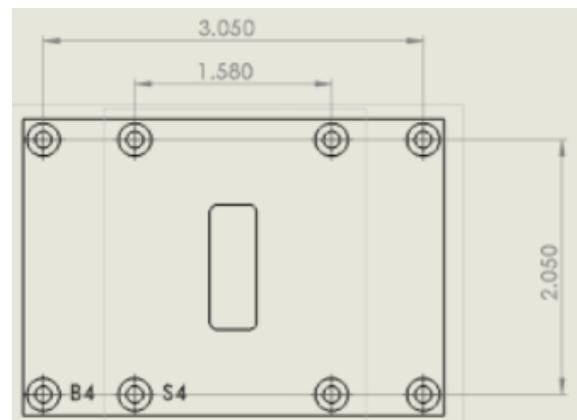
## DIMENSIONS

SS-F



Notes:

- B4 (3.050 x 2.050") is thru-hole for M3 sized screw, counter sunk and should be used for mounting the slit.
- S4 (1.580 x 2.050) is tapped M3, counter sunk and is used for mounting accessories to the slit.
- At least 2x screws in either B4 or S4 must be used to keep the slit cover attached to the slit frame.



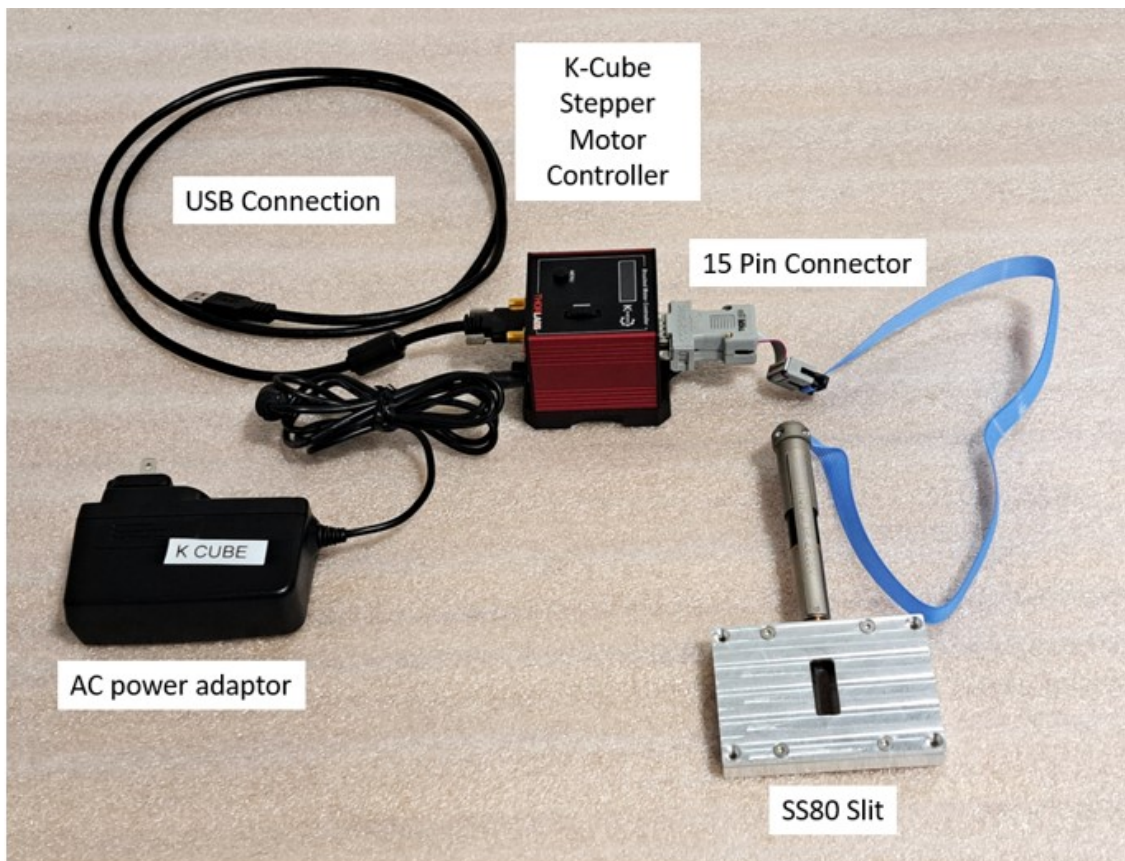
\*Dimensions not valid when the slits are used as middle slits between double-monochromators

# Slit Assemblies

## CUSTOMIZATION

### Customized Systems

Vacuum version of the SS-80-M slit. Designed to integrate into a vacuum chamber for a multidisciplinary national laboratory. Low outgassing parts are used. Sciencetech can provide bulkhead vacuum rated feedthroughs for slit integration into your vacuum chamber.



## Ordering Information

Model	Part Number	Description
SS-80	120-9004	Standard resolution adjustable slit
SS-80-M	120-9053	Standard resolution motorized slit
SS-84	120-9048	High resolution adjustable slit
SS-84-M	120-9054	High resolution motorized slit
SS-F	120-9046	Fixed slit assembly
OR031-NJ	350-0001	Replacement O-ring for all slit assemblies
SF2-2MM	120-9010	Removable 2mm Fixed Width Slit
SF1-1MM	120-9011	Removable 1mm Fixed Width Slit
SF05-0.50MM	120-9012	Removable 500µm Fixed Width Slit
SF025-0.25MM	120-9013	Removable 250µm (0.25mm) Fixed Width Slit
SF01-0.1MM	120-9033	Removable 100µm (0.1mm) Fixed Width Slit
SF3-3MM	120-9034	Removable 3mm Fixed Width Slit
NF-200	120-9101	Notch Filter 200µm
NF-350	120-9102	Notch filter 350µm
Vacuum Compatible Slit	Custom	Please contact Sciencetech for custom vacuum compatible slits
Custom Notch Filter	Custom	Please contact Sciencetech for custom notch filters
SciencetechCOM	SOFT-0200	[SciencetechCOM] COM object Software Package
SciAX	SOFT-0121	[SciAX] ActiveX Control Modules

