

## SCL60C/M - April 29, 2025

Item # SCL60C/M was discontinued on April 29, 2025. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

### SELF-CENTERING LENS MOUNT FOR 60 MM CAGE SYSTEMS

- ▶ **Compatible with 60 mm Cage Systems**
- ▶ **Non-Marring Delrin®\* Fingers with Alignment Grooves that Firmly Grip the Edge of the Optic**
- ▶ **Self-Centering, Spring-Actuated Design**

#### Application Idea

SCL60CA Holding an ACL4532 Ø45 mm Aspheric Condenser Lens in a 60 mm Cage System



**SCL60CA**  
60 mm Cage-Compatible  
Self-Centering Lens Mount



#### OVERVIEW

##### Features

- Spring-Actuated Non-Marring Delrin®\* Fingers Center an Optic Within the Mount
- Alignment Groove on Fingers Firmly Grip the Edge of the Optic
- Holds Optics from Ø0.15" (Ø3.8 mm) to Ø1.77" (Ø45.0 mm)
- Compatible with Thorlabs' 60 mm Cage System
- Designed for Easy Lens Insertion
- Provides Large, Clear Aperture

The three spring-loaded fingers of Thorlabs' 60 mm Cage-Compatible Self-Centering Lens Mount firmly grip optics ranging from Ø0.15" (Ø3.8 mm) to Ø1.77" (Ø45.0 mm) that are no heavier than 1.0 lb. The fingers are easily opened with one hand by pinching the actuator tabs between the thumb and forefinger. The lens is held between the mounting fingers as the actuator tabs are released. The nested ring design centers the optic within a 60 mm Cage System. Each mount features four through-holes to accommodate our ER Series Cage Rods; to lock them into place, the SCL60CA mount has four 5/64" (2.0 mm) hex locking setscrews and the SCL60C/M mount has eight 0.05" (1.3 mm) hex locking setscrews. A bottom-located 8-32 (M4 x 0.7) tapped hole also allows for direct fastening to our Ø1/2" Posts.

For post-mounting applications outside of a cage system, or if larger diameter optics up to Ø3.00" (Ø76 mm) need to be accommodated, please see our additional Self-Centering Lens Mount options.

\*Delrin is a registered trademark of DuPont Polymers, Inc.

## CAGE OVERVIEW

### Cage System Overview

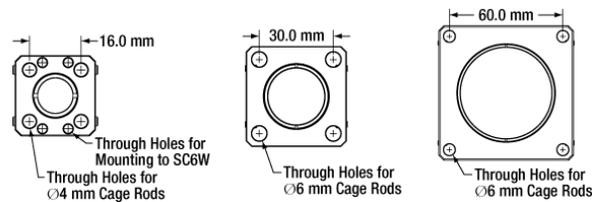
The Cage Assembly System provides a convenient way to construct large optomechanical systems with an established line of precision-machined building blocks designed for high flexibility and accurate alignment.

### 16 mm, 30 mm, and 60 mm Cage System Standards

Thorlabs offers three standards defined by the center-to-center spacing of the cage assembly rods (see Figure 14A). The 16 mm cage, 30 mm cage, and 60 mm cage standards are designed to accommodate  $\text{Ø}1/2"$ ,  $\text{Ø}1"$ , and  $\text{Ø}2"$  optics, respectively. Specialized cage plates that allow smaller optics to be directly inserted into our larger cage systems are also available.

### Standard Threads

The flexibility of our Cage Assembly System stems from well-defined mounting and thread standards designed to directly interface with a wide range of specialized products. The three most prevalent thread standards are our SM05 Series (0.535"-40 thread), SM1 Series (1.035"-40 thread), and SM2 Series (2.035"-40 thread), all of which were defined to house the industry's most common optic sizes. Essential building blocks, such as our popular lens tubes, directly interface to these standards.



**Figure 14A** An example of the standard cage plate measurements determining cage system compatibility.

#### Standard Cage System Measurements

Cage System	16 mm	30 mm	60 mm
Thread Series	SM05	SM1	SM2
Rod to Rod Spacing	16 mm (0.63")	30 mm (1.18")	60 mm (2.36")
Total Length	25 mm (0.98")	41 mm (1.60")	71.1 mm (2.80")

#### Cage Components

Cage Rods	16 mm	These rods are used to connect cage plates, optic mounts, and other components in the cage system. The SR Series Cage Rods are compatible with our 16 mm cage systems, while the 30 mm and 60 mm cage systems use ER Series Cage Rods.
	30 mm	
	60 mm	
Cage Plates	16 mm	These serve as the basic building blocks for a cage system. They may have SM-threaded central bores, smooth bores sized for industry standard optics or to accommodate the outer profile of our SM Series Lens Tubes, or specialized bores for other components such as our FiberPorts.
	30 mm	
	60 mm	
Optic Mounts	16 mm	Thorlabs offers fixed, kinematic, rotation, and translation mounts specifically designed for our Cage Systems.
	30 mm	
	60 mm	
Cage Cubes	16 mm	These cubes are useful for housing larger optical components, such as prisms or mirrors, or optics that need to sit at an angle to the beam path, such as beamsplitters. Our cage cubes are available empty or with pre-mounted optics.
	30 mm	
	60 mm	
Replacement Setscrews	Replacement setscrews are offered for our 16 mm (SS4B013, SS4B025, and SS4B038) and 30 mm (SS4MS5 and SS4MS4) cage systems products.	
Post and Breadboard Mounts and Adapters	Mounting options for cage systems can be found on our Cage System Construction pages. Cage Systems can be mounted either parallel or perpendicular to the table surface.	
Size Adapters	Cage System Size Adapters can be used to integrate components from different cage system and threading standards.	
	Thorlabs also produces specialized cage components, such as Filter Wheels, a HeNe Laser Mount, and a FiberPort Cage Plate Adapter,	

**Specialized Components**

allowing a wide range of our products to be integrated into cage-mounted optical systems. Explore our Cage Systems Visual Navigation Guide to see the full range of Thorlabs' cage components.

**Self-Centering Lens Mount for 60 mm Cage Systems**

Part Number	Description	Price	Availability
SCL60C/M	Customer Inspired! 60 mm Cage-Compatible Self-Centering Lens Mount, Ø0.15" (Ø3.8 mm) to Ø1.77" (Ø45.0 mm), M4 Tap	\$231.66	Today
SCL60CA	60 mm Cage-Compatible Self-Centering Lens Mount, Ø0.15" (Ø3.8 mm) to Ø1.77" (Ø45.0 mm), 8-32 Tap	\$231.66	Today