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THORLABS

XE25C1/M - November 6, 2015
Item # XE25C1/M was discontinued on November 6, 2015. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

OPTICAL ENCLOSURES

► **Assemble Complete Enclosures in Under 10 Minutes**
► **Shield Experiments from Environmental Variations**
► **Mountable on Standard Breadboards**

XE25C1
(Breadboard Sold Separately)

Track for Sliding Doors Attaches to Breadboard

XE25C6D
Plexiglass Assembly
with Sliding Door
(Breadboard Sold Separately)

[Hide Overview](#)

OVERVIEW

Features

- Build Complete Enclosures in Less than 10 Minutes
- Black Hardboard Panels Ideal for Light-Sensitive Instruments
- Protect Sensitive Equipment from Acoustic Vibrations and Thermal Gradients
- Designed to Mount on a Standard Breadboard
- Optional Sliding Side Doors with Handles
- Fully Customizable with Our Construction Tools and Enclosure Accessories
- Custom Enclosures Available Upon Request

XE25 25 mm Construction Rail Accessories			
Rails	Cubes and Brackets	Breadboard Mounting	Rail Joiners
Construction Tools	T-Nuts and Screws	Enclosures	Enclosure Accessories

Thorlabs' enclosures provide a protected space for instruments that are sensitive to temperature, light, and acoustic vibrations. Our enclosures are made from our 25 mm rails and feature panels made of black hardboard or plexiglass, which are held in place by the rail channels. Each is designed with an internal height of 12" (30 cm), and is available in lengths and widths ranging from 9" to 21" (22.5 cm to 52.5 cm). They ship partially assembled and can be fully assembled in less than 10 minutes using a 1/8" (4 mm) balldriver or hex key (not included). Like any assembly based on 25 mm rails, our enclosures are completely customizable using the parts shown in the Construction Rail Accessories table to the right. For more information on how to build your own enclosure, please see the *Custom Enclosures* tab.

Click for Details
Custom enclosures can be built using
our 25 mm rails and accessories above.
Shown enclosure was constructed
entirely from stock items

Included Parts List[a]	
Rails	XE25 25 mm Rails
Corners	RM1G Construction Cubes
Panels	TB4 Black Hardboard
Screws	Low-Profile Channel Screws

a. Breadboard sold separately.

Breadboard Mountable

The corners of our stock enclosures are positioned such that the 1/4"-20 (M6) tapped holes in the rail ends align with the counterbores in our MB Aluminum Breadboards (sold separately). Please consult the Suggested Breadboards tables below to ensure the proper match. If you need an enclosure for a larger breadboard, or wish to place an enclosure on a breadboard different than the recommended size, we suggest contacting technical support to discuss our custom enclosure options.

Sliding Door Option

The black hardboard or plexiglass enclosures optionally include an assembly on one side that provides access to the interior. It consists of two overlapping sliding doors and a bottom-located slide track, as shown in the image above. The tops of the sliding panels fit into the rail channel of the upper rail. Plastic handles that bolt into the sliding panels are included.

Thorlabs' accessories for assemblies made of 25 mm rails include corner cubes and brackets, T-Nuts, low-profile channel screws, breadboard mounting accessories, and rail joiners. In addition, we offer optical enclosures, enclosure accessories, and "do-it-yourself" tools like taps, tap guides, and drill guides for home-built XE25-based constructions.

For Details on Our Custom Enclosure Capabilities, Please Contact Technical Support.

Hide Custom Enclosures

CUSTOM ENCLOSURES

This tab provides guidelines for building a custom enclosure using stocked parts from Thorlabs.

The versatility of our enclosure construction components ensures that many solutions are available to meet your application requirements. For example, simple enclosures without doors can be constructed to be as small as 1' x 1' x 1' (300 mm x 300 mm x 300 mm). Larger custom enclosures, such as the 1200 mm x 600 mm x 525 mm enclosure shown to the right, might include hinged doors for easy access to an experiment.

Click to Enlarge
RM1S Slotted Corner Cubes
Prevent Light Leakage at
Corners

Assembly Guidelines

The table below lists the parts needed to construct the two-door enclosure shown to the right. Each door can be opened separately, allowing access to the breadboard inside the enclosure.

We recommend that the doors and frame of the enclosure be built separately and then assembled to complete the enclosure. The rails used in the doors and frame are connected via the construction cubes with slotted corners and are secured using the low-profile channel screws. The use of the construction cubes with slotted corners helps prevent light leakage at the corners of the enclosure. To create the side panels, our TB4 hardboard can be cut using a utility knife; these pieces fit directly into the slots of the 25 mm rails and the counterbores of the cubes.

This particular enclosure uses a 25 mm rail as a support along the top of the enclosure for the door hinges, shown to the right. The support rail is secured along the two top frame rails using a low-profile T-nut and setscrew which enables the rail to be positioned anywhere along the top of the enclosure.

Once the enclosure is constructed, it can be secured to an optical table using an XE25CL2 table clamp or XE25A90 right-angle bracket. Alternatively, a breadboard can be inserted inside the enclosure as in the example to the right.

For applications requiring a light-tight enclosure, our BFP1 à|æ&\Á|[&\^åÁ^¦-Eaå@•āç^Á|aậ^¦⁄&æậÁa^Á•^åÁ[Á^æ⁄æậ•⁄aậÁó@Á@ậ*^•Á-Áó@Á^}&|[•̆¦^È

Custom Enclosure Dimensions

As our enclosures use the same family of components, there are numerous possibilities when designing your own enclosure. Any of the dimensions of the shown enclosure can be modified to suit your application requirements. For example, an enclosure with a smaller length than the one shown might use a single hinged door, or no door at all. Additionally, while the example enclosure uses a support rail for the hinged doors, one possibility for smaller width enclosures is to attach door hinges to the rear rail of the frame.

Finally, the height of the enclosure can easily customized to fit any application. For best results when adding doors to your enclosure, the total door height with connection cubes should match the enclosure height. When using stocked rail parts, we recommend using 20" (500 mm) and 21" (525 mm) long rails for the door and enclosure, respectively.

Parts List for Custom 1200 mm x 600 mm x 525 mm Enclosure		
Item #	**Quantity**	**Description**
XE25L1200/M	4	1200 mm Long XE25 Construction Rail
XE25L600/M	7	600 mm Long XE25 Construction Rail
XE25L525/M	4	525 mm Long XE25 Construction Rail
XE25L500/M	7	500 mm Long XE25 Construction Rail
XE25L300/M	4	300 mm Long XE25 Construction Rail
RM1S	20	XE25 3-Way Counterbored Construction Cube
XE25H	4	XE25 Enclosure Hinge
XE25T3/M[a]	1	Low-Profile T-Nuts for 25 mm Rails (10 Nuts/Pack)
MB60120/M	1	600 mm x 1200 mm Aluminum Breadboard, M6 Taps
SH6M10LP[a]	1	M6 Low-Profile Channel Screws (100 Screws/Box)
TB4[b]	2	Black Hardboard, 24" x 24" (3 Sheets)
BBH1[c]	1	Breadboard Handles (Set of 2)

[a] If using 1/4"-20 setscrews or cap screws, see the XE25T3 and SH25LP38.
[b] This item requires cutting to form the panels of the enclosure.
[c] To attach each handle, use two M6 (1/4"-20) cap screws and T-nuts.

Hide Standard Enclosures

Standard Enclosures

▶ Black Hardboard or Plexiglass Walls
▶ Three Size Options

Our standard enclosures feature either black hardboard panels that block stray light or plexiglass panels for applications that are not light sensitive. All our stock enclosures are designed with an internal height of 12" (30 cm). The L x W x H dimensions given in the product descriptions below are specified for the enclosure interior. The roof ships preassembled; a 1/8" (4 mm) balldriver or hex key (not included) is required to complete the construction.
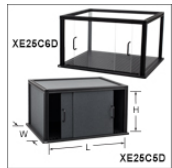
The corners of our stock enclosures are positioned such that the 1/4"-20 (M6) tapped holes in the rail ends align with the counterbores in our MB Aluminum Breadboards (sold separately). Please consult the Suggested Breadboards table to ensure the proper match.Á⁄@ÅÝÒGÍ ÔÌ Å&[} cæ誕Ä̈T FÙÁ⁄[œˆåÅ&[¦} ^¦Å&ˇ à^•Å§•c^cæåÁ{ -Å̈T FÕÅ&[¦} ^¦Å&ˇ à^•ĚÁ

	Suggested Breadboards		
Imperial Enclosure	Imperial Breadboard	Metric Enclosure	Metric Breadboard
XE25C1	MB1218	XE25C1/M	MB3045/M
XE25C3	MB1224	XE25C3/M	MB3060/M
XE25C5	MB1824	XE25C5/M	MB4560/M
XE25C6	MB1824	XE25C6/M	MB4560/M

Part Number	Description	Price	Availability
XE25C1/M	(L x W x H) 37.5 cm x 22.5 cm x 30 cm Enclosure with Black Hardboard	$164.00	Today
XE25C3/M	(L x W x H) 52.5 cm x 22.5 cm x 30 cm Enclosure with Black Hardboard	$182.00	Today
XE25C5/M	(L x W x H) 52.5 cm x 37.5 cm x 30 cm Enclosure with Black Hardboard	$193.00	Today
XE25C6/M	(L x W x H) 52.5 cm x 37.5 cm x 30 cm Enclosure with Plexiglass	$229.00	Today
XE25C1	(L x W x H) 15" x 9" x 12" Enclosure with Black Hardboard	$164.00	Today
XE25C	(L x W x H) 21" x 9" x 12" Enclosure with Black Hardboard	$182.00	Lead Time
XE25C5	(L x W x H) 21" x 15" x 12" Enclosure with Black Hardboard	$193.00	Today
XE25C6	(L x W x H) 21" x 15" x 12" Enclosure with Plexiglass	$229.00	Today

Hide Enclosures with Door Assemblies

Enclosures with Door Assemblies

▶ Black Hardboard or Plexiglass Walls
▶ Sliding Side Panels with Rigid Plastic Handles
▶ Internal Dimensions: 21" x 15" x 12" (52.5 cm x 37.5 cm x 30 cm) [L x W x H]

Our enclosures with door assemblies feature black hardboard or plexiglass panels and a sliding door assembly on one side. This assembly consists of two overlapping doors with plastic handles that slide along the channel of the rail above and the track bolted into the breadboard below. The roof ships preassembled; a 1/8" (4 mm) balldriver or hex key (not included) is required to complete construction of the enclosure and a 9/64" balldriver or hex key (not included) will be needed to attach the handles to the doors.

The corners of our stock enclosures are positioned such that the 1/4"-20 (M6) tapped holes in the rail ends align with the counterbores in our MB Aluminum Breadboards (sold separately). Please consult the Suggested Breadboards table to ensure the proper match.

	Suggested Breadboards		
Imperial Enclosure	Imperial Breadboard	Metric Enclosure	Metric Breadboard
XE25C5D	MB1824	XE25C5D/M	MB4560/M
XE25C6D	MB1824	XE25C6D/M	MB4560/M

Part Number	Description	Price	Availability
XE25C5D/M	(L x W x H) 52.5 cm x 37.5 cm x 30 cm Black Hardboard Sliding Door Enclosure	$215.00	Today
XE25C6D/M	(L x W x H) 52.5 cm x 37.5 cm x 30 cm Plexiglass Sliding Door Enclosure	$249.00	Today
XE25C5D	(L x W x H) 21" x 15" x 12" Black Hardboard Sliding Door Enclosure	$215.00	Today
XE25C6D	(L x W x H) 21" x 15" x 12" Plexiglass Sliding Door Enclosure	$249.00	Today