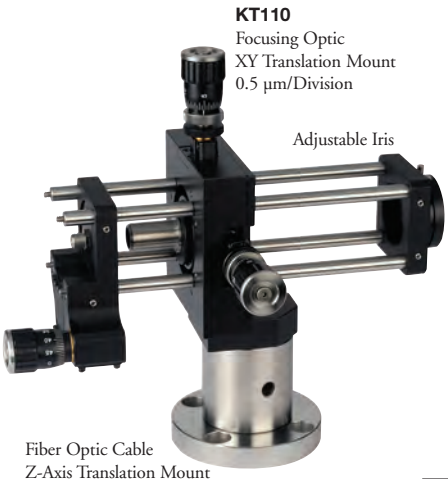
Free-Space Fiber Coupler for Single Mode Fiber



- High-Precision Differential Adjusters Provide Submicron Translation
- Accepts Microscope Objectives
- Easy-to-Follow Instructions and Alignment Tools

The KT110 Fiber Coupler is designed to couple free-space laser beams into fiber optic cables that are terminated with FC or SMA connectors. (Fiber Patch Cables are available starting on page 843, and other connector adapters are available on page 129)

Many of our diffraction-limited aspheric lenses are directly compatible with the coupler. Due to their superior performance, these optics replace the microscope objectives that are traditionally used.

For most free-space coupling applications we have found that the C230TME Aspheric Lens, which has an equivalent microscope magnification of 35X, is an ideal first choice. This lens, which is available with three different BBAR coatings, is listed below for your ordering convenience. Complete optical specifications can be found on page 635.

ITEM#	METRIC ITEM#	$	£	€	RMB	DESCRIPTION
KT110	KT110/M	$ 904.50	£ 627.10	€ 803,10	¥ 7,637.70	Free-Space Single Mode Fiber Coupler

ITEM#	$	£	€	RMB	DESCRIPTION
C230TME-A	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	*f* = 4.5 mm Aspheric Lens, AR-Coated: 350-700 nm
C230TME-B	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	*f* = 4.5 mm Aspheric Lens, AR-Coated: 650-1050 nm
C230TME-C	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	*f* = 4.5 mm Aspheric Lens, AR-Coated: 1050-1620 nm

*See page 635 for complete specifications

NEW versions

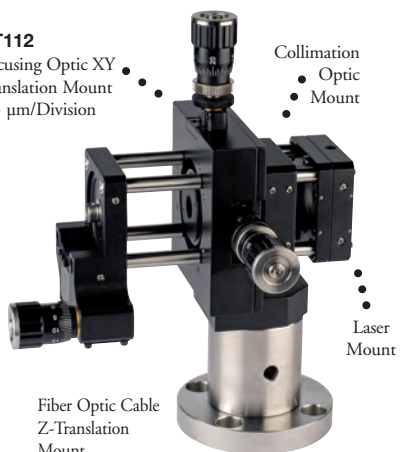
Mechanical Drawings Available on the WEB

Single Mode and Multimode Fiber Coupler: Ø5.6 mm and Ø9 mm Laser Diodes

The KT112 Fiber Coupler is specifically designed to couple the output from a laser diode into a fiber optic cable terminated with FC or SMA connectors. (See our Fiber Optics Section starting on page 843 for FC and SMA cables.)

To compensate for variations in the mechanical emission point of the laser, a manual X-Y positioner is used to mount the laser package. A collimating lens mounted in a cage plate is used to collimate the laser output. To focus the collimated beam onto the fiber optic, another lens that has been mounted in a precision XY translator is employed. The final component in the system is the Z-translator, which accepts the FC- or SMA-terminated fiber optic cable.

- Accepts FC or SMA Fiber Cables
- 45% Typical Coupling Efficiency Measured with a HL6714G (10 mW, 670 nm) Laser Diode into an SM600 Single Mode Fiber (3.3 µm Core)
- High-Precision Differential Adjusters Provide Submicron Translation



ITEM#	METRIC ITEM#	$	£	€	RMB	DESCRIPTION
KT112	KT112/M	$ 965.50	£ 669.40	€ 857,20	¥ 8,152.80	Ø5.6 mm and Ø9 mm Laser Package to Fiber Coupler

Recommended Collimation Optic*

ITEM#	$	£	€	RMB	DESCRIPTION
C230TME-A	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	Laser Collimation Optic, *f* = 4.5 mm, AR-Coated: 350-700 nm
C230TME-B	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	Laser Collimation Optic, *f* = 4.5 mm, AR-Coated: 650-1050 nm
C230TME-C	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	Laser Collimation Optic, *f* = 4.5 mm, AR-Coated: 1050-1620 nm

*One Aspheric Optic Required. See page 635 for complete optical specifications.

ITEM#	$	£	€	RMB	DESCRIPTION
C220TME-A	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	Focusing Optic, *f* = 11 mm, AR-Coated: 350-700 nm
C220TME-B	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	Focusing Optic, *f* = 11 mm, AR-Coated: 650-1050 nm
C220TME-C	$ 87.00	£ 60.40	€ 77,30	¥ 734.70	Focusing Optic, *f* = 11 mm, AR-Coated: 1050-1620 nm

*One Aspheric Optic Required. For additional aspheric lenses that are compatible with this launch system, and housed in a Ø9.24 mm optic cell, see page 626.