

Direct-Coupling Collimators

(Part Number: DCC-xxx-xxx-x)

FEATURES

- BK7 lens, 350nm to 2000nm
- UV fused silica lens, 185nm to 2100nm
- Adjustable focus
- Aluminum alloy construction
- Internal SMA thread

APPLICATIONS

- Coupling light into spectrometers
- Collimating light from light sources
- Spectroscopy

PRODUCT DESCRIPTION

Direct-coupling collimators are used to either coupling light from free space into a spectrometer or collimating light from a point light source to form a collimated (parallel) optical beam. Direct-coupling collimators are key components with numerous applications. For example, in spectroscopy, a direct coupling collimator can collect light in a narrow field of view into a spectrometer. In another example one collimator is connected to a point light source and the collimated beam passes through a cuvette. On the other side of the cuvette a second collimator couples light directly into a spectrometer.

To maximize transmission wavelength range Mightex direct-coupling collimators feature a single BK7 or UV fused silica lens without optical coating. The collimator housing is machined from aluminum alloy for maximum durability. The collimator features an internal SMA thread for direct connecting to spectrometers with popular SMA input ports.

When installed on a spectrometer, the full field of view (FOV) or full divergence angle can be calculated as $FOV = 2\text{atan}(W/2f)$ where W is the width of the entrance slit of the spectrometer and f is the focal length of the lens. Alternatively, the linear field of view on an object placed a distance L away from the collimator is $W(L/f)$. Focusing of the collimator is adjustable for object distance between 50mm to infinity.



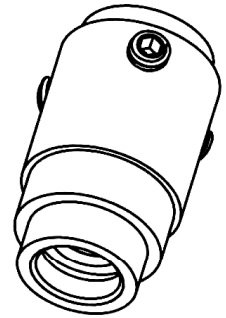
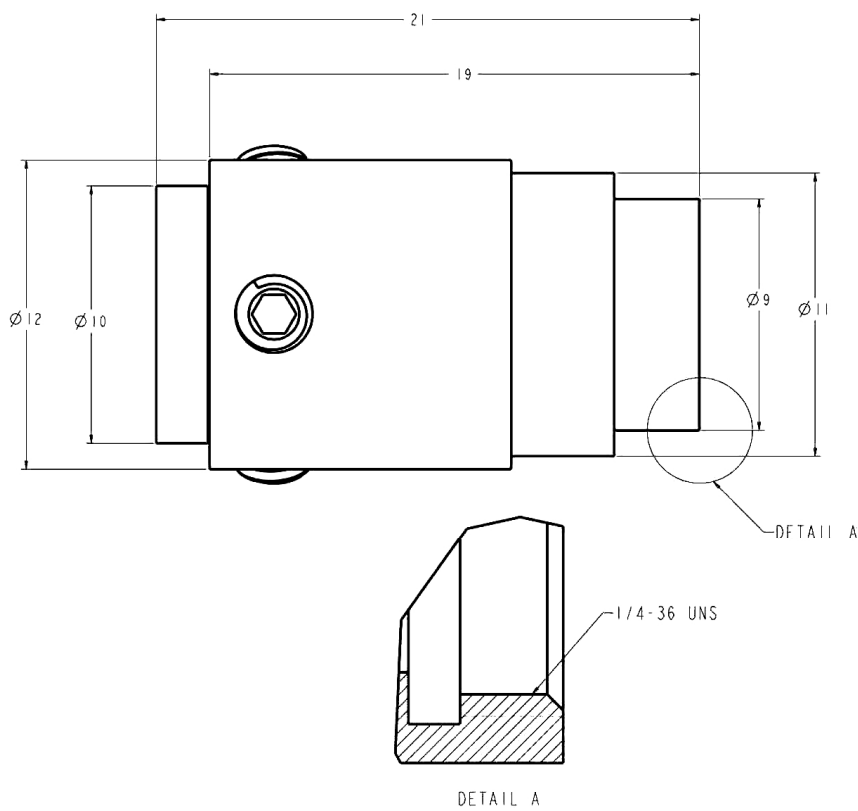
PERFORMANCE SPECIFICATIONS

Part Number	Focal Length (mm)	Clear Aperture (mm)	F# / NA	Lens Material	Wavelength Range (nm)	Connector
DCC-010-005-V	10	5	2 / 0.24	BK7	350 - 2000	SMA
DCC-010-005-U	10	5	2 / 0.24	UV fused silica	185 - 2100	SMA

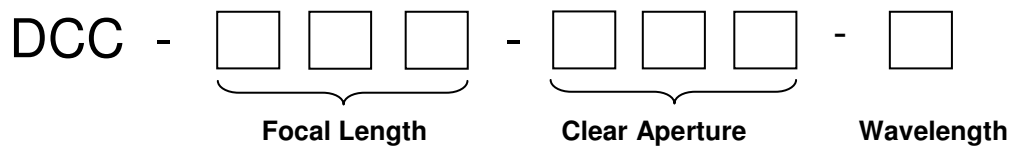
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INSTALLATION DRAWINGS



PART NUMBER AND ORDERING INFORMATION



For example, DCC-010-050-V has a focal length of 10mm, clear aperture diameter of 5mm, and a visible/NIR transmission range (350nm-2000nm).

With a world-class OEM design team, Mightex offers a broad range of customized solutions in order to meet individual customer's unique requirements. Please call 1-416-840 4991 or email sales@mightex.com for details.