

# Light Guide Collimators

Part Numbers: LGC-019-022-05-V, LGC-019-022-07-V

## FEATURES

- Aspherical lens
- Adjustable focus with locking ring
- Accepts various ferrule diameters

## APPLICATIONS

- Coupling light into light guides
- Collimating light from light guides

## PRODUCT DESCRIPTION

Light guide collimators are used to either couple light from free space into a light guide or collimate light from a light guide to form a collimated (parallel) optical beam. Light guide collimators are key components with numerous applications. For example, a light guide collimator can project light from a light guide into a uniform spot in free space.

High-numerical-aperture aspherical lenses are used for precise collimation and maximum light throughput. The collimator features adjustable focus from ~100mm to infinity. Various light guide ferrule diameters are supported. Customization is available for other ferrule diameters.

The full field of view (FOV) or full divergence angle can be calculated as  $FOV = 2\arctan(D/2f)$ , where D is the light guide core diameter and f is the focal length of the lens. Alternatively, the linear field of view on an object placed at a distance L away from the collimator is  $D(L/f)$ .



Light guide collimator



Collimator with light guide and GCS source

## PERFORMANCE SPECIFICATIONS

| Part Number      | Focal Length (mm) | Clear Aperture (mm) | F# / NA  | Lens Material | Wavelength Range (nm) | Light Guide Ferrule OD <sup>1</sup> |
|------------------|-------------------|---------------------|----------|---------------|-----------------------|-------------------------------------|
| LGC-019-022-05-V | 19                | 22                  | 0.86/0.5 | B270          | 350~2000              | 5mm                                 |
| LGC-019-022-07-V | 19                | 22                  | 0.86/0.5 | B270          | 350~2000              | 7mm                                 |

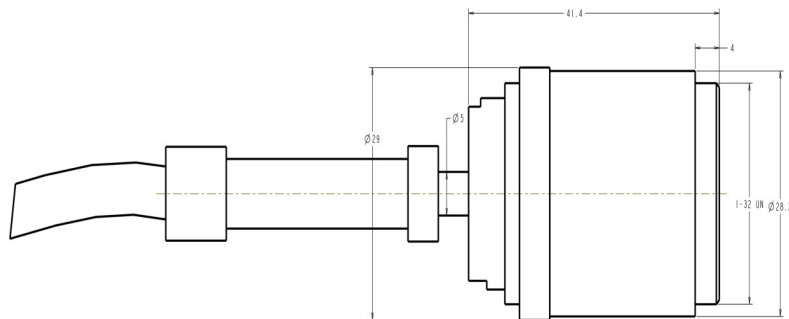
1. Ferrule length must be at least 15mm.



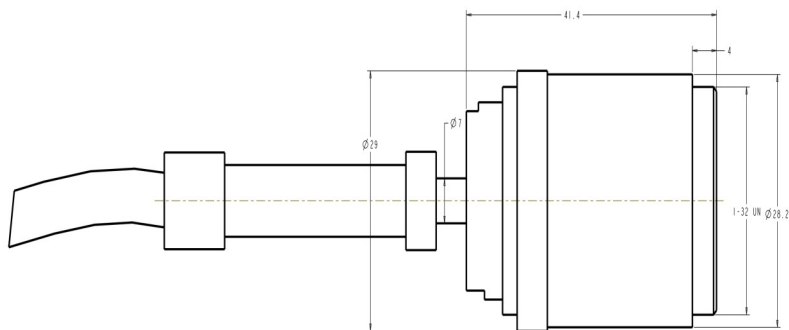
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### INSTALLATION DRAWINGS



**LGC-019-022-05-V**



**LGC-019-022-07-V**

### PART NUMBER AND ORDERING INFORMATION

**LGC** -          -          -       -   

Focal Length                      Clear Aperture                      Ferrule OD                      Wavelength

For example, LGC-019-022-05-V has a focal length of 19mm, clear aperture diameter of 22mm, a visible/NIR transmission range of 350nm-2000nm, and accepts light guides with ferrule diameter of 5mm.

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](mailto:sales@mightex.com) for details.