

# Gooch & Housego

## OL 740-4P Off-axis Parabolic Telescope

The OL 740-4P Off-Axis Parabolic Telescope has a number of design applications.

- It can be interfaced to the OL Spectroradiometer systems for measuring the spectral irradiance or radiance of collimated, point, or diffusely radiating sources.
- It can be interfaced to the OL Spectroradiometer systems for obtaining highly collimated, monochromatic flux levels and used to calibrate various detector or radiometer systems.
- It can be interfaced to the OL 480 Blackbody Source for obtaining a collimated, broadband source at various blackbody temperatures.

The telescope consists of a five inch diameter off-axis parabolic mirror (762 mm focal length) and a reflex viewer with zero parallax viewing. The reflex widefield eyepiece has a precision reticle with ten concentric circles ranging from 1 to 10 mm in diameter. The telescope is factory set at  $\infty$  focus. With this focus setting, the minimum source size required to overfill the FOV of the telescope for radiance measurements is indicated in Table 1.

The mirror design extends the useful wavelength range from the UV to far IR. The circular FOV apertures are used as monochromator entrance slits.

The main telescope mirror is a diamond turned off-axis parabola surface that allows accurate focusing at very long distances. The off-axis design is used to eliminate problems from central beam obscuration and non-uniform FOV errors typical of Cassegrain designs. This off-axis design is relatively insensitive to focus errors for radiometric measurements.

### PERFORMANCE SPECIFICATIONS

Mirror .....	Off-Axis Parabolic
Focal Length .....	762 mm (30")
Clear Aperture .....	125 mm dia. (5")
Focus.....	200 m to $\infty$
Viewer .....	Reflex with Target Reticle
FOV Apertures.....	0.1°, 0.2°, 0.4°

### TECHNICAL SPECIFICATIONS

Dimensions.....	23.5" X 16.9" X 11.1"
.....	(59.7 cm X 42.9 cm X 28.2 cm)
Weight.....	35 lbs. (15.9 kg)

### REQUIREMENTS/ OPTIONS

Requirements .....	None
Options .....	None

**TABLE 1  
Monochromator  
Minimum Source Size**

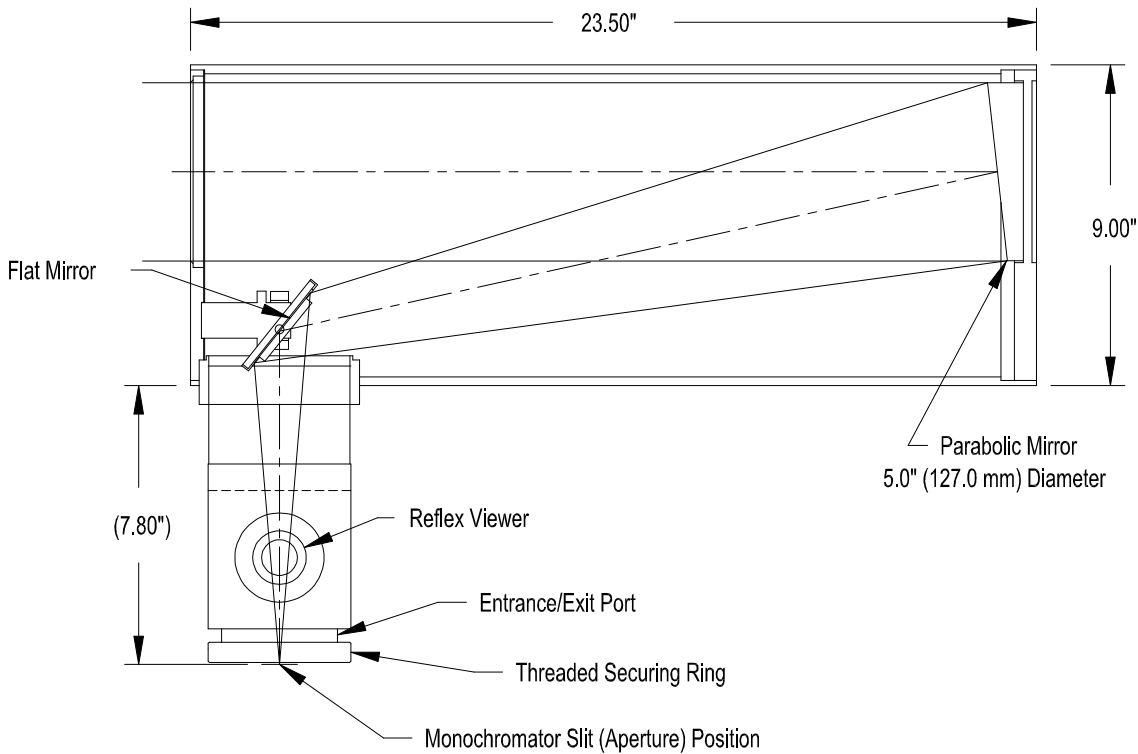
FOV Slits	200 m (656')	500M (1640')
0.1° (1.5 mm) .....	40 cm .....	100 cm
0.2° (3.0 mm) .....	80 cm .....	200 cm
0.4° (5.0 mm) .....	135 cm .....	330 cm

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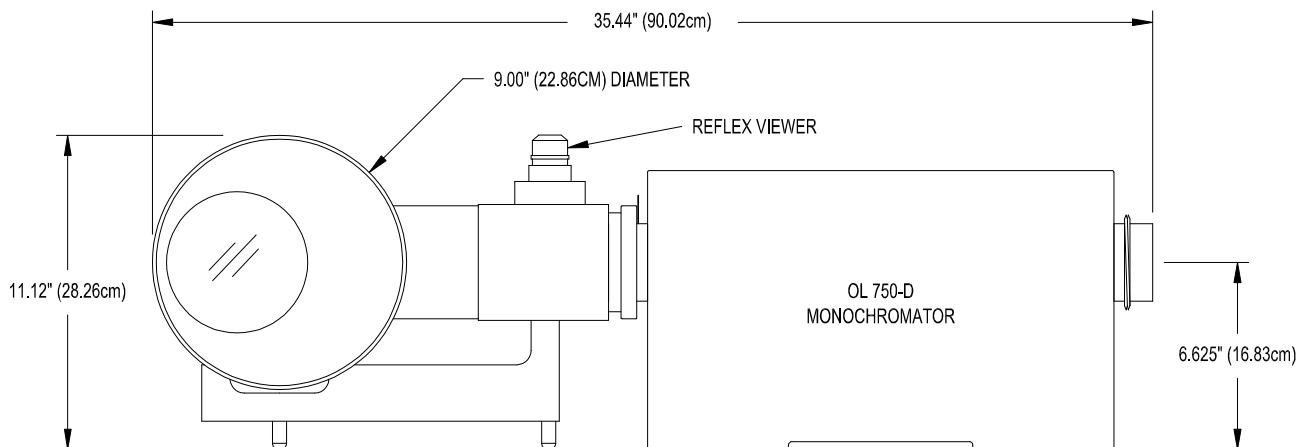
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OL 740-4P Optical Layout



OL 750-D DOUBLE MONOCHROMATOR WITH OL 740-4P OFF-AXIS PARABOLIC TELESCOPE

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