

LIBRASCOPE

600mm, f/1.8 Catadioptric Objective Lens

Model L-477



DESCRIPTION

The 600mm f/1.8 catadioptric objective lens manufactured by the Librascope Division of The Singer Company, is a high speed, high MTF lens. It is optimized for superior optical performance when used in low light level systems where high contrast transfer at low spatial frequencies is required over a wide spectral band.

For image intensifier applications, the contrast degradation must be minimal up to 30 lp/mm. For this reason, the contrast transfer is above 60% in this region. Also, the S-20-ER and S-25 photocathodes with which they are designed to work

require a small focal shift from 0.4μ to 0.9μ wavelengths.

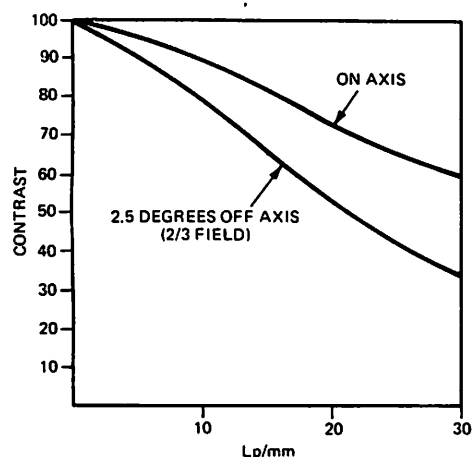
The lens housing mates directly with the AN/TVS-4 (NOD), but is easily adaptable to other systems since the lens has a 1.72" back focal length. In the lightest weight configuration, the housing is cast magnesium. The lens is normally purged, filled with dry nitrogen, and sealed. It has been designed to meet a non-operating temperature of -25°F to 155°F and an operating temperature of 0°F to $+125^{\circ}\text{F}$.

SPECIFICATIONS

Focal Length	609mm
F Number	f/1.8
T Number	T/2.5
Back Focal Length	1.72"
Image Format	40mm
Field Angle	3.8°
Weight	55 lbs.
Length (Front Vertex-to-Image plane)	11.8"
Max. Diameter	15"

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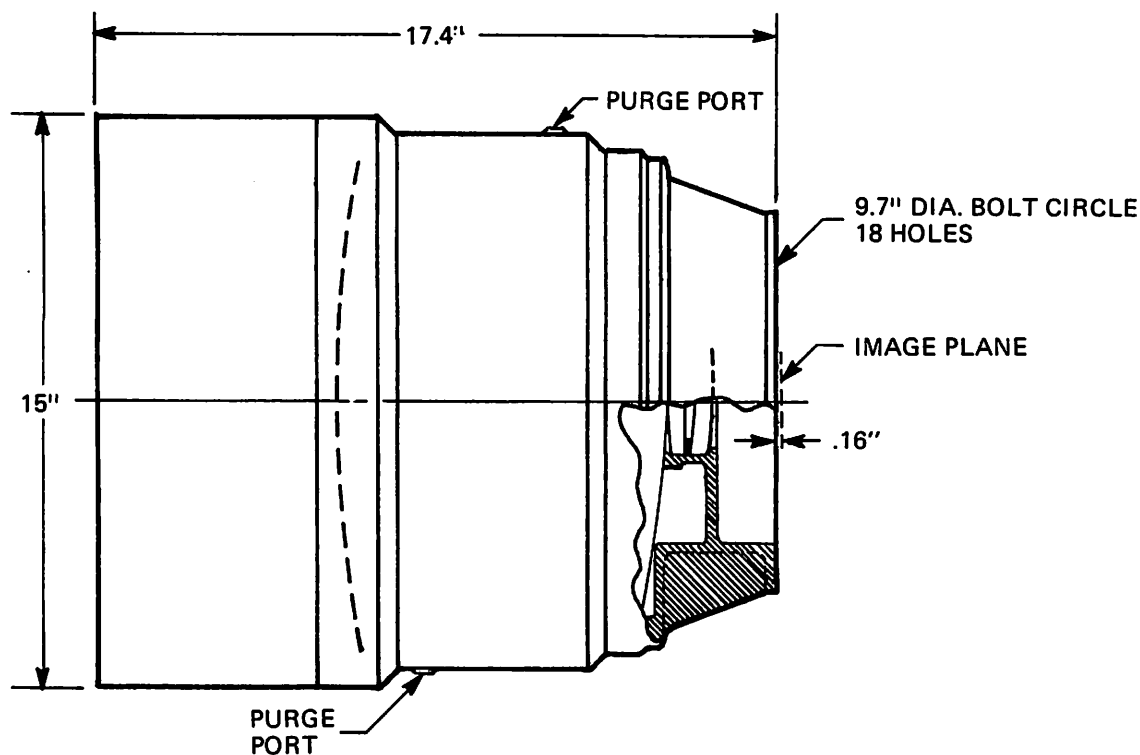
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MEASURED MTF

(S-20-ER plus 2870°K source)

The lens can be built with 80mm format (7.6° FOV).
In this configuration, it is 16" diameter and weighs about 90 lbs.



SINGER

AEROSPACE & MARINE SYSTEMS

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