

SCHOTT® High Resolution Image Inversion

Fiber Optic Image Inverters

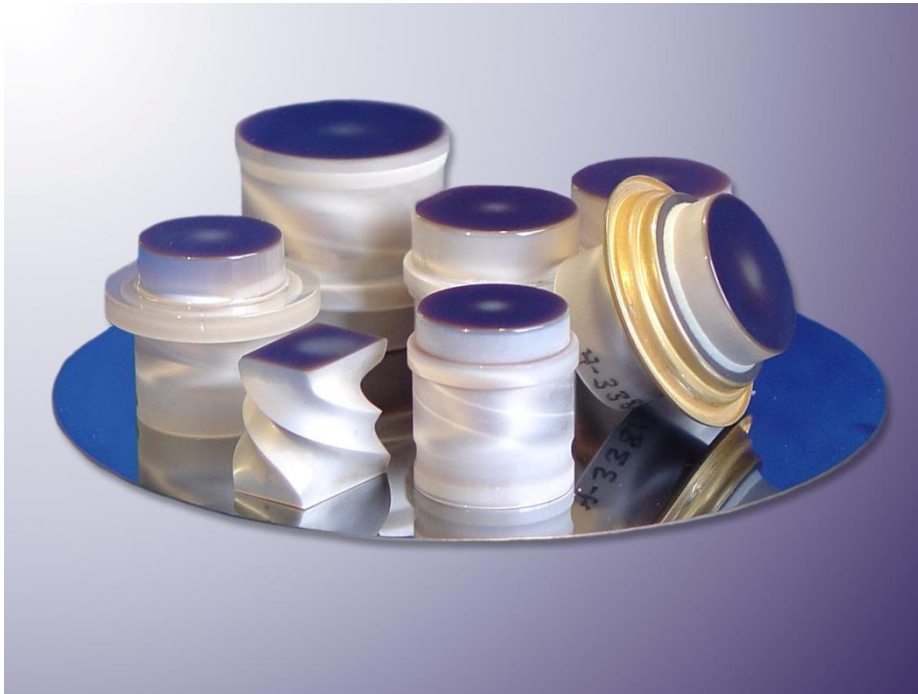


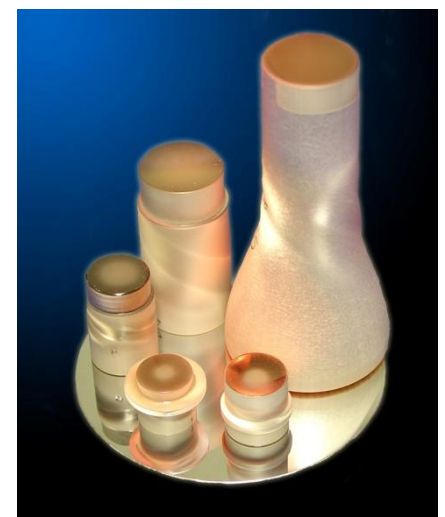
Photo courtesy of the US Army

Image Inverters flip the image 180° minimizing the size and complexity of the night vision eyepiece assembly.

Performance Characteristics

Fiber optic inverters are used primarily in night vision image intensifier tubes, but these imaging components can be used in any application that requires the correction of an inverted image, while also providing a compact, vacuum tight and rugged package. Fiber optic inverters are manufactured using fiber elements ranging in size from 4 to 25um that are fused together into a coherent imaging array, which is then heated and twisted to invert the image 180 degrees from the input surface to the output surface.

Typical Material Properties			
Typical Performance Parameters	Glass Type*		
	24A	24AS	24C
Fiber Size (µm) / Resolution lp/mm**	25/23 10/64 8/72	25/23 10/64 8/72 6/102 4/128	25/23 10/64 6/102 4/128
Numerical Aperture	1.0	1.0	1.0
Stray Light Control (EMA)	Yes	Yes	No
Collimated Transmission White Light: 10mm Thick (normal) (%)	61	61	85
Coefficient of Thermal Expansion (x10 ⁻⁷ /°C) 20 – 300°C	68	68	68
Lead Free	No	No	No
Phosphor Compatible	Yes	Yes	Yes
* Other special glass types available upon customer's request.			
** Resolution Measurement performed with an 1951 USAF Resolution Target using diffuse white light illumination. Resolution may vary with other wavelengths.			



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