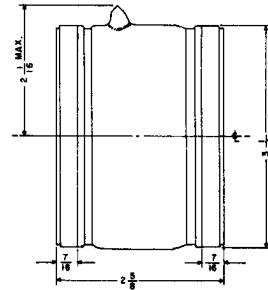
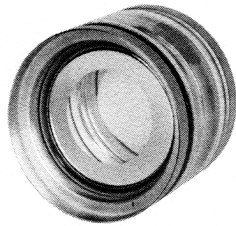


# IMAGE TUBE

TYPE FW-116

A PRODUCT OF ITT LABORATORIES

Nutley, N. J. • Fort Wayne, Ind. • San Fernando and Palo Alto, Calif.

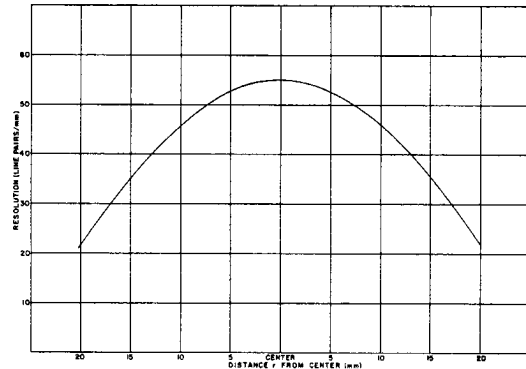


The FW-116 is a unipotential magnetically focused image tube capable of high resolution and low distortion. The tube may be operated under static or pulsed conditions and is intended

(by reason of its P-11 type phosphor screen) for photographic applications rather than direct viewing.

## PRELIMINARY DATA

Cathode	Cesium-antimony
Cathode response	S-11
Cathode sensitivity	
Luminous	30 $\mu\text{a}/\text{lumen}$
Radiant	0.03 $\mu\text{a}/\mu\text{w}$
Cathode useful area	1½ inch diameter
Phosphor	
Type	P-11
Useful area	1½ inch diameter
Image	
Magnification (paraxial)	1 (approximately)
Resolution (paraxial)	50 line pairs/mm *
Distortion	* *
Anode voltage (static)	10 kv ***
Magnetic field strength	450 Gauss



Characteristic resolution curve with tube immersed symmetrically in cylindrical solenoid (uniform winding) and focused for maximum resolution in center of field. Dimensions of solenoid: 7½ inches long, 9½ inches OD, 4¾ inches ID.

\* Depending on uniformity of magnetic field.

\*\* Since distortion is a function of magnetic field uniformity, no figure can be specified. Nonuniformity results in both image rotation and S distortion; however, even with relatively nonuniform fields the image quality is inherent superior to that obtained with a purely electrostatic lens system. The tube is normally operated immersed in the most uniform region of a solenoid; however, very acceptable image reproduction may be had using a squirrel-cage array of uniformly distributed 3/8 inch diameter by 6 inch length Alnico rod magnets, 48 in number.

\*\*\* Normally, an image tube may be operated for short time intervals at approximately four times rated anode voltage without increase in background.

For further information and detailed technical specifications write to the Director, Components and Instrumentation Laboratory, ITT Laboratories, 3700 E. Pontiac St., Fort Wayne, Indiana.

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