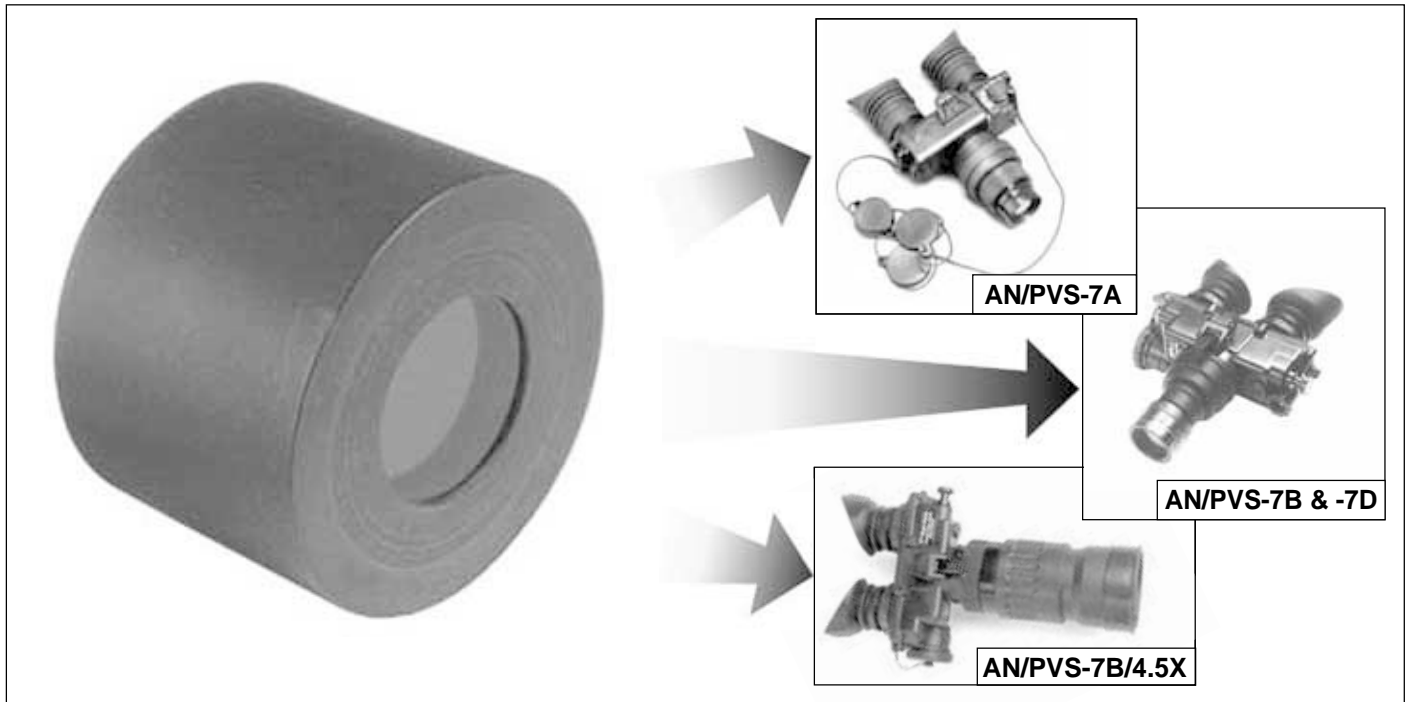


Image Intensifier, Generation 3 18-mm MX-10130 (F9810 Series)



Features

- **Photoresponse Options (minimum) Ranging from 800 to 1800 $\mu\text{A}/\text{lm}$**
- **Resolution Options Ranging from 45 to 64 lp/mm**
- **Signal-to-Noise Ratio Options Ranging from 14.5 to 21**
- **Sensitivity to Near Infrared**
- **Automatic Brightness Control**
- **Extended Operational Life (10,000 Hours)**

ITT Industries Night Vision, the world's leading producer of image intensification devices, now offers the highest performance Generation (Gen) 3 image intensifier tubes available in the industry.

Description

ITT continues to improve Gen 3 MX-10130 image intensifier tubes for use in variants of the AN/PVS-7 night vision goggle. Combined improvements in resolution, signal-to-noise ratio and photocathode sensitivity have increased operational range and situational awareness for the user.

ITT's MX-10130 Gen 3 18-mm image intensifier is completely self-contained with an integral high-voltage power supply. Equipped with automatic brightness control (ABC), this power supply provides

constant output image brightness as light levels increase. It also provides bright-source protection to guard the tube against exposure to high levels of light.

The MX-10130 Gen 3 tube consists of a high-efficiency GaAs photocathode bonded to a glass input window corrected for veiling glare, a microchannel plate (MCP) current amplifier, and a phosphor screen. The photocathode is very sensitive to low-radiation levels of visible and infrared light in the wavelength region of 450 to 900 nm. The electronic image provided by the photocathode is proximity-focused on the MCP and amplified without distortion. The MCP's output electron image is then proximity-focused onto a green P-43 type phosphor screen that is deposited on

a non-inverting fiber-optic output window.

Models

This image intensifier is available in a wide range of performance levels to meet customer requirements. Tube variants and model numbers are detailed on back of this sheet.

TRUST THE NIGHT TO ITT

ITT is the largest manufacturer of Gen 3 night vision equipment for U.S. and allied forces. As a full-service supplier, ITT offers capabilities that cover the spectrum: design/development of new tubes and systems; high-volume manufacturing and after-sale support, including manuals, training and depot maintenance. When your mission involves night operations, you can TRUST THE NIGHT TO ITT.



ITT Industries
Engineered for life

MX-10130 (F9810 Series)

Performance Levels

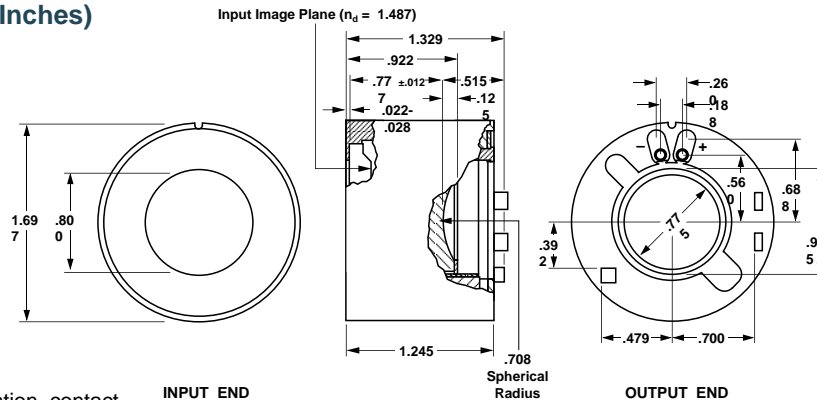
Model Number	F9810B* MX-10130			F9810C MX-10130			F9810J MX-10130			F9810N MX-10130			F9810P MX-10130		
	Omni II Enhanced			Omni III Enhanced			Omni III Plus			Omni V / Ultra			Omni IV		
Resolution, lp/mm, (Minimum)	45			51			64			64			64		
Photocathode Sensitivity (Minimum) 2856° K, $\mu\text{A}/\text{lm}$ @ 830nm, mA/W	800 NA			1200 NA			1350 135			1500 150			1800 190		
Signal/Noise Ratio (Minimum)	14.5			18.0			19.0			19.2			21.0		
EBl, $\text{X}10^{11}\text{lm}/\text{cm}^2$ (Maximum)	2.5			2.5			2.5			2.5			2.5		
Luminous Gain, fL/fc @ $2\text{X}10^{-6}\text{fc}$ @ $2\text{X}10^{-4}\text{fc}$	40000 – 70000** 10000 – 20000**			40000 – 70000** 10000 – 20000**			40000 – 70000** 10000 – 20000**			40000 – 70000** 10000 – 20000**			40000 – 70000** 10000 – 20000**		
Output Brightness, fL @ 1 and 20 fc	2.0 – 4.0**			2.0 – 4.0**			2.0 – 4.0**			2.0 – 4.0**			2.0 – 4.0**		
Output Brightness Uniformity (Maximum) @2856° K @880 nm	3:1 4:1			3:1 4:1			3:1 4:1			2:1 2:1			2:1 2:1		
MTF (Minimum) @2.5 lp/mm @7.5 lp/mm @15.0 lp/mm @25.0 lp/mm	83% 60% 38% 18%			90% 70% 45% 20%			92% 80% 61% 38%			92% 80% 61% 38%			92% 80% 61% 38%		
Photocathode Diameter, mm (Minimum)	17.5			17.5			17.5			17.5			17.5		
Reliability, Hrs. (Minimum)	10000			10000			10000			10000			10000		
Phosphor	P-43			P-43			P-43			P-43			P-43		
Maximum Spots Allowed in Each Zone	<u>Zone</u>			<u>Zone</u>			<u>Zone</u>			<u>Zone</u>			<u>Zone</u>		
Spot Size (in.)	1 2 3			1 2 3			1 2 3			1 2 3			1 2 3		
>.015 – .020	0 0 0			0 0 0			0 0 0			0 0 0			0 0 0		
>.012 – .015	0 1 1			0 1 1			0 0 0			0 0 0			0 0 0		
>.009 – .012	0 1 2			0 1 2			0 0 0			0 0 0			0 0 0		
>.006 – .009	1 2 3			1 2 3			0 1 2			0 1 2			0 1 1		
.003 – .006	3 4 5			3 4 5			0 2 3			0 2 3			0 2 2		

* As available.

** Or per customer request.

NOTE: Model F9810K (MX-10130D) is the full U.S. Mil Spec Omni IV tube.
Model F9810L (MX-10130D) is the full U.S. Mil Spec Omni V tube.

Dimensions (Inches)



Export of this product is regulated by the U.S. Dept. of State in accordance with guidelines of "International Traffic in Arms Regulations (ITAR)" per Title 22, Code of Federal Regulations, Parts 121-128.

Approved for Unlimited Public Release per 01-S-0119

For further information, contact

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