



The Alpha Optics AO-31821S is 18mm, Gen 3, high-gain, high photosensitivity Inverting Image Intensifier Tube encapsulated within a hard-surface insulating sleeve and suitable for passive night vision systems and goggles. The AO-31821S consists of a high-efficiency (GaAs) extended red photocathode on a twisted fiber optic output window; glass input window; micro-channel plate (MCP) current amplifier.

The AO-31821S has a built-in high-voltage power supply with overload protection circuit which incorporates (ABC) automatic brightness control to provide constant output image brightness as light levels varies. The power supply also provides (BSP) bright source protection to guard the tube against exposure to high levels of light and autogating feature (optional) to protect the tube against exposure to high levels of light.

Specifications:	Units	
Photocathode Useful Diameter	mm	17.5
Photocathode Type		GaAs
Material of output window		FOE, inverting, concave R=40 mm
Phosphor		P43
Limiting Resolution, min	lp/mm	64
Luminous Sensitivity at 2856° K, min	μA/lm	1800
Radiant Sensitivity at 850 nm, min	mA/W	180
Gain, min	lm/lm	35000 - 80000 **
Max. output brightness	cd/m ²	2 - 14 **
E.B.I., max	μlx	0.25
Signal to Noise Ratio at 108 μlx, min		24
Input Current, max	mA	20
Input Voltage	V	2.0 ÷ 3.6
Weight, max	g	85
MTFF	hours	10000
Additional Options (when requested by Customer)		External Gain Control
		Shockproof Modification
		Auto-Gating Power Supply Unit

** Particular parameter value is specified in accordance with Customer's requirements

Maximum allowable spots in each zone

Spot size, mm	Zone I circle Ø 5.6 mm	Zone II ring Ø 5.6 - 14.7 mm	Zone III ring Ø 14.7 - 17.5 mm
More than 0.200	0	0	0
0.150 - 0.200	0	1	1
0.075 - 0.150	0	2	2