

Thermal Night Sights



MANPORTABLE COMMON THERMAL NIGHT SIGHTS

Kollsman has been a principle supplier of Night Vision Equipment Sets for more than two decades. The units comprising the night sight family including the TOW 2 series of night sights (AN/TAS-4A), Dragon Night Tracker and the Night Observation Device Long Range (NODLR). Thermal imagery makes it possible to see in darkness, and through smoke and haze. It is also possible to penetrate camouflage and foliage. The TOW 2 heavy antitank missile system gains the ability to operate under limited visibility conditions with AN/UAS-12A equipment set. The set includes the AN/TAS-4A infrared sight and ancillary equipment. The AN/TAS-4A uses an integral closed cycle cooler for detector cooling.

Features

Lightweight

In keeping with the manportable design concept, the components are lightweight, interchangeable and self-contained.

Easy Mount/Dismount

Mounted on top of the TOW optical day sight, the night sight provides easy access to the gunner for target location, tracking and firing. A simple disconnect system, consisting of precision locating V-ways and a quick-release cam, allows the night sight to be readily dismantled without placing any constraints upon the TOW weapon system itself.

Main Characteristics

Nominal Magnification:

Wide Field	4 power
Narrow Field	12 power
Minimum Focal Length	50 meters (both fields of view)

Field of View:

Wide (vertical)	3.4+/- 0.3 deg (59.3+/- 5.2 mrad)
Wide (horizontal)	6.8+/- 0.6 deg (118.7+/- 10.5 mrad)
Narrow (vertical)	1.1+/- 0.1 deg (19.2+/- 1.7 mrad)
Narrow (horizontal)	2.2+/- 0.2 deg (38.4+/- 3.5 mrad)

Spatial Resolution:

Wide Field	0.5 milliradian
Narrow Field	0.167 milliradian

Minimum Resolvable Temperature:

0.15°C

Number of Detector Elements:

60 (56 displayed and used for tracking)

Wavelengths Detected:

7.5 to 11.6 microns

Detector Operating Temperature:

80°K

Cool Down Time:

6.5 min max at ambient
9.0 min at 125°F

Sight Activation Time:

<15 seconds

Battery Pack Operation:

12 hours

Post-Amplifier Gain:

Step-programmable 32 dB to 72 dB

Video Channels:

Band Pass	10 Hertz to 27 kilohertz @ 0.5 dB 5 Hertz and 30 kilohertz @ 3 dB
Reference Frequency (mid-band)	7.5 kilohertz
Output Noise	50 nanovolts/root Hertz
Channel Separation	40 dB
Dynamic Range	20 dB
Offset	0.0 to 1.0 VDC

Input Power:

4.8 VDC
16.5 VDC, 20 Watts (for cooler)

Cooler Capacity:

300 microwatts at 80°K

