

**KSC Flight Operations
Night Vision Goggle
Specification Requirements**

NASA KSC Flight Operations requests the military style AN/AVS-9 (Exelis F4949 Series) Night Vision Goggle/Image Intensifier Sets. The specific type requested is the F4949F-YG goggle with F9800YG (minimum 1600 figure of merit, up to unrestricted figure of merit performance), battery pack, case 271073-2 HELMET MOUNT ASSY, SPH-5, F4949. More data follows:

OPTICAL

Spectral Response Visible to .90 μm (IR)
Magnification Unity
Field of View 40° nominal (+1°, -2°)
Resolution 1.3 cy/mr, minimum (1.36 typical)
Brightness Gain 5500 fL/fL, minimum
Collimation $\leq 1^\circ$ convergence
 $\leq 0.3^\circ$ dipvergence/divergence
Interpupillary Adjustment Independent, 51 to 72 mm total
Vertical Adjustment 25 mm to infinity
Fore-and-Aft Adjustment 27 mm, range
Tilt Adjustment 10° range
Objective Lens EFL 25 mm, F/1.23, T/1.35
Objective Lens Filters Class A, B, C, UK 645 available
Objective Lens Focus Range 41 cm to infinity
Eyepiece Lens EFL 27 mm
Eyepiece Exit Pupil/Eye Relief On-axis: 14 mm @ 25 mm distance
Full-field: 6 mm @ 25 mm distance
Eyepiece Adjustment +2.0 to -6.0 diopters

MECHANICAL

Flip-up/Flip-down Button release
Automatic Breakaway 11 to 15 g
Battery Type: Rotary wing: 4 ea. AA size, alkaline

ELECTRICAL

Weight of Binocular 550 grams
Weight of Mount Fixed wing: 250 grams
Rotary wing: 330 grams
Operating Temperature Range -32°C to +52°C