



# nVisor ST50 Detailed Datasheet Rev B

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## Product Specifications

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### Optical

FOV, Monocular (diagonal)	50 °
FOV, Vertical	32 °
FOV, Horizontal	40 °
Shape Of View (SOV) Type 1	Full Rectangular (Type 1)
FOV, Binocular (diagonal)	50 °
Overlap	100%
See-Thru Type	Optical
See-Thru Transmission	44%
Pupil Size	10, Non-Real mm
Eye Relief	23 mm
Geometric Distortion	-2% Maximum (Barrel)
Accommodation (Fixed Or User Adjustable Range)	0 diopter
Convergence Angle	0 °
Dipvergence (Vertical Misalignment)	4 MAX MOA
Brightness (MAX)	23 fL
Brightness Levels	23 (high) 15 (mid) 8 (low) fL
Chromaticity (X)	.313
Chromaticity (Y)	.329
Contrast (Min.)	10000:1
Image Defect Criteria	<a href="#">See Document 104921</a>
Spatial Resolution	1.88 arcmin/pxl

### Microdisplay

Display Technology	Organic Light-Emitting Diode (OLED)
Resolution	SXGA 1280 x 1024
Pixel Format	12 x 12 micron square pixels comprised of three vertical 4 X 12 micron sub pixels with R G B filters.
Color Depth	24-BIT (8 bits per R,G,B)

### Video

Video Input Format	SXGA 1280 x 1024 @ 60 Hz
Video Interface	DVI over HDMI
Latency	< 0.002 ms
Video Image Quality	No visible artifacts, noise or abnormalities

## Audio

Headphones, Standard	Integrated Koss KSC75 headphones
Headphone Response	15-25,000 Hz
Headphone Impedance	60 Ohms
Headphone Distortion	N/A
Mic Transducer Principle	Electret
Microphone Response	20-16,000 Hz
Mic Terminating Impedance	<2200 Ohms
Microphone Sensitivity	-44 dB
Microphone, Optional	Shure WH20QTR Boom Microphone

## Controls

On/Off Control	Power (Push Button) located on Display.
Brightness Control	Brightness button cycles through pre-set levels; located on Display
Display Configuration Control	NVIS Unified (UNI) over USB
User Input Button(s)	Two USB Joystick human interface buttons. Left button is joystick button 1 Right button is joystick button 2
Interpupillary Distance (IPD) Range	53-73 (Independent left and right) mm
Head Circumference Adjustment Range	571.5 - 660.4 mm
Vertical Adjustment Range For Head Fitting	50.8 total mm

## Indicators

Power On/Off Indicator	Green LED located on Display. Always on when unit is powered up, off when power is turned off.
Sync (video Signal) Indicator	Green LED(s), on Display. Separate Left & Right channels. Always on when correct sync is being received Blinking when in configuration mode. Off otherwise.

## Power

Power Consumption (TYP)	8 W
Power Supply	INPUT: 100-240 VAC, 0.3A 50-60 Hz. OUTPUT: +5 V DC, 2 A min.
Power Source	100-240 VAC, 50-60 Hz, 0.4 A (IEC Type C13 Cord)
Power Input	+5V DC, 2 A min.

## Physical

Size (envelope)	14.2 L x 9.0 W x 8.6 H max in
Mass	1050 g
Color	Metallic Olive Green
Cable Exit	Rear, Downard Cable Exit
Cable Length	10 m (NVISOR ST50, AC POWER, 10 M) 4.2 m (NVISOR ST50, AC POWER, 4.2M)

Cable Minimum Bend Radius	1 in
Cable Makeup	2x HDMI, 1x Headphone, 1x Microphone, 1x USB, 1x Power
Trackers Supported	Intersense IC2, IC3, others with adapter plate.
Tracker Mounting	External rear platform with mounting holes
Logo, Labels, Markings	NVIS logo on distal end of HMD above objective window, part number and serial number label at inside rear rim of top housing.

## Environment

Operating Temperature Range	0 to 30 °C
Operating Humidity Range	85% Relative Humidity
Storage Temperature Range	-20 to 60 °C
Storage Humidity Range	85% Relative Humidity

## Compliance

CE Compliance	CE Compliant
RoHS Compliance	RoHS Compliant

# Drawings

