

IPLEX NX Features and Specifications

SCOPE UNIT

Model No.	IV9435N	IV9450N	IV9635N	IV9650N	IV9675N	IV9635X1N
Insertion tube	Scope diameter $\phi 4.0$ mm					
	Scope length 3.5 m		5.0 m		3.5 m	
	Exterior High - durability tungsten braid					
Optical system	Tube flexibility Uniform stiffness					
	Tapered Flex insertion tube with flexibility gradually increasing toward the distal end					
Optical system	Field of view					
	Direction of view Selectable by optical adaptor. Adaptor for Stereo measurement attachable					
Illumination	High - intensity laser diode					
Articulation Section	Articulation angle up/down/right/left 130°		180°		150°	
	Articulation operation TrueFeel scope tip articulation with electronic power-assisted					

BASE UNIT

Dimensions (W x H x D)	320 x 310 x 180 mm					
Weight	5.4 kg					
Approx. system weight (with battery and SDHC card)	7.1 kg	7.2 kg	7.3 kg	7.4 kg	7.6 kg	7.5 kg
LCD monitor	8.4-inch daylight-view, touch screen LCD, clear type					
Input/Output Terminal	Input terminal S-Video					
	Output terminal VGA					
USB connector	Type A connector, Version 2.0 standards					
Power supply	Battery: 14.8 V nominal, approx. 100-minute operating time. AC power: 100 V to 240 V, 50/60 Hz (with supplied AC adaptor)					
Recording media	SDHC card and USB flash memory (Still image recording only)					
Still image recording	Resolution H768 x V576 (Pixel)		H1024 x V768 (Pixel)		H768 x V576 (Pixel)	
	Recording format Compressed JPEG format					
Video recording	Resolution H768 x V576 (Pixel)		H1024 x V768 (Pixel)		H768 x V576 (Pixel)	
	Recording format MPEG-4 AVC (H.264) format, Windows Media Player compatible					
Stereo measurement	Distance Distance between two points					
	Point-to-line Perpendicular distance between a point and a user-defined line					
	Depth Orthogonal depth/height distance between a point and a user-defined plane					
	Area/Lines Multiple point circumference and area measurement					
3D Modeling	Live cross section, X/Y/Z-axis rotation, 2x Color mapping mode					
Scaler measurement	Distance between two points based on a known measurement in the same plane					

OPTICAL ADAPTOR SPECIFICATIONS

OPTICAL ADAPTOR VARIATION									
$\phi 4.0$ mm Optical Adaptors									
		AT80D/FF-IV94N	AT120D/NF-IV94N	AT120D/FF-IV94N	AT100S/NF-IV94N	AT100S/FF-IV94N	AT70D/70D-IV94N	AT50S/50S-IV94N	
Optical system	Field of view	80°	120°	120°	100°	100°	70°/70°	50°/50°	
	Direction of view	Forward	Forward	Forward	Side	Side	Forward	Side	
	Depth of field*1	35 to ∞ mm	2 to 200 mm	17 to ∞ mm	2 to 15 mm	8 to ∞ mm	5 to 200 mm	3 to 150 mm	
Distal end	Outer diameter*2	$\phi 4.0$ mm	$\phi 4.0$ mm	$\phi 4.0$ mm	$\phi 4.0$ mm	$\phi 4.0$ mm	$\phi 4.0$ mm	$\phi 4.0$ mm	
	Distal end*3	20.1 mm	20.2 mm	20.1 mm	22.9 mm	22.9 mm	22.3 mm	26.7 mm	
$\phi 6.0$ mm Optical Adaptors									
		AT50D/FF-IV96N	AT80D/FF-IV96N	AT120D/NF-IV96N	AT120D/FF-IV96N	AT120S/NF-IV96N	AT120S/FF-IV96N	AT90D/90D-IV96N	AT70S/70S-IV96N
Optical system	Field of view	50°	80°	120°	120°	120°	120°	90°/90°	70°/70°
	Direction of view	Forward	Forward	Forward	Forward	Side	Side	Forward	Side
	Depth of field*1	50 to ∞ mm	20 to ∞ mm	7 to 300 mm	19 to ∞ mm	4 to 150 mm	20 to ∞ mm	5 to 250 mm	4 to 250 mm
Distal end	Outer diameter*2	$\phi 6.0$ mm	$\phi 6.0$ mm	$\phi 6.0$ mm	$\phi 6.0$ mm	$\phi 6.0$ mm	$\phi 6.0$ mm	$\phi 6.0$ mm	$\phi 6.0$ mm
	Distal end*3	21.3 mm	21.3 mm	21.4 mm	21.4 mm	26.6 mm	26.6 mm	25.0 mm	31.2 mm
$\phi 6.2$ mm Optical Adaptors									
		AT80D-IV96X1N	AT120D/NF-IV96X1N	AT120D/FF-IV96X1N	AT80S-IV96X1N	AT120S-IV96X1N	AT70D/70D-IV96X1N	AT60S/60S-IV96X1N	
Optical system	Field of view	80°	120°	120°	80°	120°	70°/70°	60°/60°	
	Direction of view	Forward	Forward	Forward	Side	Side	Forward	Side	
	Depth of field*1	35 to ∞ mm	2 to 200 mm	17 to ∞ mm	30 to ∞ mm	8 to ∞ mm	5 to 200 mm	3 to 150 mm	
Distal end	Outer diameter*2	$\phi 6.2$ mm	$\phi 6.2$ mm	$\phi 6.2$ mm	$\phi 6.2$ mm	$\phi 6.2$ mm	$\phi 6.2$ mm	$\phi 6.2$ mm	
	Distal end*3	20.6 mm	20.6 mm	20.6 mm	24.4 mm	24.4 mm	22.7 mm	28.3 mm	

*1. Indicates the viewing distance with optimal focus. *2. The adaptor can be inserted into a $\phi 4.0$ mm, $\phi 6.0$ mm and $\phi 6.2$ mm hole when it is mounted on the scope. *3. Indicates the length of the rigid portion at the scope's distal end when mounted.

OPERATING ENVIRONMENT

Operating temperature	Insertion tube	In air : -25 to 100 °C In water : 10 to 30 °C
	Other parts	In air : -21 to 49 °C (with battery) In air : 0 to 40 °C (with AC power adaptor)
Relative humidity	All parts	15 to 90 %
Liquid resistance	All parts	Operable when exposed to machine oil, light oil or 5 % saline solution.
Waterproofing	Insertion tube (excluding IV9635X1N)	Operable under water with viewing tip adaptor attached. Not operable underwater with stereo measurement tip adaptors. IV94 series — Up to an equivalent to 5.0 m (16.5 ft) in depth. IV96 series — Up to an equivalent to 7.5 m (24.6 ft) in depth.
	Other parts	Operable in blowing rain conditions (battery compartment must be closed). Not operable under water.

MIL-STD COMPLIANCE

The operating environment performance is confirmed by the following MIL-STD-810G and MIL-STD-461G. No warranty is given as to damage-free under any conditions. Please ask Olympus sales representative for details.

Type	Method
Low atmosphere	MIL-STD-810G, Method 500.6
High temperature	MIL-STD-810G, Method 501.6
Cold temperature	MIL-STD-810G, Method 502.6
Rain and Blowing rain	MIL-STD-810G, Method 506.5
Humidity	MIL-STD-810G, Method 507.5
Salt Fog	MIL-STD-810G, Method 509.5
Blowing dust	MIL-STD-810G, Method 510.5
Explosive Atmosphere	MIL-STD-810G, Method 511.5
Vibration	MIL-STD-810G, Method 514.6
Shock	MIL-STD-810G, Method 516.6
Icing/Freezing Rain	MIL-STD-810G, Method 521.3
Conducted susceptibility Power leads	MIL-STD-461G, CS101 (IV9635X1N, IV9435N and IV9450N only)
Conducted susceptibility Bulk cable injection	MIL-STD-461G, CS114 (IV9635X1N, IV9435N and IV9450N only)
Conducted susceptibility Damped sinusoidal transient	MIL-STD-461G, CS116 (IV9635X1N, IV9435N and IV9450N only)
Radiated emission Magnetic Field	MIL-STD-461G, RE101 (IV9635X1N, IV9435N and IV9450N only)
Radiated emission Electric Field	MIL-STD-461G, RE102 Below Deck (IV9635X1N, IV9435N and IV9450N only)
Radiated susceptibility Magnetic Field	MIL-STD-461G, RS101 (IV9635X1N, IV9435N and IV9450N only)
	MIL-STD-461G, RS103 Above Deck (IV9635X1N, IV9435N and IV9450N only)
Electromagnetic Interference (EMI)	MIL-STD-461G, RS103 Above Deck (excluding IV9635X1N, IV9435N and IV9450N)



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