

Stereo Zoom Microscopes

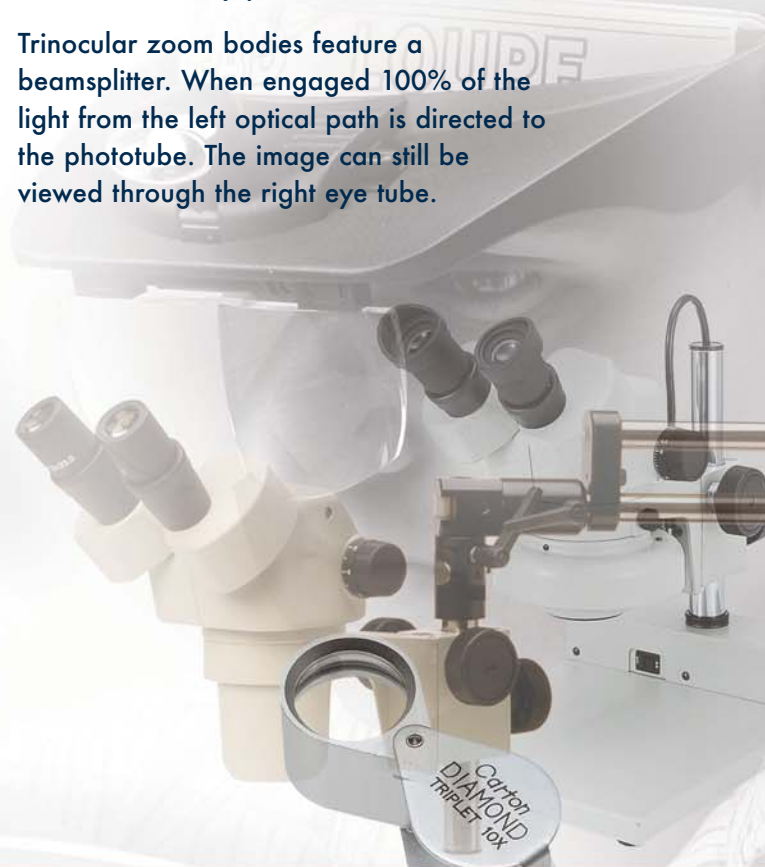
Our stereo zoom and stereo microscopes are manufactured exclusively for Aven by Carton Optical of Japan. Carton Optical has been manufacturing microscopes for over 40 years. Their microscopes have gained a reputation for providing the very best in optical performance, durability, and versatility. With a diverse selection of bodies, stands, and lighting techniques a system can be configured to fit any application.

To configure your system select:

1. The microscope body that meets your magnification, field of view and working distance requirements. Note with a combination of eyepieces and auxiliary lens you can tailor a system to meet your requirements.
2. Focusing Mount
3. Stand (please take into account the working distance and the height of the stand)
4. Illumination, Fiber Optic, Fluorescent or LED.
5. Camera and or adapter if you are using a trinocular body
6. Monitor if necessary

All stereo zoom bodies listed below feature:

- Crisp high resolution precision optics that provide an erect, non-reversed stereoscopic image
- Binocular eyepieces inclined at 45 degrees for fatigue free viewing
- Diopter adjustments on both eyepieces
- Interpupillary distance adjustment 52mm to 75mm
- Body can be rotated a full 360 degrees and locked in any position
- Trinocular zoom bodies feature a beamsplitter. When engaged 100% of the light from the left optical path is directed to the phototube. The image can still be viewed through the right eye tube.



SPZ-50 Series

Outstandingly large zoom ratio 7.46:1-best zoom ration in this class

Total zoom magnification from 6.7x to 50x

Field of View 34.3mm to 3.6mm (1.35" x 0.14")

Working distance 108mm (4.25") - the best in this class

Magnification range of 2.25x to 200x with optional lenses

17mm (0.67") high eye point wide field 10x eyepieces (field number 23) for comfortable viewing even for operators with eyeglasses.

Trinocular version has diopter adjustment on vertical tube for fine focusing of image

** Note specifications mentioned above are with Wide Field 10x eyepieces.*



SPZ-50

Binocular stereo zoom body with 10x eyepieces, rubber eye guards and dust cover

18

Stereo Zoom Microscopes

Optical Data

Eyepiece	DHW10X (F.N. 23)				
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	w/2x
Magnifications	6.7x-50x	3.35x-25x	5x-37.5x	10.72x-80x	13.4x-100x
Working Dist.	108mm	240mm	132mm	50mm	41mm
Field of View	34.3-4.6mm	68.9-9.2mm	45.7-6.1mm	21.4-2.8mm	17.1-2.3mm

Eyepiece	DHW15X (F.N.15)				
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	w/2x
Magnifications	10.05x-75x	5.02x-37.5x	7.53x-56.25x	16.08x-120x	20.1x-150x
Working Dist.	108mm	240mm	132mm	50mm	41mm
Field of View	22.3-3mm	44.7-6mm	29.8-4mm	16-1.8mm	11.1-1.5mm

Eyepiece	DHW20X (F.N. 11.4)				
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	w/2x
Magnifications	13.4x-100x	6.7x-50x	10.05x-75x	21.44x-160x	26.8x-200x
Working Dist.	108mm	240mm	132mm	50mm	41mm
Field of View	17-2.2mm	34-4.5mm	22.6-3mm	10.6-1.4mm	8.5-1.1mm



SPZT-50

Trinocular stereo zoom body with 10x eyepieces, rubber eye guards and dust cover

Order #	Description
SPZ-50	SPZ-50 Binocular
SPZT-50	SPZT-50 Trinocular



DSZ-44 Series



DSZ-44

Binocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover



DSZT-44

Trinocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover

10 Stereo Zoom Microscopes

Zoom Ratio of 4.4:1

Total Magnification from 10x to 44x

Field of View of 23mm to 5.3mm (0.90" to 0.20")

Working distance 90mm (3.54")

Magnification range of 2.5x to 140.8x with optional lenses

Wide Field 10x Eyepieces (field number 23)

** Note specifications mentioned above are with Wide Field 10x eyepieces.*

Optical Data

Eyepiece	DSW5X (F.N. 22.5)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	5x-22x	2.5x-11x	3.75x-16.5x	8x-35.2x
Working Dist.	90mm	150mm	105mm	45mm
Field of View	22.5-5.1mm	45-10.2mm	30-6.8mm	14-3.1mm

Eyepiece	DSW10X (F.N. 23)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	10x-44x	5x-22x	7.5x-33x	16x-70.4x
Working Dist.	90mm	150mm	105mm	45mm
Field of View	23-5.2mm	46-10.4mm	30.6-6.9mm	14.3-3.2mm

Eyepiece	DSW15X (F.N. 15)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	15x-66x	7.5X-33X	11.25X-49.5X	24X-105.6X
Working Dist.	90mm	150mm	105mm	45mm
Field of View	15-3.4mm	30-6.8mm	20-49.5mm	9.3-2.1mm

Eyepiece	DSW20X (F.N. 11.4)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	20x-88x	10x-44x	15x-66x	32x-140.8x
Working Dist.	90mm	150mm	105mm	45mm
Field of View	11.4-2.5mm	22.8-5.1mm	15.2-3.45mm	7.1-1.6mm

Order # Description

DSZ-44	DSZ-44 Binocular
DSZT-44	DSZT-44 Trinocular

DSZ-70 Series

- For high magnification applications
- Zoom Ratio of 3.5: 1
- Total Magnification from 20x to 70x
- Field of View of 10mm to 2.8mm (0.39" to 0.11")
- Working distance 80mm (3.15")
- Magnification range of 5x to 224x with optional lenses
- Wide Field 10x Eyepieces (field number 20)

* Note specifications mentioned above are with Wide Field 10x eyepieces.

Optical Data

Eyepiece	DSW5XZ (F.N. 20)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	10x-35x	5x-17.5x	7.5x-26.25x	16x-56x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	10-2.9mm	20-5.7mm	13.3-3.8mm	6.2-1.7mm

Eyepiece	DSW10XZ (F.N. 20)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	20x-70x	10x-35x	15x-52.5x	32x-112x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	10-2.8mm	20-5.7mm	13.3-3.8mm	6.2-1.7mm

Eyepiece	DSW15X (F.N. 15)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	30x-105x	15x-52.5x	22.5x-78.75x	48x-168x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	7.5-2.1mm	15-4.2mm	10-2.8mm	4.6-1.3mm

Eyepiece	DSW20X (F.N. 11.4)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	40x-140x	20x-70x	30x-105x	64x-224x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	5.7-1.6mm	11.4-3.2mm	7.6-2.1mm	3.5-1mm

Order # Description

DSZ-70	DSZ-70 Binocular
DSZT-70	DSZT-70 Trinocular



DSZ-70

Binocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover



DSZT-70

Trinocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover

20

Stereo Zoom Microscopes



NSW Series

Stereo Microscopes

21

Stereo Zoom
Microscopes



Large stage to accommodate large parts. A long life and low temperature 9W fluorescent lamp is used for the built-in incident light.
Magnification: 10x & 30x

Order #	Description
26876	NSW-30PF Microscope



Features a large stage to accommodate large parts. For illumination, we recommend our fluorescent ring lights or our fiber optic illuminator with our annular ring light. If an auxiliary lens is not used a ring light adapter will be required to install the fluorescent ring light or the annular ring light.
Magnification: 10x & 30x

Order #	Description
26877	NSW-30P Microscope

- Dual Magnification of 10x & 20x, or 10x & 30x or 20x & 40x bodies available
- Single Magnification of 10x or 20x bodies available
- 10x Wide Field Eyepieces standard (field number 23)
- Field of View: 23mm (0.91") at 10x, 11.5mm (0.45") at 20x, 7.6mm (0.30") at 30x and 5.7mm (0.22") at 40x

Order #	Description
NSW-1	Single 10x Stereo Body
NSW-2	Single 20x Stereo Body
NSW-20	Dual Magnification 10x & 20x Stereo Body
NSW-30	Dual Magnification 10x & 30x Stereo Body
NSW-40	Dual Magnification 20x & 40x Stereo Body
NSW-620	Dual Magnification 6x & 20x Stereo Body**

* Each Body comes with Wide Field 10x eyepieces
Rubber Eye Guards and dust cover

** NSW-620 will not work with stand T

Preconfigured Systems

Shown below are some of our popular systems or you can configure a system to match your application

Stand Systems



Order #	26800B-302
Model DSZ-44PF	
DSZ-44 Stereo Zoom Binocular Microscope 10x to 44x, 10x eyepieces mounted on Stand P. For illumination we recommend fluorescent or LED Ring Lights or our fiber optic illuminators	
Stand base is 220mm x 284mm	



Order #	26800B-381
Model SPZ-50PFM	
SPZ-50 Stereo Zoom Binocular Microscope 6.7x to 50x, 10x eyepieces mounted on Stand PFM. Has built in 9W Fluorescent ring light.	
Stand base is 220mm x 284mm	

Boom Stand Systems



Order #	26800B-374-10
SPZ-50 Stereo Zoom Binocular Microscope	
6.7x to 50x, 10x eyepieces, 0.5x lens, Ring Light Adapter, and LED Ring Light with Intensity Control mounted on our Double Arm Stainless Steel Ball Bearing Boom Stand	



Order #	26800B-375-10
SPZT-50 Stereo Zoom Trinocular Microscope	
6.7x to 50x 10x eyepieces, 0.5x lens, Ring Light Adapter, Fiber Optic Illuminator with Annular Ring Light, USB Infinity 1, 1.3 Megapixel Camera with Infinity Image Analysis Software mounted on our Double Arm Stainless Steel Ball Bearing Stand. Computer not included.	

22
Stereo Zoom
Microscopes



Preconfigured Systems

Shown below are some of our popular systems or you can configure a system to match your application

Articulating Arm Systems



Order # 26800B-374-15

SPZT-50 Stereo Zoom Trinocular Microscope

6.7x to 50x, 10x eyepieces, 0.5x lens, Ring Light Adapter, 150 watt Fiber Optic Illuminator with an Annular Ring Light, mounted on an articulating arm with 17" x 20" base

Stereo Zoom Microscopes

Examples of other Popular Systems

Systems shown below can be ordered using individual part #s. Call us, we can help configure a system to meet your requirements



Binocular Scope on Single Arm Boom Stand with Fiber Optic Illumination



Binocular Scope on Single Arm Deluxe Stand with 17"x20" base



Trinocular Scope on Stand PF with Built in Fluorescent Illumination and USB Camera



Binocular Scope on Deluxe Double Arm SS Ball Bearing Stand with 17"x20" base



Binocular Scope mounted on Stand P with Fiber Optic Illumination



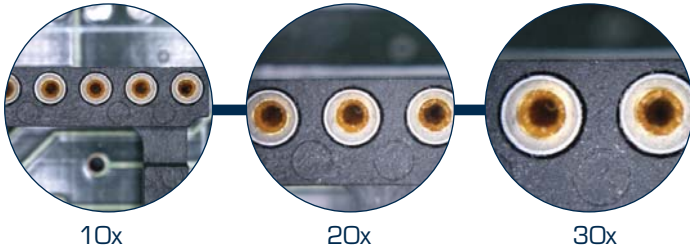
NSW Series Microscope mounted on Stand PF.



Ω

iSeries

iLoupe



26700-501S

- **World's first compact portable field microscope, available anytime & anywhere**
- **2 in 1 device. Standard Digital Camera & a High Power Microscope**
- **Built in Adjustable LED Lighting**
- **High Resolution 6 mega-pixel Canon Camera**
- **10x, 20x and 30x objective lenses available giving a magnification range of 10x to 150x**
- **Cost Effective Offering with Powerful Functions**

The first compact portable field microscope utilizes a digital camera with a patented module and specially designed lenses with built in high intensity adjustable LED Lights. The iLoupe can clearly capture objects from 6mm to 10 microns. This 2 in 1 device allows you to quickly interchange between a standard digital camera and a microscope. You can now carry a portable field microscope and a digital camera in your pocket with ease. Three objective lenses are available to meet a variety of different applications. Using the optical and digital zoom range of the camera the following magnification ranges are produced:

- With the 10x objective lens: 10x to 60x**
- With the 20x objective lens: 20x to 100x**
- With the 30x objective lens: 30x to 150x**

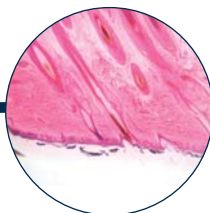
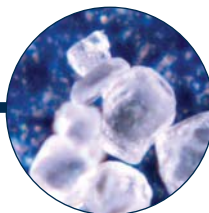
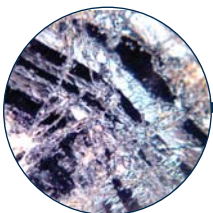
The iLoupe is available in Starter Pack and Pro Pack Versions. The iLoupe Starter Pack includes the Cannon 6 Mega Pixel Camera with the Adapter Ring, Module and a 10x-60x Objective Lens. The iLoupe ProPack includes the Cannon 6 Mega Pixel Camera with the Adapter Ring, Module and three objective lenses (10x-60x), (20x-100x) and (30x-150x). Both the Starter Pack and Pro Pack are supplied in a Plastic Carrying Case.

Applications

QC Inspection
Research

Medical
Forensics

Archaeology
Forestry and Much More



Visit www.aveninc.com to see more images taken with the iLoupe.

iLoupe Accessories



iLoupe Carrying Case
26700-506



iLoupe Pro Pack
26700-501P

Specifications

	iLoupe Starter Pack	iLoupe Pro Pack
Objective Lenses included	10x	10x, 20x, and 30x
Magnification Range	10x -60x	10x-150x
Field of View	10x: 16x12mm, 20xx: 9x6.5mm, 30xx: 5.7x4.5mm	
Lens Design	Schott No-Lead Optical Grade Glass	
Coating	Multi-Layer Anti-Reflective Coating	
Built in Dimmable Illumination	4 White LED Lights	
Batteries	Two Li-ion Rechargeable Batteries Included	



iLoupe Stand
26700-505

Order #	Description
26700-501S	iLoupe Starter Pack w/ Plastic Carrying Case
26700-501P	iLoupe Pro Pack w/ Plastic Carrying Case
26700-505	iLoupe Stand
26700-506	iLoupe Carrying Case

Shop Microscopes

Shop Microscope 40x and 100x



Designed for quick and precise measurements in laboratories, workshops and assembly lines. Comes with a dual scale reticle graduated in both inches and millimeters. A turn of the eyepiece brings the reticle in sharp focus. No calibration is needed. Reticle can be rotated for measurement in any direction. Dual knobs with rack and pinion focusing lets you quickly refine the image. Includes a fully adjustable battery operated penlight illuminator. Scope has a cutaway opening at base for subject manipulation.

Specifications

MODEL	Shop Microscope 40x	Shop Microscope 100x
Magnification (Field of View)	40X (4.5 mm)	100 (1.8 mm)
Objective Lenses	4x	10x
Focusable Eyepiece	10x with Scale	10x with Scale
Measuring Range	3.0 mm/0.1"	1.0 mm/0.05"
Minimum Gradation	0.02 mm/0.001"	0.01 mm/0.001"
Working Distance	15 mm	5.5 mm
Height	200 mm	200 mm
Width	65 mm	65 mm
Net Weight	570 g	580 g
Accessory	Penlight	Penlight

Order #	Description
26800C-531	Shop Microscope 40x with 3.0mm/0.1" Scale
26800C-532	Shop Microscope 100x with 1.0mm/0.05" Scale

Pocket Microscopes 25x



"Pen Size" powerful direct measuring pocket scope for quick close examination. Excellent for detecting flaws or imperfections, surface measurements, examination of fibers, print etc.

Comes with a measuring metric glass reticle. Has beveled opening for gathering and focusing light. Scope has an aluminum case with a satin finish and pocket clip. Furnished in a vinyl sleeve.

Order #	Description
26800C-533	Pocket Microscopes 25x

Specifications

Magnification	Field of View	Scale Calibration	Measurement Range	Length	Diameter
25x	3.24mm	0.05mm	0-3mm	127mm (5")	11.10mm (7/16")



Shop Microscopes

Illuminated Pocket Microscope 40x



Perfect carry with microscope with 40x magnification. Ideal for on site detailed examination of small areas and objects. Useful for engineers, tool makers, quality control inspectors, field researchers etc.

Has a built in light source that can be turned on by pulling on one arm of the scope. In addition a clear acrylic stand allows ambient light to the object under examination.

Includes a measuring reticle. Operates on two AA batteries not included.

Order #	Description
26800C-534	Illuminated Pocket Microscope 40x

3D Stereo Zoom Microscopes

Specifications

Magnification	Field of View	Scale Calibration	Max Measurement	Field of View	Size
40x	4.4mm	0.05mm	4mm	25mm	140x40x20 mm

Loupes & Magnifiers

Loupes with Scales



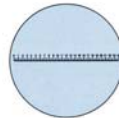
Loupes with reticles for measurement and inspection. Comes with ReticleScale No.1 and Vinyl Case. Optional reticle scales are available.

Order #	Description
26001	Loupe with Scale 7x
26002	Loupe with Scale 10x
26003	No. 1 Reticle Scale
26004	No. 2 Reticle Scale
26005	No. 3 Reticle Scale
26006	No. 4 Reticle Scale

SCALE PATTERNS



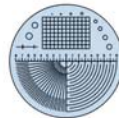
No.1
Lengths in either inches or millimeters can be measured with the appropriate line. Maximum: 0.6" or 16mm



No.2
Lengths can be measured in 0.1 millimeters increments. Maximum: 16mm



No.3
Angles, radius, diameters, widths, etc. can be measured mainly in inches.



No.4
Angles, radius, diameters, widths, etc. can be measured mainly in millimeters.