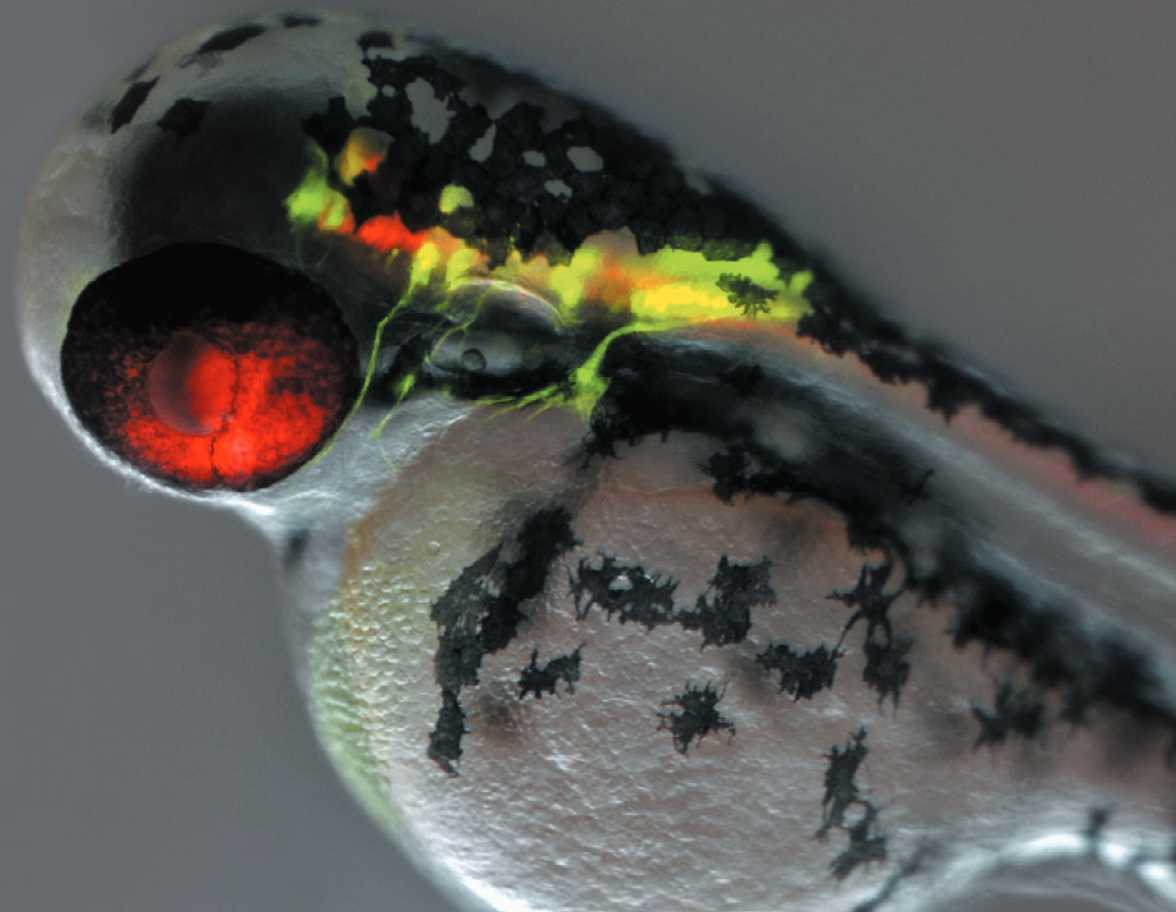




Research Stereo Microscope SMZ25/18

Research Stereo Microscope

# SMZ25 SMZ18



Live zebrafish expressing GFP- and RFP-neurons, imaged with Nikon's latest research stereo microscope, the SMZ25 (fluorescence and OCC).  
Image courtesy of Joe Fetcho, Ph.D., Cornell University.

# Discover a New Evolution Giant Step Forward in Stereo Microscopy

Traditional boundaries between scientific fields, such as molecular biology and developmental biology, are rapidly disappearing as researchers seek to connect findings at the molecular level to those derived from studies of cells, tissue, and organisms. Fields including molecular biology, cell biology, neurobiology, embryology, developmental biology and systems biology have increasing needs for imaging systems that span spatial scales from single cells to whole organisms.

With these demands in mind, Nikon's stereo microscope features a large zoom ratio of 25:1, high resolution, and exceptional fluorescence transmission capability.

## Great zoom range and high resolution

- First stereo microscope to offer a 25:1 zoom range (SMZ25)
- Both eye paths boast numerical apertures (NA) of up to 0.156, using the SHR (Super High Resolution) Plan Apo 1x objective and SMZ25 zooming body

## Bright and high contrast fluorescence imaging

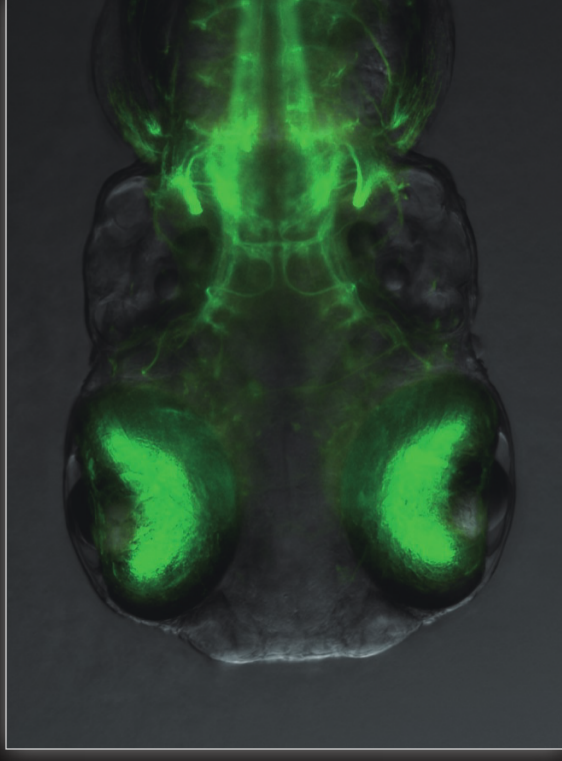
- Fly eye lens ensures uniform brightness over the entire field of view even at the lowest magnifications
- The optical design results in a high signal to noise ratio and crystal clear fluorescence imaging

## Automation and digital imaging

- Motorized focus and zoom operation (SMZ25)
- Imaging Software NIS-Elements enables the use of multiple imaging, processing and analysis modalities including z-stack capture, time-lapse imaging, and the generation of EDF images

## Easy to use

- User-friendly remote control (SMZ25)
- Easy-to-operate slim LED DIA base with OCC illumination
- Wide range of illuminators and accessories accommodate a variety of observation methods



▶ Live transgenic zebrafish larva Tg(chat:Gal4, UAS-Dendra-Xras) expressing membrane-bound Dendra in cholinergic neurons at 3 days post fertilization (stereomicroscope SMZ25, fluorescent and brightfield images). Image courtesy of Dr. Eum Koo, Dr. Hiroya, Keihanna Laboratory for Sensorimotor Integration, RIKEN Center for Brain Science



## SMZ25

Motorized zoom model with the highest zoom ratio and resolution in the SMZ series



## SMZ18

Manual zoom model providing advanced optical performance and very bright fluorescence at an economical cost

Zooming observation	Motorized zoom		Manual zoom	
	BF/DF/FL/Simple polarizing	BF/DF/FL/Simple polarizing	BF/DF/FL/Simple polarizing	BF/DF/FL/Simple polarizing
Zoom ratio	25:1	18:1	18:1	18:1
Magnification range	0.63x-15.75x	0.75x-13.5x	0.75x-13.5x	0.75x-13.5x
Maximum magnification	31.5x**1	270x**1	270x**1	270x**1
Maximum FOV	ø70 mm*2	ø59 mm*2	ø59 mm*2	ø59 mm*2
Maximum NA of objective	0.312*3	0.3*3	0.3*3	0.3*3

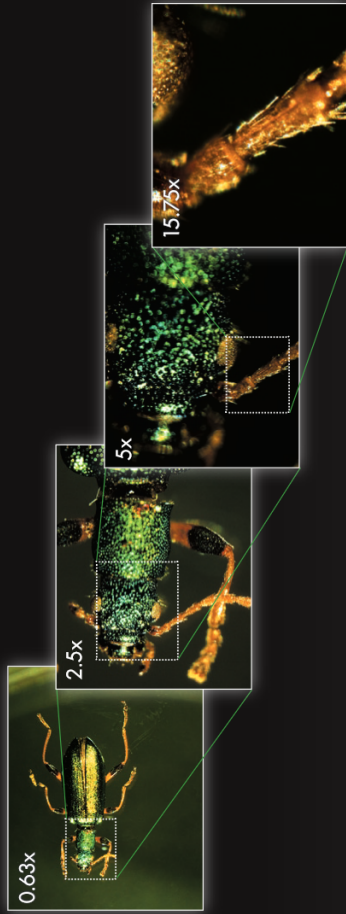
\*1: Using SHR Plan Apo 2x and C-W10x \*\*2: Using SHR Plan Apo 0.5x and C-W10x \*\*3: Using SHR Plan Apo 2x



# Great zoom range and high resolution

## Dynamic zoom ratio of 25:1 **SMZ25**

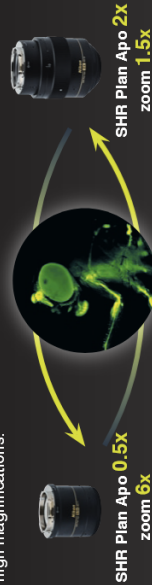
The optical zoom system, the Perfect Zoom System, achieves a zoom ratio of 25:1 (zoom range: 0.63x - 15.75x). Even with a 1x objective lens, the SMZ25 captures the entire 35 mm dish and simultaneously delivers microscopic details.



*Arthropoda sp.*  
(Using SHR Plan Apo 1x with SMZ25)  
Image courtesy of Japanese Association

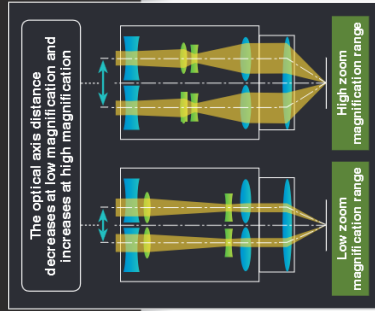
## Auto Link Zoom (ALZ) supports seamless viewing at different scales **SMZ25**

ALZ automatically adjusts the zoom factor to maintain the same field of view when switching objective lenses. This function enables seamless switching between whole organism imaging at low magnifications and detailed imaging at high magnifications.



Maintains FOV at total magnification of 3x

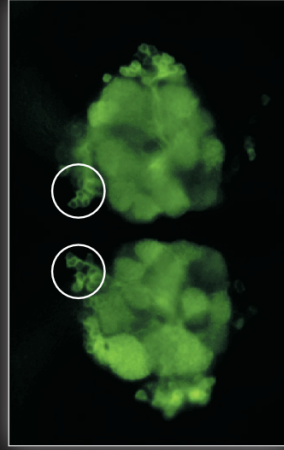
Adult *Drosophila*  
Pebble-Gal4 drive membrane-bound GFP expression in partial cells (with SMZ25)  
Image courtesy of Hideo Kacama, Ph.D. (Laboratory for Circuit Mechanisms of Sensory Perception RIKEN)



Higher NA in both eye paths coupled with a great zoom ratio provides seamless viewing on the macro and micro levels.

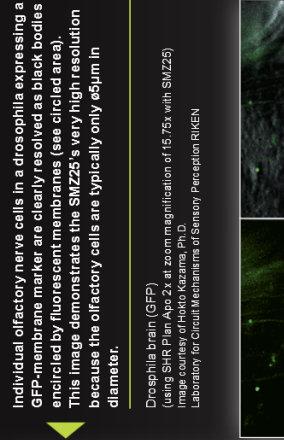
## Covers from macro observations to micro observations with one stereomicroscope

Nikon's SMZ25 and SMZ18 offer a great NA of 0.156 on the SHR Plan Apo 1x and 0.312 on the SHR Plan Apo 2x. Traditionally, researchers have had to switch to a higher magnification microscope to view microscopic details after using a stereo microscope to view or manipulate macroscopic structures. Nikon's SMZ25 and SMZ18 eliminate this need by providing both macroscopic and microscopic imaging capabilities. For example, the SHR Plan Apo 2x objective allows for visualization of structures as small as a few microns in size, which was once considered to be impossible on a stereo microscope. Achromatic correction is maintained in both the objective lens and the optical zoom system, virtually eliminating color aberrations.



A single motor neuron expressing clusters of GFP-glycine receptors (resolved as individual puncta along the cell body and processes) imaged in a live zebrafish

Zebrafish (GFP and OGC)  
(using SHR Plan Apo 2x at zoom magnification of 15.75x with SMZ25)  
Image courtesy of Joe Fatche, Ph.D., Cornell University



Individual olfactory nerve cells in a *Drosophila* expressing a GFP-membrane marker are clearly resolved as black bodies encircled by fluorescent membranes (see circled area). This image demonstrates the SMZ25's very high resolution because the olfactory cells are typically only  $\approx 5\mu\text{m}$  in diameter.

*Drosophila* brain (GFP)  
(using SHR Plan Apo 2x at zoom magnification of 15.75x with SMZ25)  
Image courtesy of Hideo Kacama, Ph.D. Laboratory for Circuit Mechanisms of Sensory Perception RIKEN

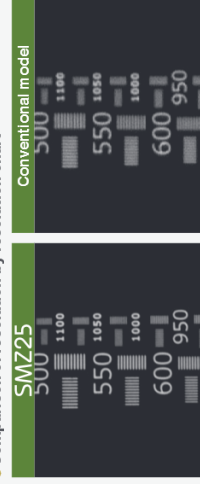
## Offers a very high zoom ratio thanks to Nikon's Perfect Zoom System **SMZ25**

The Perfect Zoom System dynamically changes the distance between the two optical axes as the zoom factor is changed. This change in optical axis distance enables maximization of light entry into the optical system at every magnification. The result is an uncompromised, large zoom range, high resolution in both eye paths, and minimal aberrations over the entire zoom-range. Furthermore, this optical design enables all of these desirable features to be housed in a compact zoom body, resulting in an ergonomic instrument design.

## High-performance objective lens **SMZ25** **SMZ18**

Nikon's objective lens series, the SHR Plan Apo series, offers a high resolution of 1100LP/mm (Observed value, using SHR Plan Apo 2x at maximum zoom). The SHR Plan Apo series of lenses delivers brilliant images with true-to-life colors.

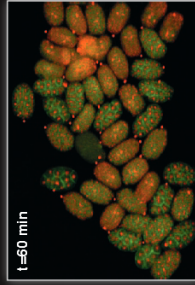
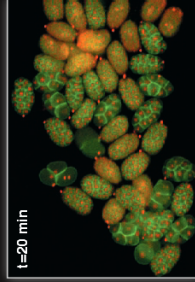
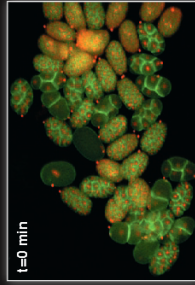
## Comparison of resolution by resolution chart



# Bright and high contrast fluorescent images

## Enhanced brightness and uniform illumination in low magnification range

Even at low magnification, the SMZ25 and SMZ18 capture the entire 35 mm dish with equal brightness over the whole field of view\*, making these new stereo microscopes appropriate for live screening of developmental models, such as *C. elegans*, *Drosophila*, zebrafish, and mice, to identify and select mutants. The SMZ25 and SMZ18 also allows brilliant images to be captured even with low excitation light levels, minimizing photo-bleaching and photo-toxicity which is harmful to live cells and organisms. \*When using the SHR Plan Apo 1x on the SMZ25

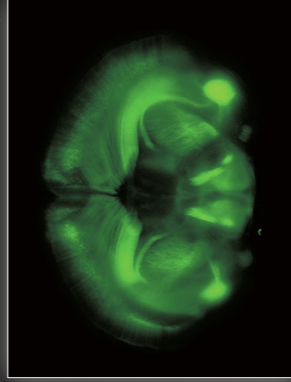


## Time-lapse imaging of developing *C. elegans* embryos expressing RFP, histones and GFP-membrane markers allows researchers to screen for cytokinesis mutants prior to selection for downstream applications

*C. elegans* embryos (GFP and RFP, each ovoid is  $\approx 30 \mu\text{m}$  in diameter) (using SHR Plan Apo 2x at zoom magnification of 8x with SMZ25)  
Image courtesy of Julie C. Carman, Ph.D., Columbia University.

## Mouse whole-brain slice (YFP)

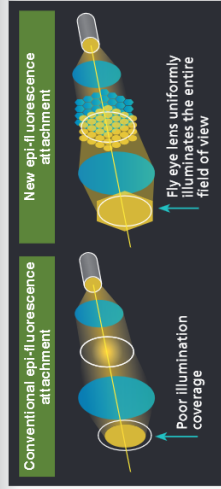
(Using SHR Plan Apo 1x at zoom magnification 0.63x with SMZ25)  
Image courtesy of Takesue, Iida, M.D., Ph.D. and Shiga, Otsuka, M.D., Ph.D., Department of Cellular Neurobiology, Graduate School of Medicine and Faculty of Medicine, the University of Tokyo



12.5 day old mouse embryo. Red: Nucleus (Using SHR Plan Apo 0.5x at zoom magnification 1.30x with SMZ18)  
Image courtesy of Kazuo Yamagata, Ph.D., Department of Cellular and Systemic Responses, Research Institute for Microbial Disease, Osaka University.

## Fly eye lens ensures uniform brightness over the entire field of view

The SMZ25 and SMZ18 use a fly eye lens on an epi-fluorescence attachment. This makes it possible to have uniform illumination out to the edge of the field of view. In particular, when using a low-magnification objective lens for viewing of a wide field, it is possible to get photographs that are evenly bright.



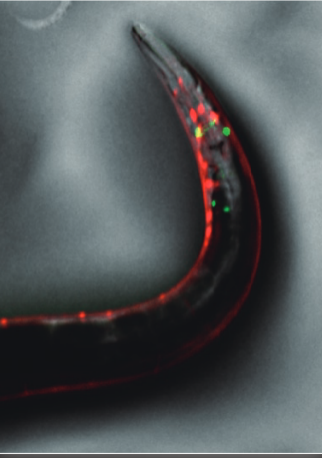
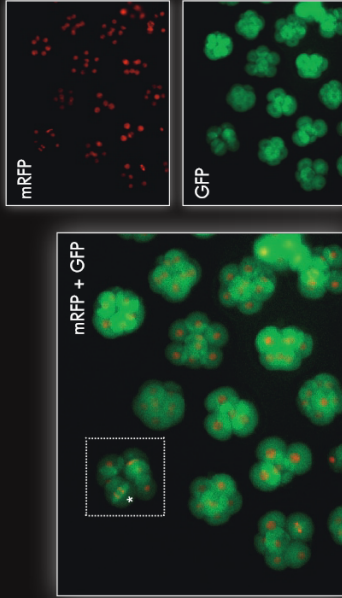
## Newly developed epi-fluorescence attachment for clear fluorescence imaging.

## Improved S/N ratio and crystal clear fluorescence imaging thanks to an improved optical system

Nikon's newly developed optical system offers improvement in S/N ratio even at high magnifications. This improved S/N ratio makes it possible to capture cell division, which is difficult using conventional stereo microscopes, and samples with low excitation light.

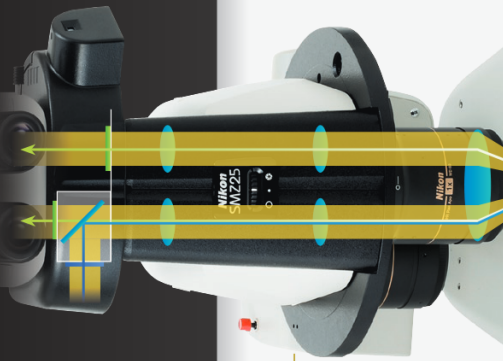
The spindle (which is marked with a \* in the white square) appearing in cell division can be observed.

Fertilized mouse egg. Green: Spindle (EGFP- $\alpha$ tubulin), Red: Nucleus (Histone H2B-mRFP1)  
(Using SHR Plan Apo 1x at zoom magnification of 13.5x with SMZ25)  
Image courtesy of Kazuo Yamagata, Ph.D., Center for Genetic Analysis of Biological Processes, Graduate School of Science for Global Education, Osaka University



## Single fluorescent neurons can be visualized in live *C. elegans*

Fluorescence and DIC images of a live *C. elegans* expressing GFP- and RFP-neurons (Using SHR Plan Apo 2x at zoom magnification of 3x with SMZ25)  
Image courtesy of Julie C. Carman, Ph.D., Columbia University



## A zoom body appropriate for observations with fluorescent lighting

Nikon has succeeded in improving the signal and reducing noise in fluorescence imaging by using a short wavelength, high transmission lens. Combined with an innovative epi-fluorescence attachment, the SMZ25 and SMZ18 are better able to detect excitation light than conventional fluorescent stereo microscopes.



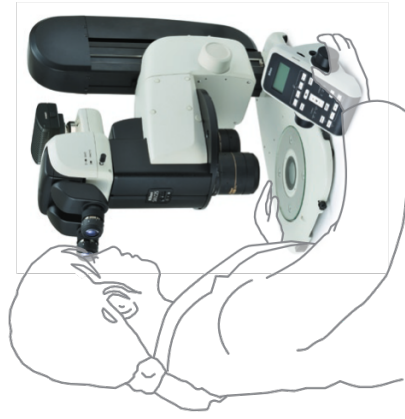
# Automation and digital imaging

A wide range of digital imaging capabilities with the Digital Sight series and NIS-Elements imaging software.

## User-friendly remote controller **SMZ25**

The remote controller provides easy access to zoom and focus controls and is designed for both right and left hand use. The remote controller contains an LCD monitor with an adjustable backlight which provides information regarding the zoom factor, objective lens, filter cube, and LED DIA brightness at a glance. The backlight on the LCD monitor can also be turned off to eliminate interference with low-light imaging applications. In addition to the remote controller, the microscope can also be operated through a PC.

The brightness of the LCD monitor backlight and LED indicators is adjustable



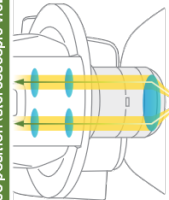
## Access the information you want quickly and easily **SMZ25** **SMZ18**

Easily obtain the information you need, such as Z drive position, zoom factor, objective lens, filter cube, and LED DIA brightness by using the Digital Sight series and NIS-Elements together with the microscope.

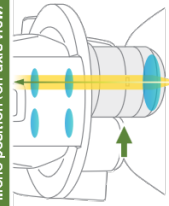
## On-axis imaging for digital images

Easily switch between stereo position (stereoscopic view) and mono position (on-axis view) when using the P2-RN12 Intelligent Nosepiece by simply sliding the objective lens. Digital images with great clarity can be captured using the mono position.

Stereo position (stereoscopic view)



Mono position (on-axis view)



Switch from a stereo position to mono position by sliding the objective lens to the right

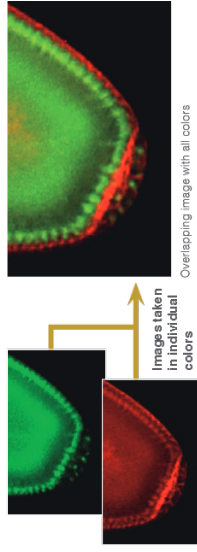
## Imaging Software **NIS-Elements**

One software for all systems: NIS-Elements, which is Nikon's flagship cross-platform imaging software, can be used with Nikon's stereomicroscope systems, SMZ25 and SMZ18. With NIS-Elements, a wide range of advanced digital imaging capabilities are easily accessible from a PC.

### Multichannel (multicolor)

Multiple fluorescent channels can be captured in conjunction with other imaging methods, such as OCC or brightfield.

Individual cells resolved in a live drosophila embryo expressing GFP and mCherry (Using SHH Plan Apo 2x at zoom magnification of 8x with SMZ25) Image courtesy of Max V. Staller, Ph.D., Christina Scholes, and Angela DeFoe, Ph.D., Harvard Medical School

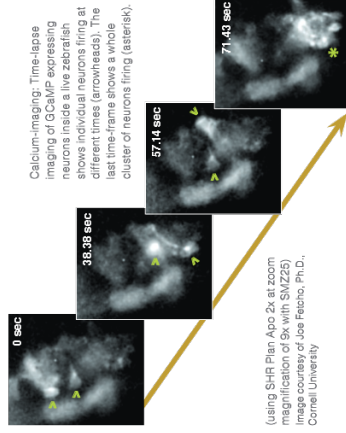


Images taken in individual colors

Overlapping image with all colors

### Time lapse

Easily setup a time-lapse imaging experiment with NIS-Elements.

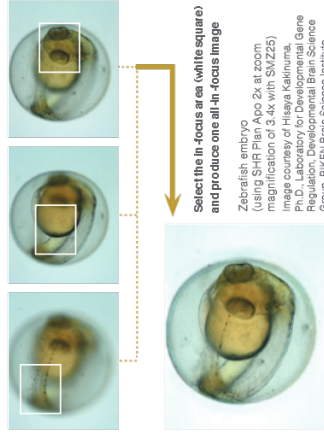


Calcium-imaging: Time-lapse imaging of GCaMP expressing neurons inside a live zebrafish shows individual neurons firing at different times (arrowheads). The last time-frame shows a whole cluster of neurons firing (asterisk).

(Using SHH Plan Apo 2x at zoom magnification of 8x with SMZ25) Image courtesy of Joe Febrho, Ph.D., Cornell University

### Extended depth of focus (EDF)

Capture multiple high resolution images at different focal depths to create a single extended depth of focus image or quasi-3D image.



Select the in-focus area (white square) and produce one all-in-focus image

Zebrafish embryo (Using SHH Plan Apo 2x at zoom magnification of 8x with SMZ25) Image courtesy of Hisae Kakimoto, Ph.D., Laboratory for Developmental Gene Regulation, Developmental Brain Science Group, RIKEN Brain Science Institute

## Imaging software **NIS-Elements**

Advanced Software for your Imaging World

for a tablet PC

L

Simply installing NIS-Elements L on a tablet PC enables setting and control of DS-F18/Digital Sight 10 microscope cameras, live image display, and image acquisition.

\*For information about compatible tablet PCs, contact Nikon.



## Select the perfect camera for your application.

Microscope Camera **Digital Sight 10**

- High-resolution 23.9 megapixels
- Switch between color and monochrome photography
- High-speed live display

23.9-megapixel Color/Monochrome High-resolution



Monochrome Microscope Camera **Digital Sight 50M**

- High-resolution 60.0 megapixels
- High sensitivity and low noise
- High quantitative capacity
- High-Speed imaging

60.0-megapixel Monochrome Coated



Microscope Camera **DS-F13**

- High-resolution 5.9 megapixels
- High sensitivity, low noise
- High-speed live display
- Superior color reproduction

5.9-megapixel Color High-resolution



## Wide range of available accessories

### Base unit

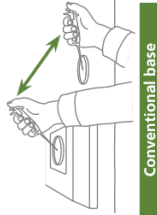
Nikon has improved ease of use by moving the controls to the front of the base, including the brightness adjustment dial and on/off switch.

#### Fiber DIA base

The Fiber DIA base features condenser lenses that can be switched between low and high magnifications. Furthermore, the Oblique Coherent Contrast (OCC) illumination system allows high contrast illumination.



1 P2-DBF Fiber Diascopic Illumination Base  
2 P2-DBL LED Diascopic Illumination Base  
3 P2-PB Plain Base



Conventional base

Slim base

### Example applications

#### OCC illuminator

The new LED DIA Base with a built-in OCC illuminator generates minimal heat, consumes little power and is long-life. This illuminator can enhance the contrast of uneven surfaces, such as that of an embryo.

#### Conventional diascopic illumination



#### What is OCC illumination?

The screen OCC stands for oblique coherent contrast (OCC), which is an oblique lighting method developed by Nikon. Compared to conventional diascopic illumination that illuminates directly from below, OCC illumination applies coherent light to samples in a diagonal direction, giving contrast to colorless and transparent sample structures.



#### Thermo plate warmer ThermoPlate TPI

(Manufacturer: Tokai Hit Co., Ltd.)

The flat plate surface ensures easy operation of the manipulator and easy handling of specimens.



Zebrafish embryo (using SHR Plan Apo 1x at zoom magnification of 5x with SMZ18)  
Image courtesy of Junichi Nakai, Ph.D., Shimizu University Brain Science Institute

### Focus unit

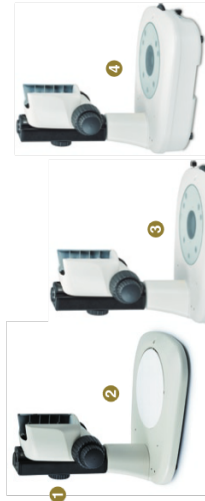
The focus unit is combined with the base unit. Choose from either a manual or motorized focus unit.



1 P2-MFU Motorized Focus Unit  
2 P2-FU Focus Unit

### Stand / Focus mount

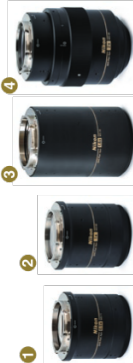
The SMZ18 can be mounted on various compact stands using a focus mount.



1 P2-FMDN Focus Mount  
2 P-PS32 Plain Stand  
3 P-DSL32 LED Diascopic Illumination Stand  
4 P-DSF32 Fiber Diascopic Illumination Stand

### SHR Plan Apo series of objective lenses

The SHR Plan Apo series features higher NA, wider field of view, and superior flatness and color aberration correction. These objective lenses can be easily switched because all magnifications have the same parfocal distance. The bayonet mount allows lenses to be safely and easily removed.



1 P2-SHR Plan Apo 0.5x  
2 P2-SHR Plan Apo 1.6x  
3 P2-SHR Plan Apo 1x  
4 P2-SHR Plan Apo 2x

	SHR Plan Apo 0.5x	SHR Plan Apo 1x	SHR Plan Apo 1.6x	SHR Plan Apo 2x
Maximum NA	0.078	0.156	0.25	0.321
Working distance	0.075	0.15	0.24	0.3
Correction ring	71 mm	60 mm	30 mm	20 mm
Wavelength	380-700 nm			
	3 mm water depth			

### Tubes

Choose from two types of tilting trinocular tube and one type of low eyepiece trinocular tube. All tubes have a camera port for seamless integration with the Digital Sight series.



1 P2-TERG100 Trinocular Tilting Tube (eyepiece port: 100.0/0.100)  
2 P2-TERG50 Trinocular Tilting Tube (eyepiece port: 100.0/50.50)  
3 P2-TL100 Trinocular Tube L (eyepiece port: 100.0/0.100)

### Nosepiece / Focus mount adapter

Choose from either a single or double nosepiece to expand research by changing the magnification range.

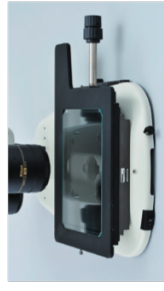


1 P2-RN12 Intelligent Nosepiece  
2 P2-FM Focus Mount Adapter

### Stage

The stage features an XY stroke of 6x4\* inches (150 mm x 100 mm) and can be attached to any of the bases, making it effective for capturing large images when used in combination with the imaging software NIS-Elements. A sliding stage and tilting stage are also available.

\*Limited Y travel with 32 mm column bases



P-SXY6x XY Stage

### Remote Controller

In addition to microscope operations such as vertical focusing, zooming, switching the fluorescent filter cube, and adjusting the light intensity of the transmitted light LED illumination, the Digital Sight series microscope digital camera's photographic operations can also be easily operated by hand while looking through the eyepiece.



P2-RC Remote Controller



Wide range of available accessories

Epi-fluorescence set

**Motorized epi-fluorescence set**  
The fluorescent turret can be operated using the remote control or imaging software NIS-Elements.



- 1 P2-EFLM2 Motorized Epi Fluorescence Attachment
- 2 Light shading Plate (comes with Fluorescence Attachment)
- 3 P2-EFL Filler Cube (GFP-B/GFP-L/RFP)
- 4 P2-EFLBF Filler Cube (Bright Field, with 1/4 plate)
- 5 P2-CTL Remote Controller

Combinations with SMZ25

**Manual epi-fluorescence set**  
An easy-to-use manual model for Nikon's high-performance epi-fluorescence attachment.



- 1 P2-EFLI2 Epi Fluorescence Attachment
- 2 Light shading Plate (comes with Fluorescence Attachment)
- 3 P2-EFL Filler Cube (GFP-B/GFP-L/RFP)
- 4 P2-EFLBF Filler Cube (Bright Field, with 1/4 plate)
- 5 P2-CTLB Control Box

Combinations with SMZ18

Fiber illuminator sets

**Flexible double arm fiber illumination set**

The direction and angle of illumination can be changed to suit the sample by making adjustments with these double arms. The fiber holder position can also be changed to obtain the optimal position for illuminating samples.



- 1 C-DF Flexible Double Arm Fiber Illumination Unit
- 2 C-FIH Fiber Holder
- 3 C-FLED2 LED Light Source for Fiber Illuminator

In combination with the SMZ25

**Ring fiber illumination set**

This ring fiber illumination set features an episcopic illumination unit that effectively captures images (can be used with 1x and 0.5x objective lenses).



- 1 P2-FR Ring Fiber Illumination Unit
- 2 C-FLED2 LED Light Source for Fiber Illuminator

In combination with the SMZ25

**Coaxial illuminator**

The coaxial light illuminator makes it possible to view light reflected from the surface of a sample, which is ideal for shooting shadowless images of thick samples.



- 1 P2-CI Coaxial Epi Illuminator
- 2 C-FLED2 LED Light Source for Fiber Illuminator

In combination with the SMZ18

**Ring LED illuminator**

The ring LED illuminator is equipped with high-intensity and long-life LEDs. The illuminator's dial adjusts the intensity of the white LED.

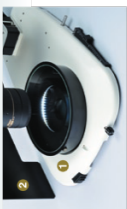


- 1 P2-FRL2 LED Ring Illumination Unit

In combination with the SMZ18

**Darkfield observation accessory**

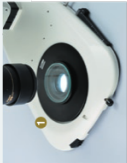
Darkfield viewing is possible simply by attaching the dark field unit to the base.



- 1 P-DF LED Dark Field Unit
- 2 Shading cover

**Polarizing observation accessory**

The analyzer is attached to the objective and the polarizer to the base or stand to enable polarized viewing.



- 1 P2-POL Simple Polarizing Attachment

Specifications

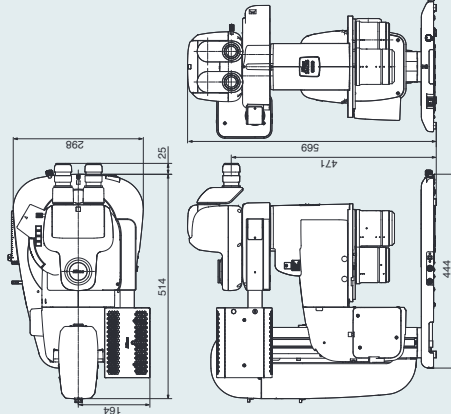
	SMZ25	SMZ18
<b>Zooming Body</b>		
Optical system	Parallel-optics type (zooming type)	apochromatic optical system
Zoom	Motorized	Manual
Zoom ratio	25:1	18:1
Zoom range	0.63-15.75X	0.75-13.5X
Aperture diaphragm	Zooming body built-in	Zooming body built-in
Objectives (NA, WD (mm))		
• P2-SHR Plan Apo 2X	0.32, 20 (with a correction ring for water 0 to 3 mm in depth)	0.3, 20 (with a correction ring for water 0 to 3 mm in depth)
• P2-SHR Plan Apo 1.6X	0.25, 30	0.24, 30
• P2-SHR Plan Apo 1X	0.156, 60	0.15, 60
• P2-SHR Plan Apo 0.5X	0.078, 71	0.075, 71
Total Magnification (Using 10X eyepieces)	3.15-315X	3.75-270X
Eyepieces (F.O.V. mm)	(Depending on objective used)	(Depending on objective used)
Tubes (Eyepiece/Port)	• C-W 10XB (22) • C-W 15X (16) • C-W 20X (12.5) • C-W 30X (7)	• P2-TERG 100 Trinocular Tilting tube (100/0 : 0/100) • P2-TERG 50 Trinocular Tilting tube (100/0 : 50/50)
Focus Unit (Stroke from Objective's parafocal point)	• P2-TL100 Trinocular Tube L (100/0 : 0/100) Inclination angle : 10 degree	• P2-MFU Motorized Focus Unit (Up 96 mm/Down 4 mm)
Focus mount Adapter/Nosepiece	• P2-FU Focus Unit (Up 97 mm/Down 5 mm)	• P2-FM Motorized Focus Unit (Up 96 mm/Down 4 mm)
Bases/Stand	• P2-FM Focus Mount Adapter (2 objectives can be attached)	• P2-FM Focus Mount Adapter (2 objectives can be attached)
Stages	• P2-FM Focus Mount Adapter (2 objectives can be attached)	• P2-FM Focus Mount Adapter (2 objectives can be attached)
Epi-Fluorescence Attachments	• P2-PB Plain Base • P2-DBL LED Diascopic Illumination Base (OCC Illuminator built-in)	• P2-PB Plain Base • P2-DBL LED Diascopic Illumination Base (OCC Illuminator built-in)
Episcopic Illuminators	• P2-DBF Fiber Diascopic Illumination Base • P-DSL32 Diascopic Illumination Stand* • P-SXY64 Stage • C-SSL Dia-sliding Stage • C-TRS Tilting Stage	• P2-DBF Fiber Diascopic Illumination Base • P-DSL32 Diascopic Illumination Stand* • P-SXY64 Stage • C-SSL Dia-sliding Stage • C-TRS Tilting Stage
Episcopic light sources	4 filter cubes mountable. Fly eye lens built-in	4 filter cubes mountable. Fly eye lens built-in
Observation methods	• P2-EFLM2 Motorized Epi Fluorescence Attachment • P2-FRL2 LED Ring Illumination Unit	• P2-EFLM2 Motorized Epi Fluorescence Attachment • P2-EFLI2 Epi Fluorescence Attachment
Weight (approx.)	Use with Fiber light source	Use with Fiber light source
Power consumption (approx.)	• P2-CI Coaxial Epi Illuminator • P2-FIR Ring Fiber Illumination Unit	• P2-CI Coaxial Epi Illuminator • P2-FIR Ring Fiber Illumination Unit
	• C-DF Flexible Double Arm Fiber Illumination Unit	• C-DF Flexible Double Arm Fiber Illumination Unit
	• C-FLED2 LED Light source for fiber illuminator	• C-FLED2 LED Light source for fiber illuminator
	Bright Field, Epi Fluorescence, Simple Polarizing (with P2-POL Simple Polarizing Attachment), Dark Field (with P-DF LED Dark Field Unit), Oblique lighting	Bright Field, Epi Fluorescence, Simple Polarizing (with P2-POL Simple Polarizing Attachment), Dark Field (with P-DF LED Dark Field Unit), Oblique lighting
	30 kg (Motorized Epi Fluorescence Attachment configuration with Trinocular Tilting Tube, Motorized Focus Unit, Intelligent Nosepiece, LED DIA base and Objectives 1X and 0.5X)	30 kg (Epi Fluorescence Attachment configuration with Trinocular Tilting Tube, Focus Unit, Intelligent Nosepiece, LED DIA base and Objectives 1X and 0.5X)
	30 W (Motorized Epi Fluorescence Attachment configuration with Trinocular Tilting Tube, Motorized Focus Unit, Intelligent Nosepiece and LED DIA base)	10 W (Epi Fluorescence Attachment configuration with Trinocular Tilting Tube, Focus Unit, Intelligent Nosepiece and LED DIA base)

\*Compatible with SMZ18 only

Dimensions

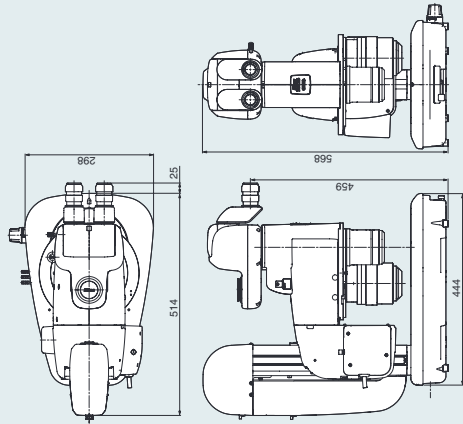
SMZ25

(configured with motorized epi-fluorescence attachment and LEDD/Abase)



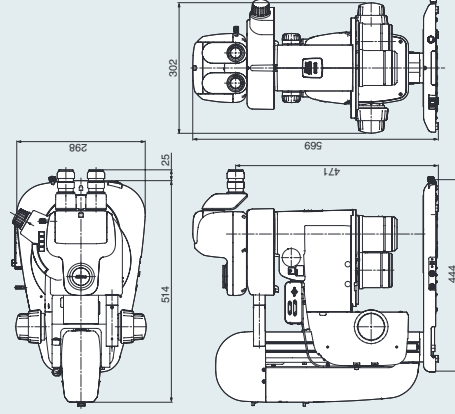
SMZ25

(configured with fiber DiAbase)



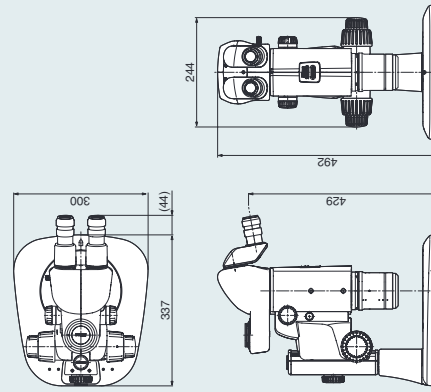
SMZ18

(configured with epi-fluorescence attachment and LEDD/Abase)

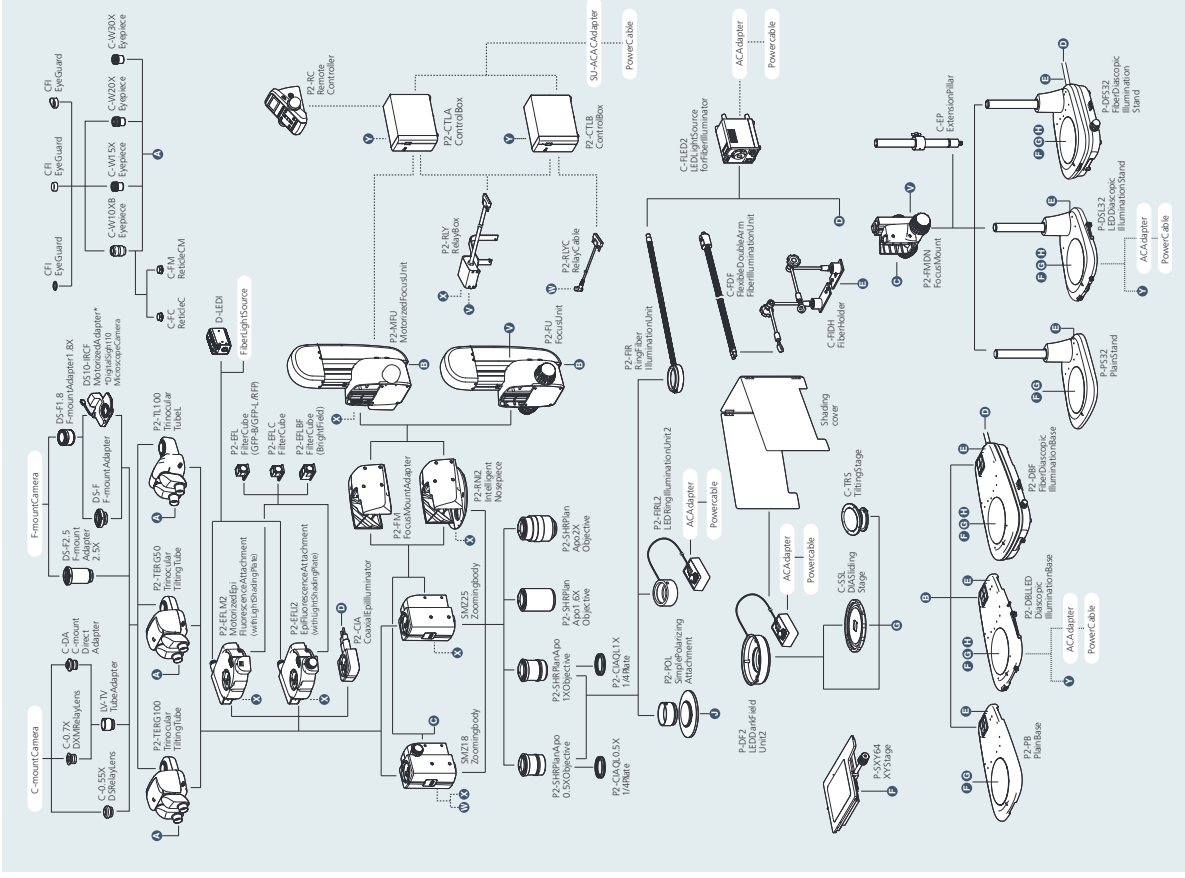


SMZ18

(configured with plain stand and of focus mount)



System diagram





Note: the information listed for researchers who provided sample photographs is for when the photographs were first provided.

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. October 2024 © 2013-2024 NIKON CORPORATION  
N.B. Export of the products \* in this brochure is controlled under the Japanese Foreign Exchange and Foreign Trade Law. Appropriate export procedures shall be required in case of export from Japan.  
\* Products: Hardware and its technical information (including software)



**WARNING**

TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING THE EQUIPMENT.



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