

Parallel-optics type

Stereo Microscope

SMZ1270/1270i SMZ800N



Incredible sharpness throughout a wide magnification range

These versatile stereo microscopes provide both excellent optical performance, such as high-magnification, high-zoom ratio and high-resolution images, and advanced operability. The expandability of parallel optics makes these models suitable for a wide range of applications.

Highest-in-class zoom ratio

- Highest-in-class zoom ratio of 12.7:1 (0.63 – 8x) with SMZ1270/1270i
- New WF series objectives optimized for wide viewfield observation at low magnification

High-quality images

- High-level chromatic aberration correction provides sharp images throughout the viewfield.

Easy to get results

- Automatically detects magnification data in combination with the digital camera control unit (SMZ1270i only)
- Nosepiece offers both widened magnification range and on-axis imaging
- Eyepiece tubes with various inclination angles and slim-type stands minimize user fatigue during observation

Expandable with a wide range of accessories

- A wide range of accessories are available, including eyepiece tubes and stands that are equal to superior specification stereo microscope models



SMZ1270

Versatile stereo microscope with the highest-in-class zoom ratio



SMZ1270i

The same as the SMZ1270 but equipped with intelligent functions found in superior models (SMZ1270i with a trinocular tilting tube and nosepiece)



SMZ800N

Affordable model with improved operability and basic performance

Highest-in-class zoom ratio

Wide zoom range

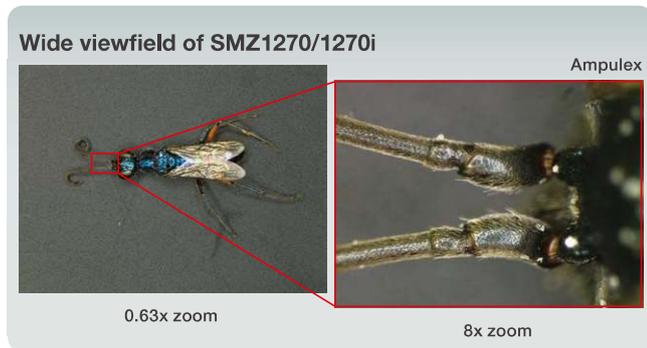
The SMZ1270/1270i offers the highest-in-class zoom ratio of 12.7x (0.63 – 8x). It offers both low-magnification wide viewfield observation of the whole of a 35 mm petri dish* during screening and high-magnification observation of minute cell structures

* with 1x objective at the lowest magnification.

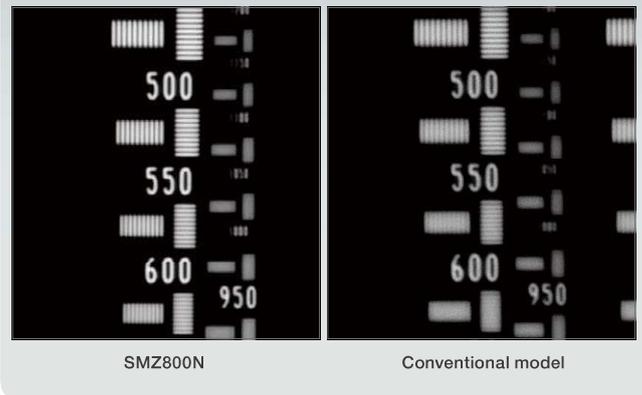


SMZ1270/1270i enables observation of the whole of a 35 mm petri dish.

The SMZ800N comes with a 1 – 8x zoom range, with higher magnification than conventional models and enables high-resolution observation of 640LP/mm (using ED Plan Apo 2x/WF at maximum zoom).



Improved resolution of SMZ800N



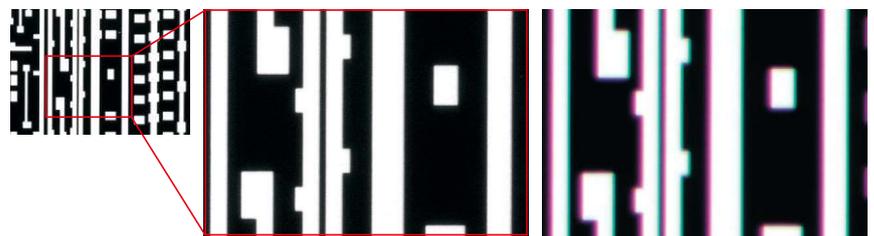
Wide field objectives

The WF series objectives offer uniformly bright images even at low magnification and wide viewfield observation with SMZ1270/1270i. In addition, a 0.75x objective is now available, expanding the lineup of low magnification objectives.



High-quality images

Apochromat optics have been adopted for the lenses in the SMZ1270/1270i zoom body and semi-apochromat optics in the SMZ800N to achieve high-level chromatic aberration correction. They provide sharp images without blur or color fringe.



Apochromat optics
(captured with SMZ1270+Plan Apo 1x/WF)

Conventional optics

Easy to get results

Intelligent function for status readout **SMZ1270i**

In combination with the imaging software NIS-Elements, the SMZ1270i can detect zoom magnification data. In addition, with the Intelligent Nosepiece P-RNI2 attached, data related to the objective in use is also detected. Calibration data is automatically altered, following changes of magnification, to display the appropriate scale and measurement results on the images.



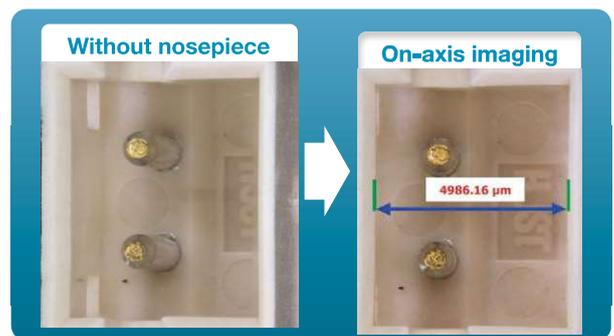
Note: With NIS-Elements L and F, functions above are not available. Use NIS-Elements D/Br/Ar.

- Detection of zoom magnification and objective information
- Calibration auto change



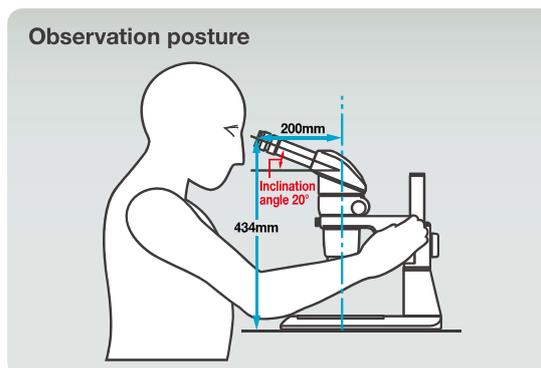
On-axis observation with the nosepiece

The double nosepiece offers easy on-axis imaging, enabling observation of the bottom of holes, accurate simple measurement and extended depth of focus (EDF) imaging without distortion.



Ergonomic design

Eyepiece tubes with a range of inclination angles are available for comfortable observation. They offer the optimum eyelevel to suit each user. In addition, slim-type plain stands and the LED Diascopic Illumination Stand easily facilitate the presentation and removal of specimens.



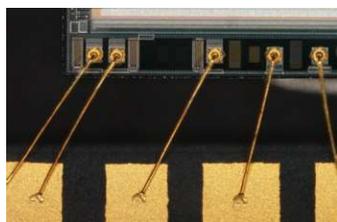
With the LED Diascopic Illumination Stand and Fiber Diascopic Illumination Stand, focus control during observation is possible using the dial in front of the base.

Expandable with a wide range of accessories

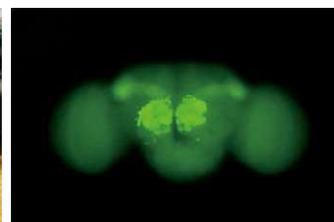
In addition to conventional accessories, the level of accessories used with superior models is also available for the SMZ1270/1270i and SMZ800N. These include trinocular tubes and slim-type LED diascopic illumination stands. These allow various microscope configurations to suit numerous routine inspections and a range of research and development applications.



Fibers



Semiconductor



Brain of adult drosophila excited with GFP
Image courtesy of Hokto Kazama, Ph.D., Circuit Mechanisms of Sensory Perception, Brain Science Institute, RIKEN

OCC illumination



Diascopic brightfield illumination



OCC illumination boosts the contrast of transparent sample structures.
Hemicentrotus pulcherrimus in two-cell stage



With the LED Diascopic Illumination Stand and Fiber Diascopic Illumination Stand, image contrast under OCC illumination can be easily adjusted.

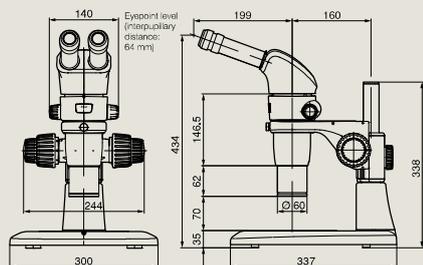
	SMZ1270	SMZ1270i	SMZ800N
Optical system	Parallel-optics type (zooming type)		
Zoom ratio	12.7 : 1		8 : 1
Zoom range	0.63 – 8x (0.63/1/2/3/4/6/8x stops)		1 – 8x (1/2/3/4/6/8x stops)
Total magnification	3.15 – 480x (depending on eyepiece and objectives) (with coaxial episcopic illuminator: 15 – 540x)		5 – 480x (depending on eyepiece and objectives) (coaxial episcopic illuminator: 22.5 – 540x)
Tubes	Eyepiece inclination: 20° (P-B Binocular Tube) / 0°-30° (P-TERG100 Trinocular Tilting Tube, P-TERG50 Trinocular Tilting Tube), P-T100 Trinocular Tube		
Eyepieces	C-W10x/B (F.N. 22), C-W15x (F.N. 16), C-W20x (F.N. 12.5), C-W30x (F.N. 7)		
Objectives	Plan Apo 0.5x/WF, Plan Apo 0.75x/WF, Plan Apo 1x/WF, ED Plan 1.5x/WF, ED Plan 2x/WF		Plan Apo 0.5x/WF, Plan Apo 0.75x/WF, Plan Apo 1x/WF, ED Plan 1.5x/WF, ED Plan 2x/WF, Plan 1x, ED Plan 0.75x, Achrom 0.5x
Working distance	70 mm (with Plan Apo 1x/WF)		78mm (with Plan 1x)
Weight (approx.)	9.8 kg (with P-B Binocular Tube + P-DSL32 LED Diascopic Illumination Stand)	11.9 kg (with P-TERG100 Trinocular Tilting Tube + P-DSL32 LED Diascopic Illumination Stand)	6.8 kg (with P-B Binocular Tube + C-PSN Plain Stand)

Please refer to the system diagram (P. 26-27) for accessory combinations.

Dimensions

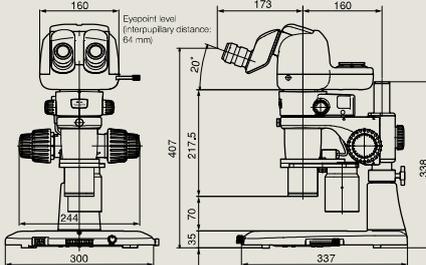
SMZ1270 set

SMZ1270 + P-B Binocular Tube +
Plan Apo 1x/WF + P-PS32 Plain Stand



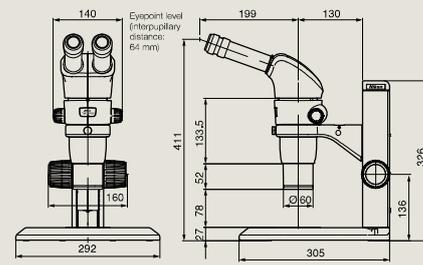
SMZ1270i set

SMZ1270i + P-TERG100 Trinocular Tilting Tube +
Plan Apo 1x/WF + Intelligent Nosepiece P-RN12 +
P-DSL32 LED Diascopic Illumination Stand



SMZ800N set

SMZ800N + P-B Binocular Tube +
C-PSN Plain Stand



Unit: mm