

Nikon

Stereoscopic Zoom Microscopes

SMZ645
SMZ660



A new standard in stereo

The **SMZ645** and **600** dramatically improve optical performance and ha



stereoscopic zoom microscopes.

providing comfort, while continuing the tradition of Nikon microscopes.

At Nikon, a world leader and pioneer in optical instruments, we are proud of our never-ending refusal to compromise and our commitment to providing the very best in optical performance.



At the *same* time, we realize that our technologies and philosophy mean nothing if we fail to create products designed with the customer in mind. No matter how superior the technology used in a given product may be, that product has no real value unless it serves the needs of the customer. That is why we design our products *only* after careful, painstaking market research, and use the most advanced Nikon technologies to fulfill the needs of the marketplace.

Nikon's new SMZ645 and 660 microscopes were developed specially to meet the needs of customers who demand more advanced features and higher performance at lower prices. For these reasons, we believe the



SMZ645 and 660 will become the new standard for stereoscopic zoom microscopes in the 21st century.

A natural design that lets you concentrate on

Ergonomic design for effortless observations



Eyepiece with a built-in diopter adjuster

The eyepiece was designed especially for the SMZ645/660 and comes equipped with built-in diopter correction. This brings the image and the reticle into focus at the same time, making it easier to view images, while reducing eye strain.



Streamlined base allows operation without removing your hands from the microscope

The plain stand features a trim design that makes handling samples much easier. Moreover, the base has a wide front and smooth curves, allowing operators to work while resting their arms in a natural position. The diascope stand also has the same armrest design.

New ergonomic auxiliary objectives for correct eye-level positioning

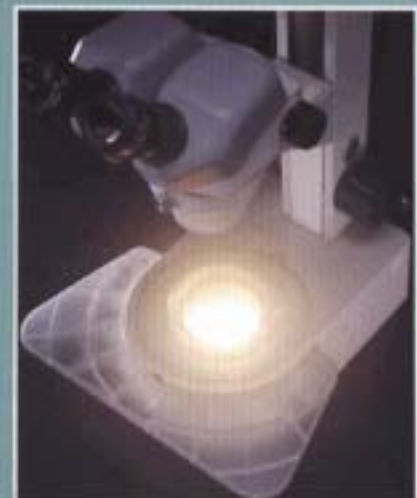
Nikon has also developed new AL ERG ergonomic auxiliary objectives that can be freely adjustable to match the operator's eye level for comfortable viewing.

Low-position focus knob for quick, effortless focusing

The focus knob is located within easy reach of the operator, eliminating the need to twist your shoulders to use it.

Diascopic stand with large-diameter stage glass

The diameter of the stage glass in the diascope stand has been widened to make it possible to view samples even in large Petri dishes.



observation, not on operating the microscope

High magnifications and long working-distances



Easy-to-use 6.3X ratio offers magnifications from 0.8X to 5X

By using twin zooming objective optics developed exclusively by Nikon, the SMZ645 and 660 incorporate a convenient 6.3X zoom *ath*, enabling observations at just the right magnification to match the sample. The zooming knob also features click-stops which changes in magnification in 1X

intervals from 1X to 4X without removing your eye from the eyepiece. And since it is easy to maintain the same magnification, efficiency is ensured, whether you are using the microscope by yourself or sharing it in a laboratory situation.

A long working distance of 115mm (4.5)

Even though the SMZ645 and 660 offer extremely high magnifications, they still provide the longest working distances of any microscopes in their class. This allows you to process and manipulate samples with ease, even while performing delicate or complex tasks.



New three "A" design



Airtight.

This prevents contamination from dust, oil, and water

By making the joints airtight, Nikon has succeeded in preventing contamination from dust, oil, drops of water, or other contaminants. This reduces the need to perform regular maintenance, saving overall costs.

Anti-mold.

These microscopes can be used in hot, humid environments

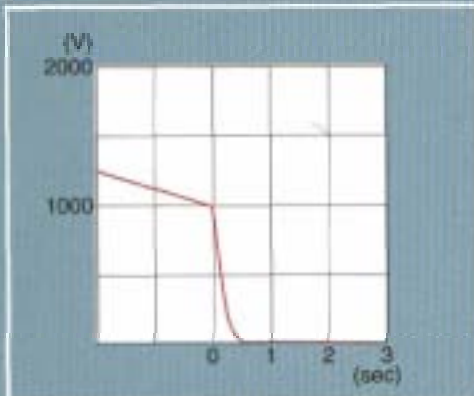
In addition to being airtight, the SMZ645 and 660 have an anti-mold design developed exclusively by Nikon. This ensures peace of mind when these microscopes are used in environments subject to high heat or humidity.

Anti-electrostatic.

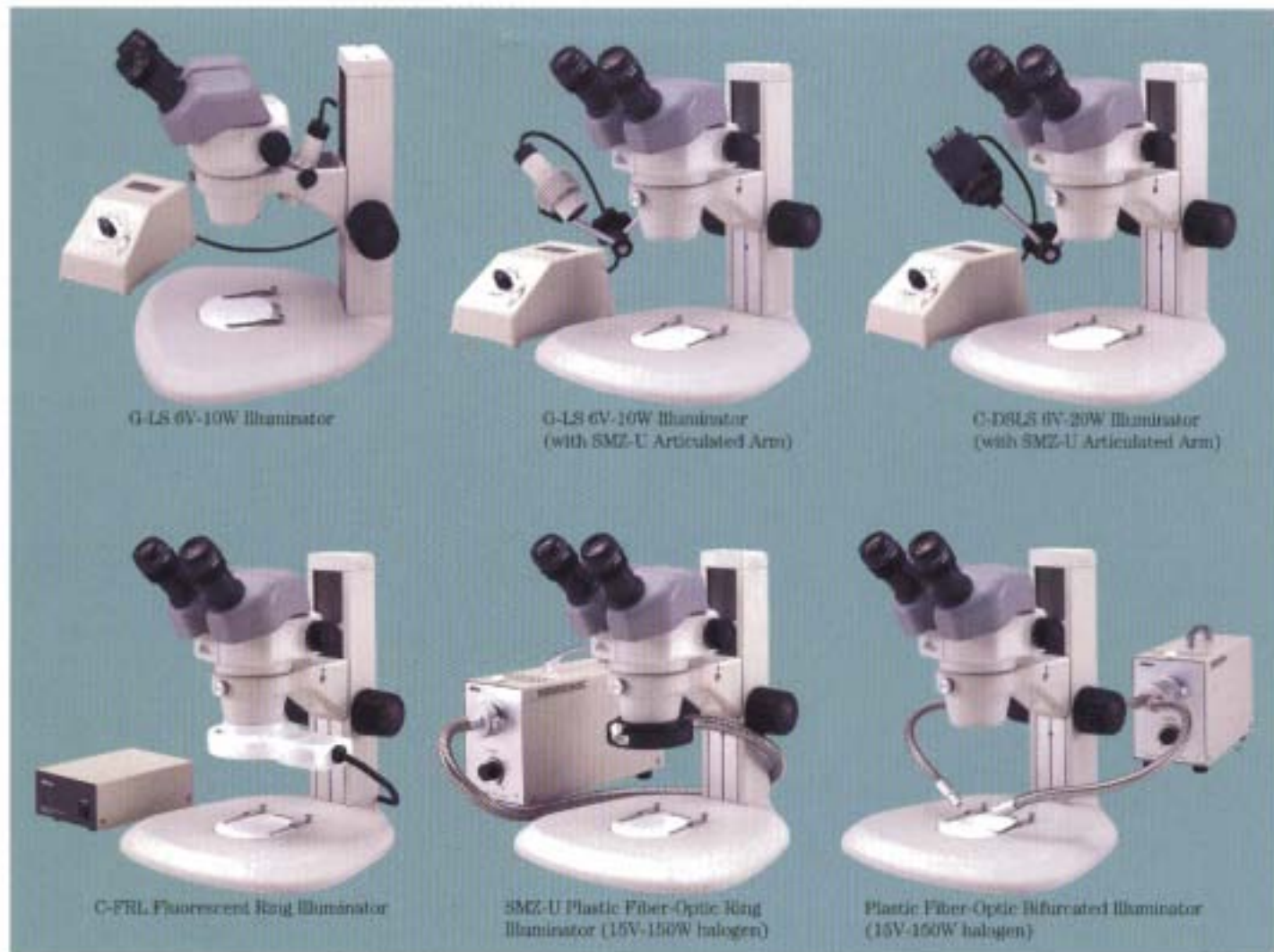
For higher yields

The SMZ645 and 660 are designed to discharge static electricity buildup within the microscope almost instantly. This prevents samples from becoming damaged, ensuring higher yields and lowering production costs for your products.

An optional ESD stage plate is also available for greater anti-electrostatic effects.



Accessories



Illumination systems

- G-LS 6V-10W Illuminator
- G-LS 6V-10W Illuminator (with G-EIA Articulated Supporting Arm or SMZ-U Articulated Arm)
- C-DLS 6V-20W Illuminator (with G-EIA Articulated Supporting Arm or SMZ-U Articulated Arm)
- C-FRL Fluorescent Ring Illuminator
- SMZ-U Plastic Fiber-Optic Ring Illuminator (15V-150W halogen)
- Plastic Fiber-Optic Bifurcated Illuminator (15V-150W halogen)

Stands

In addition to the new C-PS Plain Focusing Stand and the C-DS Diascopic Stand 8, the SMZ-U Plain Stand D2, SMZ-U Diascopic Stand 2, SMZ-U Bright/Darkfield Stand 2, SMZ-U Large Stage Stand, Universal Table Stand US-3, C-US1 Universal Table Stand 1, and the C-US2 Universal Table Stand 2 can all be used with these microscopes.

C-PS Plain Focusing Stand



C-D8 Diascopic Stand 8

Focusing mount

In addition to the new C-FMA/B (for universal stands) used to install the zooming body, the SMZ-10A focusing mount for SMZ-U stands can be used with these microscopes. The SMZ-10A focusing mount can accommodate a large-sized stage.

Auxiliary objectives

Nikon has added new ergonomic auxiliary objectives that can be adjusted to your eye level as well as 0.5X, 0.7X, 1.5X, and 2X auxiliary objectives to its lineup. These new objectives boast long working distances to improve work efficiency.



Ergonomic auxiliary objective "AL ERG"

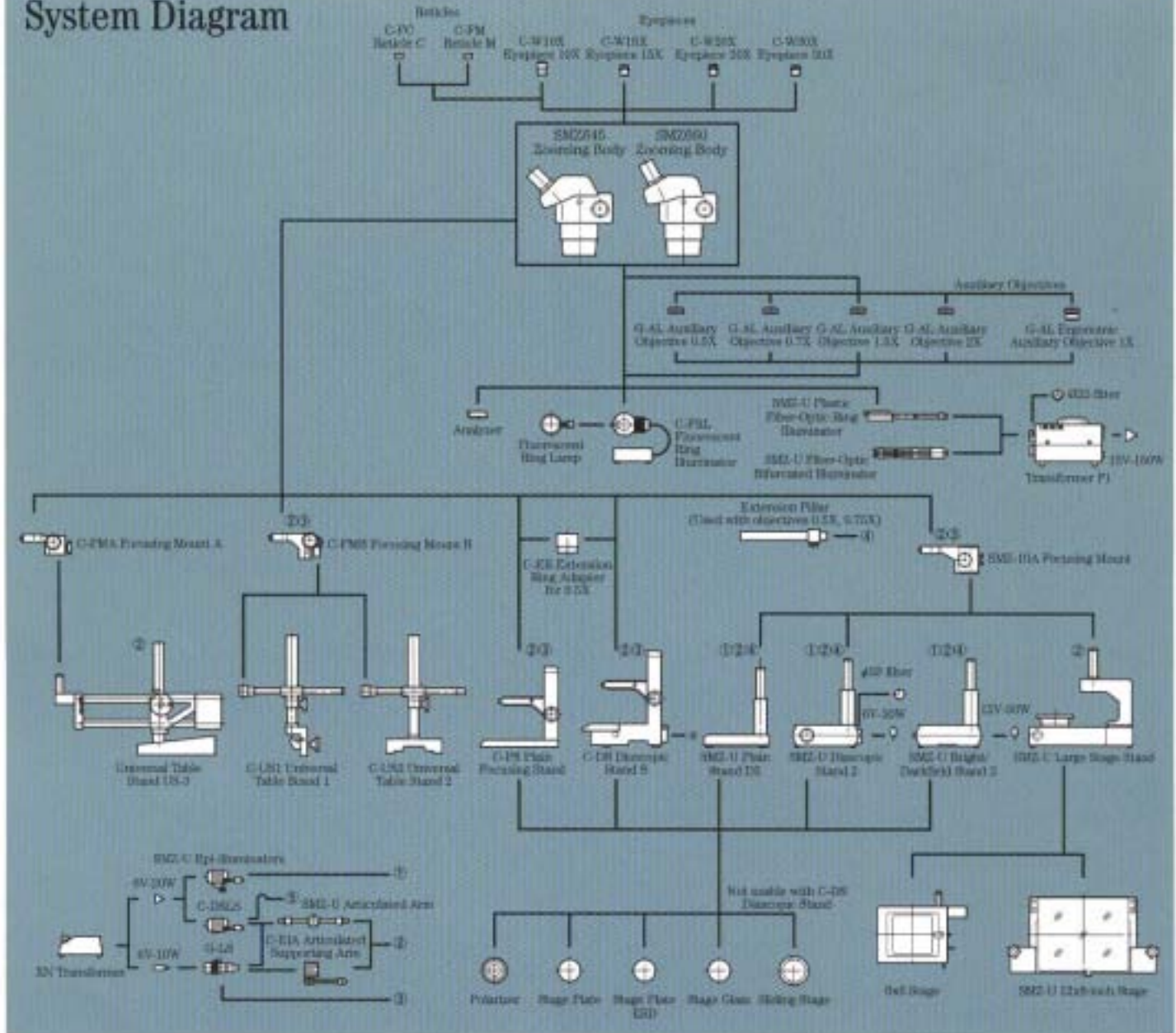
Eyepieces

Nikon-developed 10X, 15X, 20X, 308 high eye-point eyepieces all feature diopter correction and the ability to add reticles.

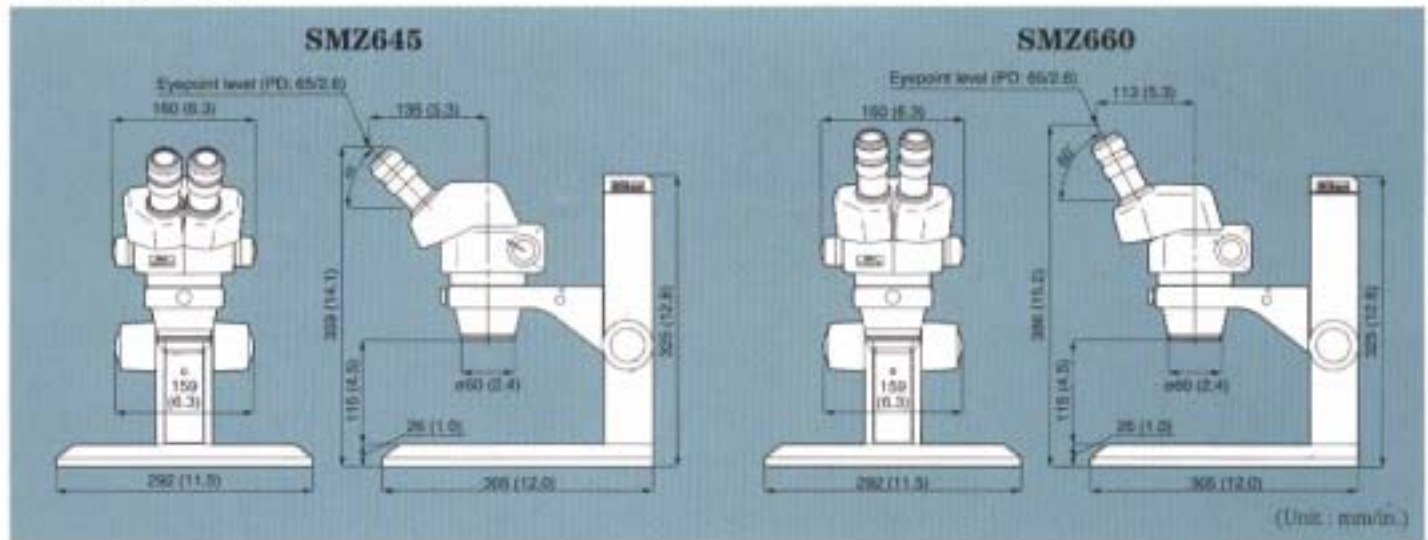
Reticles

C-FC (with crosshairs) and C-FM (with micrometer) reticles are available exclusively for the 10X eyepiece.

System Diagram



Dimensions



Specifications—SMZ645/660

Optical system	Twin zooming objective
Total magnification	4X to 300X depending on eyepiece and auxiliary objective used
Eyepiece inclination	SMZ645: 45° SMZ660: 60°
Interpupillary distance adjustment	52 to 75 mm (2.0 to 3.0 in.) (C-W10X)
Eyepieces (with diopter adjustment)	C-W10X (F.N. 22) C-W15X (F.N. 16) C-W20X (F.N. 12.5) C-W30X (F.N. 7)
Zooming range	0.8X to 5X
Zooming ratio	6.3 : 1
Auxiliary objectives (working distance)	AL0.5X (211mm/8.3 in.) AL0.7X (150mm/5.9 in.) AL1.5X (61mm/2.4 in.) AL2X (43.5mm/1.7 in.) AL ERG 0.77X-1.06X (102-48 mm/4.0-1.9 in.)
Working distance	115mm (4.2 in.)

Illumination systems	G-LS 6V-10W Illuminator G-LS 6V-10W Illuminator (with G-EIA Articulated Supporting Arm) C-DLSL 6V-20W Illuminator (with SMZ-U Articulated Arm) C-FRL Fluorescent Ring Illuminator SMZ-U Plastic Fiber-Optic Ring Illuminator (15V-150W halogen) Plastic Fiber-Optic Bifurcated Illuminator (15V-150W halogen)
Stands	C-PS Plain Focusing Stand C-DS Diascopic Stand S SMZ-U Plain Stand D2 SMZ-U Diascopic Stand 2 SMZ-U Bright/Darkfield Stand 2 SMZ-U Large Stage Stand
Antistatic function	100V to 20V, less than 2 sec.
Airtight construction	JIS dew prevention standard Type 1 compliant

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. October 1998.

	WARNING	TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USE
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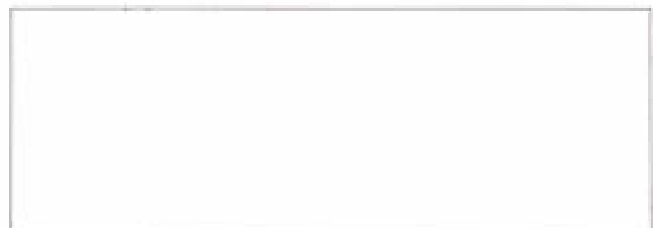
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