

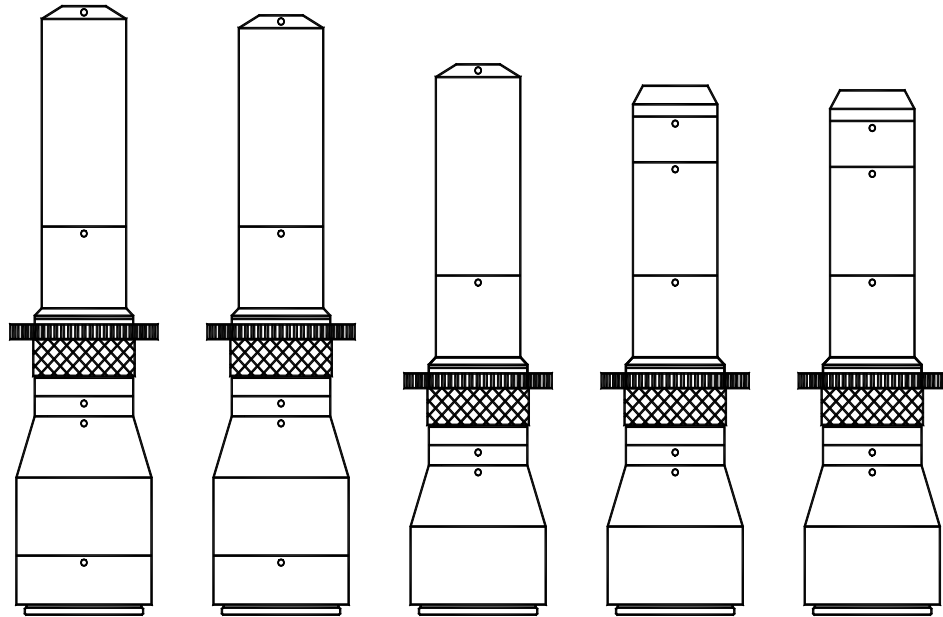
MikroMak™ with Nelsonian® Technology



 **INFINITY**
PHOTO-OPTICAL

MikroMak™

Prime Probe Lenses



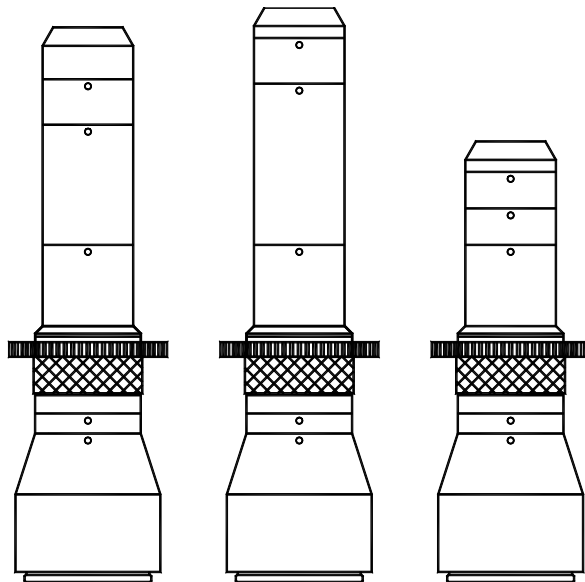
125mm

90mm

70mm

50mm

40mm



50mm
PetzVex™

40mm
PetzVex™

RO

(CINE version shown with 64T Follow Focus Gear 0.8mm Pitch (32TPI))

MikroMak™ Prime Probe Lenses Instructions for Use

Thank you for choosing a MikroMak Prime Probe Lens. We have attempted to incorporate many of the characteristics of our multiply-award winning* InfiniProbe TS-160 ROBUSTO into a simplified, easy to use and carry form. By using a MikroMak, you will attain very high performance and creative levels with almost total abandon or attention to any requirements other than minimally turning focus, exposure or adjusting illumination.

As its optical system is supplied as a sealed unit *setscrews are used for intended permanent construction and are not user removeable. Attempted entry will void the warranty.* (The sole exception to this is when the T16 rear tube is to be exchanged with a stereo microscope stand adapter. *Its #2-56 setscrew can be loosened with an Allen wrench for such exchange.*) Consequently, your MikroMak is designed for virtually foolproof, trouble-free use.

MikroMak Characteristics: The MikroMak Prime Probe series all function on principles derived from microscope tech, termed Nelsonian™. Because of this, they all provide an *inverted image*—as all laboratory type microscopes do. This allows their optics to be as “pure” as possible (no additional or unnecessary elements introducing potential image degradation) and their outer dimensions accordingly compact. Most people who are using the MikroMak have had this experience from using laboratory microscopes and we are sure you are among them. But, even so, if the inverted image is desired to be erect instead, set your camera or accessory monitor to *rotate*.

All MikroMaks provide extreme depth of focus combined with high clarity and resolution (many equivalent in power and magnification to just below the 10x objective on laboratory microscopes) in compact, light weight configurations. One unique characteristic common to all (and equally *uncommon* with other lenses) is that they focus slightly *beyond* infinity and *closer* than shown engraved on their scales. This is deliberate in anticipation of future accessorization and does not indicate a defect in any way. Consequently, the engraved information should be read as the *approved* operating ranges.

The 125mm, 90mm and 70mm types all achieve high magnifications equal to the low power objectives on standard laboratory microscopes—and resolution typical of them as well.

The 50mm and 40mm MikroMaks achieve magnifications greater than 1.5x. There are *two kinds* of 50mm and 40mm MikroMaks. The first type is the Aspheric and the second is the PetzVex™.

The Aspherics provide edge to edge sharpness over full frame sensors. In addition, the 40mm accepts an accessory 25mm Field Extender that converts it effectively into a 25mm wide field lens.

The PetzVex types provide on center sharpness with the *deliberate* outer field falloff similar to the effects associated with the classic Petzval design from a new formula that does so. Consequently, outer field bokeh change. The PetzVex are designed specifically for use with full format sensors.

Regardless of type, the 50mm and 40mm are well-suited to high depth of field, forced perspective, table-top, product and stand-off nature cinematography and can then extend to be specially used in macro.

MikroMak/RO is the “exception to the rule” in that it is the only member of the MikroMak series to be NON-Nelsonian. However, almost every MikroMak accessory and adapter can be used with MikroMak/RO, so their instructions apply to it as well.

In use, MikroMak/RO operates more typically like traditional macro lenses—but with some unique features:

First, its full format internal focusing system automatically sets the best performance when focused at any chosen working distance. Its in-camera erect image means you simply point it and focus; there’s nothing more to do. Especially so, if you set your camera to auto ISO. The image excellence is stunning.

Next, it converts from a 120mm lens to a 55 by adding the 55mm Front Attachment, making it effectively two lenses in one.

At its closest focus it yields 3.5x and can be used with the 55mm Front to 1x. Full technical data and magnification tables are attached.

MikroMak in Use: After mounting the T2 adapter for your specific brand or type of camera onto the rear threads (M42 x 0.75) of the MikroMak, position it in place as you would for any other lens used on it.

A focusing ring sets focus from infinity into the micro/macro range provided. Because once set to infinity almost everything up to a very close proximity is *automatically* in focus, *the markings on the scale are magnifications, not distance settings* (which are now virtually unnecessary). You can focus first and *then* look at what the magnification is, *or*, you can set a magnification and then *move* the entire setup until focus is obtained. The scale is marked in magnifications, *not* in meters or feet, since the focus at infinity is held to very close proximities. Thus, markings such as 0.5x or 3x, etc., reasonably denote the macro and micro enlargements *onto the sensor*.

Focusing the MikroMak is done *two ways*, depending on the subject and macro/micro “weighting,” and may at first seem “counter-intuitive.” However, once this characteristic is understood, operation becomes natural.

First, focus to infinity—or as far away as possible. *Do not focus any further unless you want to use MikroMak in close up ranges.* That is the *second* “weighting.” Trying to focus after having set the MikroMak to infinity actually alters imagery adversely. Generally speaking, once focused to infinity, *stop*. Only use the focus control to go into the macro and micro magnification ranges.

Illumination: As the MikroMak is progressively focused, the angle of illumination—as with all optics that achieve such magnifications—becomes increasingly in need of intense, directed beaming. Diffuse lighting does not sufficiently “bite” into objects with sufficient angularity to resolve detail. LED or fiber optic light guides are well suited for the MikroMak—even those criticized for concentrating light as they are positioned closer. We have found that cube lights are ideal. They can be mounted on the probe of the MikroMak, used singularly or in tandem, be remotely controlled and, most importantly, concentrate its beam as the MikroMak is moved in ever closer. Provided that they share similar characteristics, other LED lights may prove equally suited.

By means of the *Universal Adapter*, ring lights for low power and other accessories can be mounted on the MikroMak. In addition, lights that are equipped with ¼”-20 taps can be mounted on stands, fixtures or tripods near the MikroMak setup.

Exposure: The MikroMak is preset at its optimum performance level according to micro tech design known as its Nelson Point. Theoretically, above or below this aperture, the image will degrade one way or another, resulting in either too much or too little contrast or too little resolution or too much glare overpowering the system. In calculating the MikroMak's best operating point, we have removed all guess work to its use. It's fully-adaptable senior sibling, the InfiniProbe TS-160 ROBUSTO has provision for altering the Nelson Point characteristics, but the MikroMak is ideal for getting results without having to consider variables.

Since MikroMak is set for its Nelson Point, it is not a high-speed lens. Modern camera sensors can easily compensate for this by using their high ISO settings. Today, even used well beyond 16,000 ISO, most cameras exhibit little or no noise. In this respect, MikroMak stands at the forefront of modern technique, especially with dual native ISO sensored cameras. If the *recording medium* is not limited, then an exposure can be selected which allows easy handling and use. Counter-intuitively, set the ISO reasonably high and you will experience results that could not be properly done even a decade ago.

Accessories: MikroMak is more accessorize-able than perhaps any other prime. Although complete simply as-is, we still put a *system* behind it.

The *Universal Adapter* (UA) fits over the front probe and has 49mm threads allowing a vast array of filter holders, filters and lighting units to be attached, commonly available from photo/cine suppliers. A selection of *Stereo Microscope Stand Adapters* permit you to work in the field, come back to your lab or studio and continue use on the microscope stand of your choice. There's even an 80mm disc for use with the UA and ARRI type light boxes. Further accessories such as mounting clamps, matched 2x multipliers, etc., open even more possible avenues for expression.

Care and Cleaning. Your MikroMak should be treated as the fine instrument that it is. Care should be taken to keep dust and dirt off the external lens surfaces. The unit can be cleaned (metal parts only) with a cloth moistened with alcohol. The external optical surfaces should be cleaned only when necessary, and then, only by a soft cotton swab moistened by an approved optical glass cleaner. If you have further questions, please contact Infinity Photo-Optical Company or your authorized dealer.

Warranty. Details of the Warranty are contained on the Warranty Page (attached).

*Runner Up to Zeiss Supremes at Cine Gear 2018.
Special Honors with Suffocator™ at CINEC Munich 2018.