



THE LEADER IN VISION DIAGNOSTICS™

# Ultra

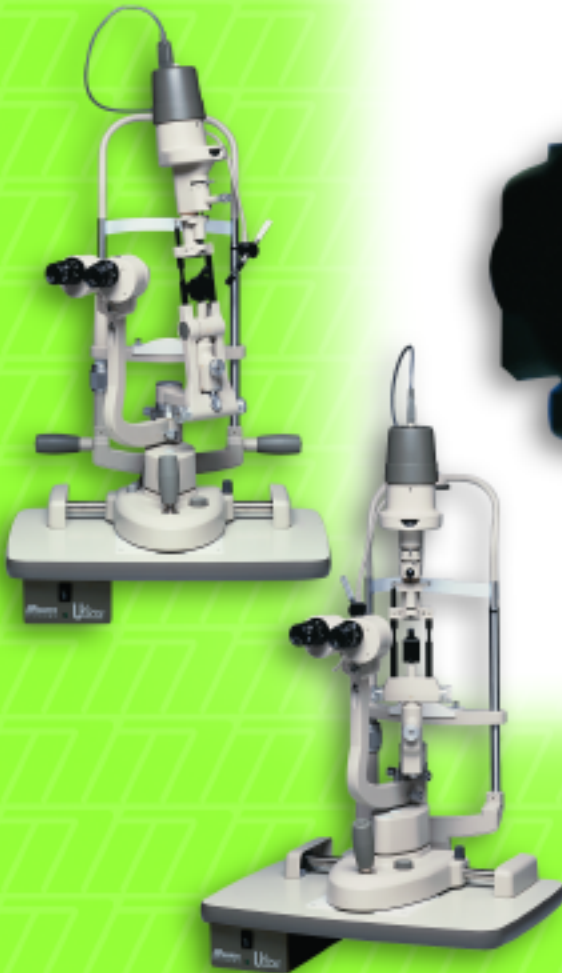
## A NEW ERA IN DIAGNOSTIC OBSERVATION

**20% Increase in Overall Optical Efficiency**

**20% Increase in Light Transmission**

**15% Expanded Field of View**

**14% Increase in Depth of Focus**

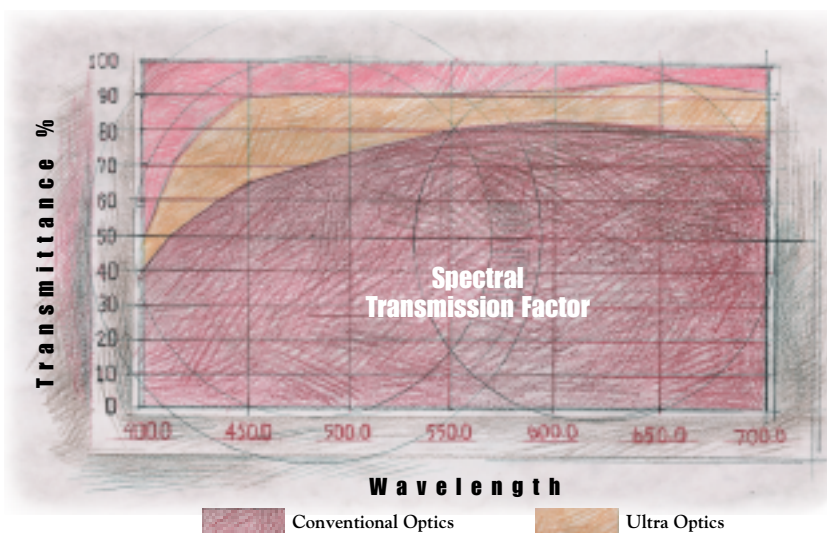


# WHAT'S SO DIFFERENT ABOUT THE MARCO ULTRA SERIES?

In a word, *everything*. The Ultra Series from Marco changes the slit-lamp picture forever. First, we incorporated the very latest in materials, design and lens-coating technologies to create a new era in optical resolution and efficiency. Then we improved the ergonomics to make the Ultra Series the most convenient-to-use slit lamps in the industry. Finally, we designed the Ultra Series to be manufactured using up-to-the-minute production techniques, reducing assemblies that used to require as many as fifteen parts down to one single part. The result is higher quality, reduced maintenance and exceptional value.

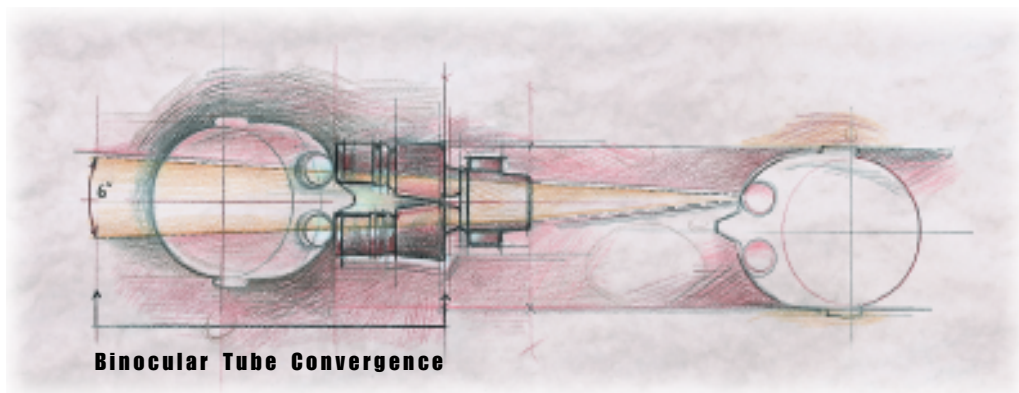
## THE NEXT GENERATION IN OPTICS

With a new, modernized optical design, the Ultra Series utilizes a multi-layered, multi-coated system which transmits light more efficiently, producing a measurable 20% increase in optical resolution and clarity. The breakthrough optical quality of the Ultra Series also results in a 20% increase in light transmission, a 15% expanded field of view and a 14% increase in depth of field. A single look through the optics of any Ultra Series slit lamp is enough to tell you that a new age in diagnostic observation has arrived.



**QUITE SIMPLY...THERE IS NO OTHER OPTICAL SYSTEM LIKE ULTRA OPTICS... TRULY REVOLUTIONARY.**

The Galilean optics of our G-series (models G2, G4 and G5) feature a 6-degree inward convergence angle for the binocular tubes, an excellent angle for improving physician comfort by reducing optical fatigue. The G-series optical system is also optimized for today's video imaging.



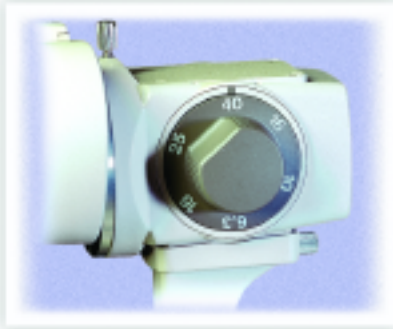
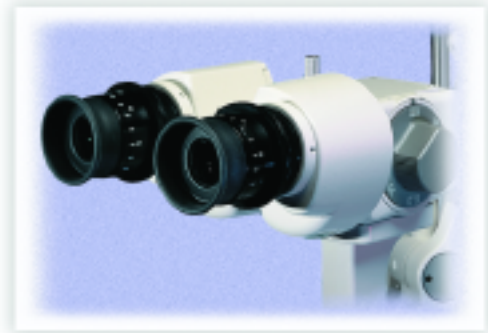
**THE ADVANCED OPTICS OF THE ULTRA SERIES IMPROVE EFFICIENCY BY AN AVERAGE OF 20% OVER CONVENTIONAL SLIT LAMPS.**



# A FULL RANGE OF ADVANTAGES.

## EYEPIECES

- Newly designed high-eyepoint eyepieces (G-Models) help create a field of view 1.3 times wider than conventional slit lamps.
- Threaded, locking eyepieces eliminate the problem of slipping and feature individual dioptric rings that are adjustable for neutralizing refractive error.
- PD adjustment is synchronized over a wide range by manually positioning the right or left ocular section.
- The comfortable, fatigue-free 6-degree convergence angle remains constant regardless of PD adjustment.

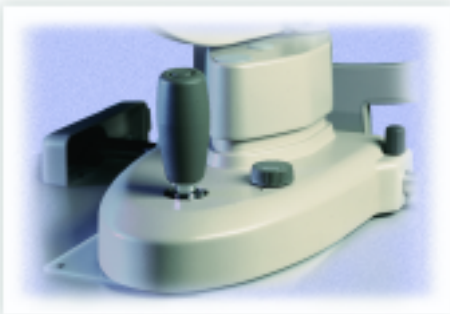


## MAGNIFICATION KNOB

- A flattened area on the magnification knob (G-models) allows the operator to adjust power by feel, without looking at the markings.
- With the flat position on top, powers are high; with the flat position on bottom, powers are low.

## BASE

- A newly designed ergonomic joystick with its adjacent rheostat allows adjustment of elevation, all lateral movements and light intensity without removing your hand from the joystick.
- The joystick top button instantly increases illumination to its maximum intensity. Or...
- The joystick top button can also be instantly converted to a freeze-frame button for video image capturing.
- An increased X-Y base range of motion expands the observation area for more efficient 90D or similar auxiliary-lens examinations.
- Finer-pitched gears and metal tracks create smoother, more precise movement.
- More secure metal rack covers lock into position for enhanced stability.
- Sleek, curved lines designed to complement today's styling.



- For ease of maintenance, the rheostat is easily replaceable and the entire slit-lamp base is interchangeable between all Ultra models.

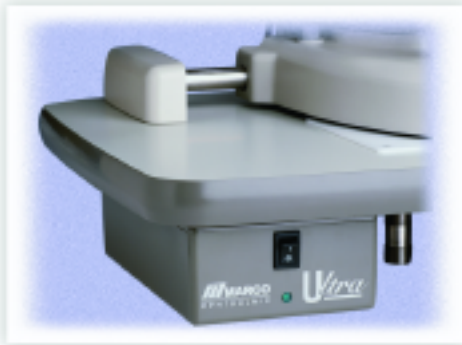
## HEADREST

- The standard Y-shaped patient headrest comfortably accommodates most patients.
- An LED fixation light eliminates bulb replacement and assures a virtually unlimited life.

- The optional large patient headrest was specifically designed to accommodate larger patients, and easily mounts on any Ultra model slit lamp.







## TRANSFORMER/TABLE TOP

- The transformer is more compact to reduce the possibility of patients' bumping it with their knees.
- The rheostat is located adjacent to the joystick for more convenient adjustment and a more compact transformer box.
- The slide base offers a more positive feel and better control with the joystick, while offering increased X-Y motion.
- The curved bumper guards of the table are safer, prevent damage, and more attractive.
- For ease of maintenance, the transformer/table top is interchangeable between all Ultra models.

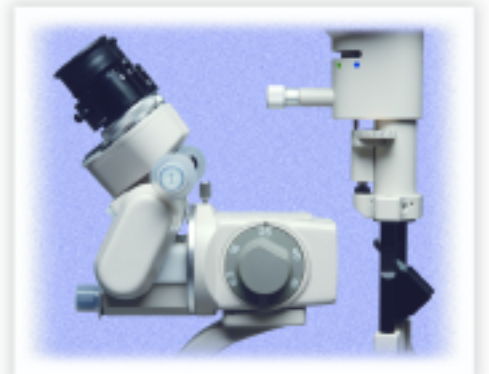
## LIGHT SOURCE

- The halogen illumination is transmitted more efficiently through an optically enhanced light source, producing a crisper, clearer image and improving video imaging quality.
- With the redesigned optical system, 20% less light is required for normal examinations.
- A 20% increase in aperture (10mm on models G5, 5 and 2B; 14mm on models G2 and G4) produces a wider field of illumination.
- The halogen bulb is easily accessible for replacement.
- Engraved scales are located on both right- and left-hand slit adjustment knobs.
- The redesigned light source produces more even illumination distribution throughout the entire field of view, resulting in better clarity.
- The "knife-edge" slit aperture mechanism produces a slit of unsurpassed sharpness.
- The filter-identification scale has been enlarged for simplified use and is individually labeled for easier recognition.
- All controls are made of anodized and bead-blasted metal for a high-precision feel, enhanced comfort and reduced maintenance.



## ACCESSORIES

Ultra series slit lamps accommodate a complete range of accessories, including applanation tonometers, Hruby lenses, assistantsopes, and beamsplitters for full video equipment. The Marco ViewCube is an integrated beamsplitter/video camera that blends a traditional multi-piece system into one efficient component. The inclined oculars provide unlimited adjustability (0-60 degrees) which helps eliminate head and neck strain associated with lengthy examinations.



# THE ULTIMATE IN VERSATILITY, POWER AND VALUE



- Exceptionally natural and comfortable view is created by a parallel optical system with 6° converging binocular tubes, incorporating high-eyepoint, extremely wide-field eyepieces and Galilean magnification changer.
- G2 offers 10x, 16x and 25x magnification.
- G4 offers 6x, 10x, 16x, 25x and 40x powers.
- Designed for today's video imaging.
- Halogen illumination standard.
- Slit angle, width and height as well as filter placement, slit decentration and slit rotation are all controlled within a single hand's spread.
- Slit height is continuously adjustable from 1mm to 14mm.
- Slit height also has premeasured, fixed aperture diaphragms of 0.3, 3, 5, 8 and 14mm.
- Slit width is continuously variable from 0 to 14mm—the largest slit aperture in the industry.
- Built-in cobalt-blue, red-free and heat-absorbing filters can be easily dialed in as desired.
- Single joystick controls both elevation and horizontal positioning for enhanced ease of use.
- Rheostat conveniently located next to joystick.
- Adjustments are simple, fast and precise.
- Options include tonometer mount, Hruby lens kit, video kit, assistantscope and patient handrests.

## MICROSCOPE

Type	Galilean converging-binocular microscope				
Magnification	G4: Five position rotating drum				
Changing System	G2: Three position rotating drum				
Eyepieces	16x				
Total Magnifications	6.3x*	10x	16x	25x	40x* (*G4 only)
Real Fields of View	35mm*	23mm	14mm	8.7mm	5.6mm* diameters (*G4 only)
Interpupillary Adjustment	47mm – 85mm				

## SLIT LAMP

Slit Projection	1x
Slit Width	0 – 14mm, continuously variable
Slit Length	1 – 14mm, continuously variable
Aperture Diaphragms	14mm, 8mm, 5mm, 3mm, 0.3mm
Filters	Heat absorbing, red-free, & cobalt blue

## CROSS-SLIDE BASE

Longitudinal Movement	90mm
Lateral Movement	110mm
Vertical Movement	±15mm
Horizontal Fine Movement	±7.5mm

## CHINREST

Fixation Lamp	LED (red)
Vertical Movement	78mm

## POWER

Input Voltage	AC110V, 120V, 220V, and 240V
Maximum Power Consumption	40VA

## GENERAL

Weight	37.4 lbs. (17 kg)
Stock #	G2: #1180, G4: #1140
Lamp	12V/30W halogen bulb
Tabletop Dimensions	21.5" x 13.5" (550mm x 350mm)
Color/Finish	Misty Grey with durable Hammernet finish

## ACCESSORIES

Standard	Spot fixation light, 16x eyepieces, table top, low-profile mounting bracket, chinrest tissues, spare illumination bulb, fuses, and maintenance kit
Optional	Hruby lens kit, tonometer mount, patient handrests, beamsplitter, assistantscope, video adapter, and heavy joystick spring



# THE POWER TO PERFORM



- Exceptionally natural and comfortable view is created by a parallel optical system with 6° converging binocular tubes, incorporating high-eyepoint, extremely wide-field eyepieces and Galilean magnification changer.
- Five-step magnification range from 6.3x to 40x with the twist of a single knob and no change of eyepiece.
- Fingertip millimeter slit-width control provides highly precise adjustment.
- Single-handed elevation system.
- Easy-to reach tilt mechanism for gonioscopy.
- Dial-in, and continuously variable aperture setting from 10mm to 0.2mm. Ideal for measuring ocular structures to 0.1mm.
- Focusing fixation light is adjustable to each patient.
- Halogen illumination standard.
- Five built-in filters (two cobalt).
- Rheostat conveniently located next to joystick.
- Patient handrests standard.
- Tonometer mount and Hruby lens kit optional.
- Superb depth of field is ideal for today's technically advanced imaging systems. An available beamsplitter featuring an "in-out" prism system allows full illumination to the practitioner during observation and maximum illumination to the imaging system when in position.
- Dual port beamsplitter also allows an assistantscope to be attached.

## MICROSCOPE

Type	Galilean converging-binocular microscope				
Magnification Changing System	Five position rotating drum				
Eyepieces	16x				
Total Magnifications	6.3x	10x	16x	25x	40x
Real Fields of View	35mm	23mm	14mm	8.7mm	5.6mm
	diameters				
Interpupillary Adjustment	47mm – 85mm				

## SLIT LAMP

Slit Projection	0.8x
Slit Width	0 – 10mm, continuously variable
Slit Length	1 – 10mm, continuously variable
Aperture Diaphragms	10mm, 5mm, 3mm, 2mm, 1mm, 0.2mm
Filters	Heat absorbing, UV, red-free, & cobalt blue

## CROSS-SLIDE BASE

Longitudinal Movement	90mm
Lateral Movement	110mm
Vertical Movement	±15mm
Horizontal Fine Movement	±7.5mm

## CHINREST

Fixation Lamp	LED (red)
Vertical Movement	78mm

## POWER

Input Voltage	AC110V, 120V, 220V, and 240V
Maximum Power Consumption	40VA

## GENERAL

Weight	33 lbs. (15 kg)
Stock #	#1150
Lamp	12V/30W halogen bulb
Tabletop Dimensions	21.5" x 13.5" (550mm x 350mm)
Color/Finish	Misty Grey with durable Hammernet finish

## ACCESSORIES

Standard	Focusing fixation light, 16x eyepieces, full and half mirrors, table top, patient hand-rests, low-profile mounting bracket, chinrest tissues, spare illumination bulb, fuses, and maintenance kit
Optional	Hruby lens kit, tonometer mount, beam-splitter, assistantscope, video adapter and heavy joystick spring



# ULTRA G5 ZOOM SLIT LAMP



- Unprecedented high resolution motorized zoom optical system.
- Adjustable fingertip switches control motorized zoom/focus and illumination intensity.
- Incorporates the proprietary, advanced light-gathering Ultra Optics.
- “Flip-up” magnification display mirror.
- Illuminated magnification power display window.
- Specially-coated reflection mirror reflects harmful UV rays.
- Accommodates a complete range of accessories, including assistantscope, beamsplitters, and video cameras.
- Quick-adjust elevation base spring for heavier mounted accessories.
- Built-in tonometer mount.



“Flip-up” illuminated magnification mirror instantly displays magnification power.



Adjustable, multi-directional fingertip switches control motorized zoom and illumination intensity.



## MICROSCOPE

Type	Zoom type converging binocular microscope
Zoom ratio	6X
Eyepieces	12.5X
Objective	F=113mm
Total magnifications	5.9X-35X
Real fields of view	40mm-6.7mm diameter
Working distance	104.6mm
Dioptric adjustment	+/-5D
Interpupillary adjustment	52mm-82mm

## SLIT LAMP

Slit projection	0.8X
Working distance	80mm
Slit width	0-10mm (becomes a circle at 10mm diameter)
Slit length	0.2mm, 1mm, 2mm, 3mm, 5mm, 10mm diameter
Filters	Heat absorbing, UV, red-free and cobalt blue
Rotation of slit image	Laterally +/-90° from the vertical
Slit image scanning	Horizontally +/-7° in either direction
Bulb	12V 30W halogen bulb

## CROSS-SLIDE BASE

Longitudinal Movement	90mm
Lateral Movement	110mm
Vertical Movement	±15mm
Horizontal Fine Movement	±7.5mm

## CHINREST

Fixation Lamp	LED (red)
Vertical Movement	78mm

## POWER

Input Voltage	AC110V, 120V, 220V, and 240V
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Maximum Power Consumption	40VA
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## GENERAL

Weight	33 lbs. (15 kg)
Stock #	#1150-Z
Lamp	12V/30W halogen bulb
Tabletop Dimensions	21.5" x 13.5" (550mm x 350mm)
Color/Finish	Misty Grey with durable Hammernet finish

## ACCESSORIES

**Standard** Focusing fixation light, 16x eyepieces, full and half mirrors, table top, patient hand-rests, low-profile mounting bracket, chinrest tissues, spare illumination bulb, fuses, and maintenance kit

**Optional** Hruby lens kit, tonometer mount, beam-splitter, assistantscope, video adapter and heavy joystick spring

# CONVERGING ON POWER, PERFORMANCE AND PRICE



• Both the 2b and model 5 combine remarkable ease of use with high quality converging optics and the same precision construction found in other Ultra Series models.

• The model 2b is ideal for general examination procedures and contact lens work. It finds wide acceptance in satellite offices as well as in larger practices with multiple lanes. The model 5 is slightly more advanced and comes standard with many of the same features that are offered on our more sophisticated model G5.

• The model 5 has a dial-in, continuously variable aperture setting that is adjustable from 10mm to 0.2mm. An easy to reach light source tilting mechanism is also standard on the model 5.

• The model 2b has a more simplified light source with six, pre-set aperture positions.

• Five built-in filters, including two cobalt, are standard on the model 5. The model 2b comes standard with four built-in filters.

• The model 5 comes standard with a focusing fixation light while the 2b comes standard with a pencil-point fixation light.

• Fingertip millimeter slit-width control with precision adjustment. Single-handed elevation joystick.

• Halogen illumination standard.

• Rheostat conveniently located next to joystick.

• 0 to 10mm slit width.

*Marco-Certified Quality assures you of the very finest vision products for your practice and it's your mark of confidence.*



## MICROSCOPE

Type	Greenough converging-binocular microscope
Magnification	
Changing System	Two position revolving objective
Eyepieces	10x
Total Magnifications	10x and 16x
Real Fields of View	18mm and 15mm diameters
Interpupillary Adjustment	48mm – 80mm

## SLIT LAMP

Slit Projection	0.8x
Slit Width	0 – 10mm, continuously variable
Slit Length	1 – 10mm, continuously variable (5) 10mm, 5mm, 3mm, 2mm, 1mm, 0.2mm, Fixed (2b)
Aperture Diaphragms	10mm, 5mm, 3mm, 2mm, 1mm, 0.2mm
Filters	Heat absorbing, UV, red-free, & cobalt blue

## CROSS-SLIDE BASE

Longitudinal Movement	90mm
Lateral Movement	110mm
Vertical Movement	±15mm
Horizontal Fine Movement	±7.5mm

## CHINREST

Fixation Lamp	LED (red)
Vertical Movement	78mm

## POWER

Input Voltage	AC110V, 120V, 220V, and 240V
Maximum Power Consumption	40VA

## GENERAL

Weight	39.6 lbs. (18 kg)
Stock #	5: #1105; 2b: #1101
Tabletop Dimensions	21.5" x 13.5" (550mm x 350mm)
Lamp	12V/30W halogen bulb
Color/Finish	Misty Grey with durable Hammernet finish

## ACCESSORIES

<b>Standard</b>	10x eyepieces, full mirror, table top, low-profile mounting bracket, chinrest tissues, fuses, and maintenance kit, focusing fixation light (5), patient handrests, and half mirror (5 only), fixation light (2b)
<b>Optional</b>	Hruby lens kit, 16x eyepieces, 25x eye-pieces, measuring reticle, and patient handrests (2b)

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