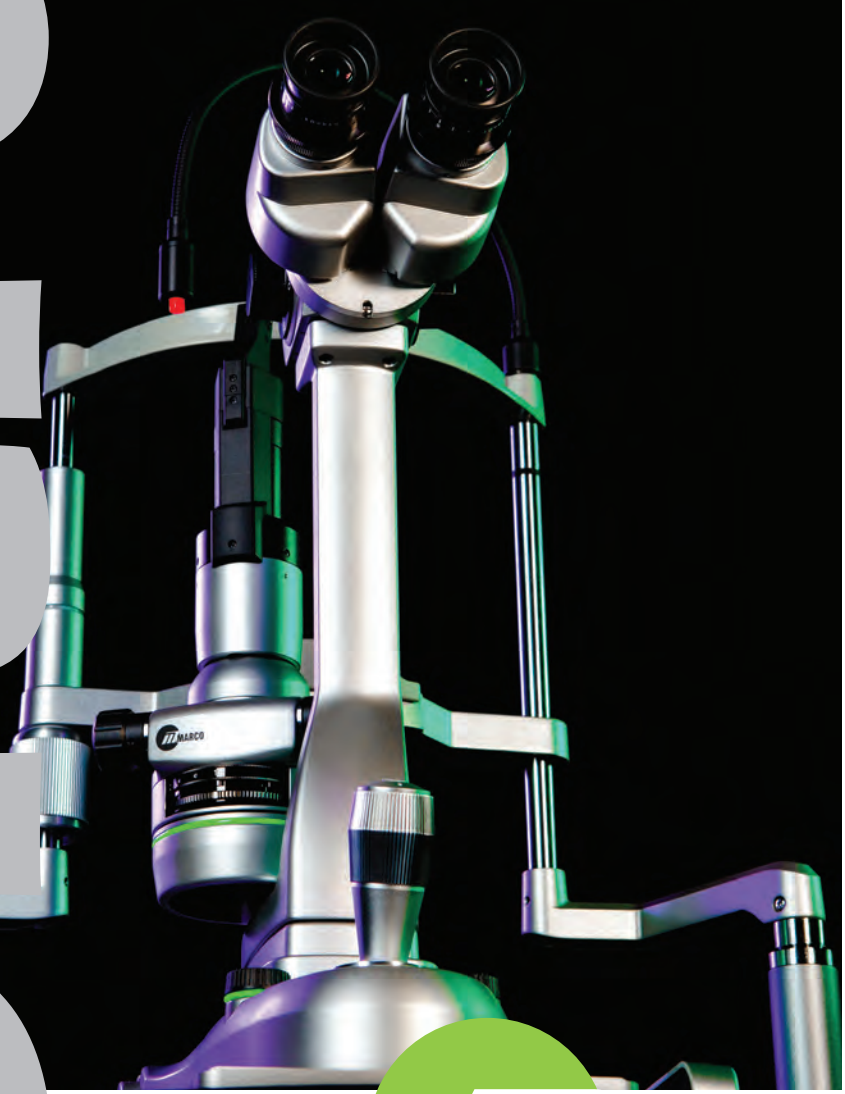


ULTRA



# ULTRAM

SLIT LAMP SERIES

Progressively engineered,  
elegantly designed, and loaded  
with intelligent features.

**Truly the Next Generation  
of Slit Lamps**



## ULTRAM2

SLIT LAMP SERIES

- Galilean optics with 6-degree converging binocular tubes and 5-step rotating magnification drum
- High-eyepoint, wide-field eyepieces
- Standard 10x, 16x, and 25x magnification
- Single-element, high-luminance LED illumination
- Lower “compact” light source configuration consolidates all controls
- Completely integrated (cable free), low-voltage electronic system
- 0-14mm continuously variable aperture
- Special Blue-correction LED, Red-free, and cobalt blue filters
- Unique circular LED light indicates light source power
- Single-handed joystick control with image-capture trigger switch
- Power / rheostat control conveniently located next to joystick
- Flexible LED patient fixation device
- Self-contained headrest and baseplate assembly
- Accommodates a variety of optional accessories and digital imaging components
- Optional patient handrests available

## ULTRAM4

SLIT LAMP SERIES

- Galilean optics with 6-degree converging binocular tubes and 5-step rotating magnification drum
- High-eyepoint, wide-field eyepieces
- Standard 6.3x, 10x, 16x, 25x, and 40x magnification
- Single-element, high-luminance LED illumination
- Built-in background illumination system for digital imaging
- Lower “compact” light source configuration consolidates all controls
- Completely integrated (cable free), low-voltage electronic system
- Expanded chin rest design for easier patient access
- 0-14mm continuously variable aperture
- Special Blue-correction LED, Red-free, and cobalt blue filters
- Unique circular LED light indicates light source power
- Single-handed joystick control with image-capture trigger switch
- Power/rheostat control conveniently located next to joystick
- Flexible LED patient fixation device
- Self-contained headrest and baseplate assembly
- Accommodates a variety of optional accessories and digital imaging components

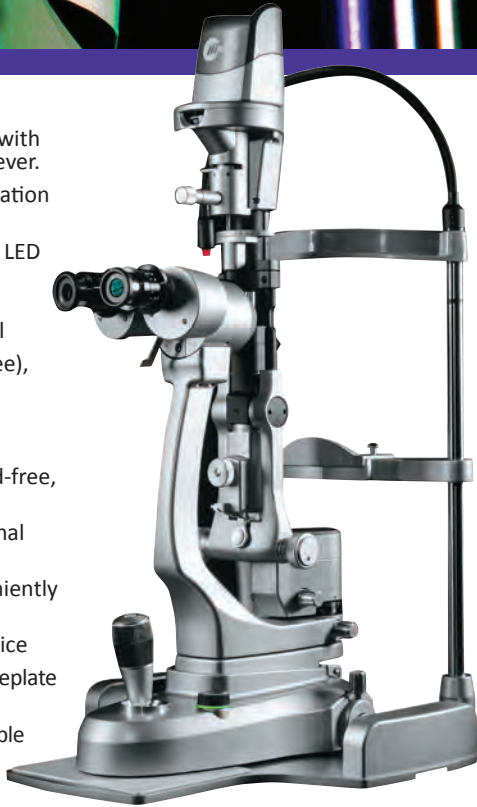
All ULTRA M Series Slit Lamps come pre-assembled and include a standard 3-year warranty.



## ULTRAM3

SLIT LAMP SERIES

- Converging / Greenough optics with 2-position “flip” magnification lever.
- Standard 10x, 16x (25x magnification when 16x eyepieces used)
- Single-element, high-luminance LED illumination
- Vertical “tower” light source configuration with tilting control
- Completely integrated (cable free), low-voltage electronic system
- 0-14mm continuously variable aperture
- Special Blue-correction LED, Red-free, Yellow, and cobalt blue filters
- Single-handed joystick operational control
- Power / rheostat control conveniently located next to joystick
- Flexible LED patient fixation device
- Self-contained headrest and baseplate assembly
- Optional patient handrests available



## ULTRAM5

SLIT LAMP SERIES

- Galilean optics with 6-degree converging binocular tubes and 5-step rotating magnification drum
- High-eyepoint, wide-field eyepieces
- Standard 6.3x, 10x, 16x, 25x, 40x magnification
- Single-element, high-luminance LED illumination
- Built-in background illumination system for digital imaging
- Vertical “tower” light source configuration with tilting control
- Completely integrated (cable free), low-voltage electronic system
- Expanded chin rest design for easier patient access
- 0-14mm continuously variable aperture
- Special Blue-correction LED, Red-free, Yellow, and cobalt blue filters
- Single-handed joystick control with image-capture trigger switch
- Power / rheostat control conveniently located next to joystick
- Flexible LED patient fixation device
- Self-contained headrest and baseplate assembly
- Accommodates a variety of optional accessories and digital imaging components



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# ULTRAM SERIES Pedigree

The new Ultra M Series of slit lamps from Marco are a visually elegant, sophisticated design, breaking from conventional philosophies and embracing a more modern appearance. While high-quality materials, paint and finish were carefully selected for lasting durability, the placement of primary functions and controls were naturally left in comfortable, traditional locations. Special attention to the overall functionality, feel and movement was paramount to complementing the sleek new design.

Most importantly, the Ultra M Series of slit lamps are an inspiring orchestration of the original “Ultra Optics” pedigree, incorporating all of the modern methodologies of optical design and engineering that established the first Ultra Series as a market leader in diagnostic observation.

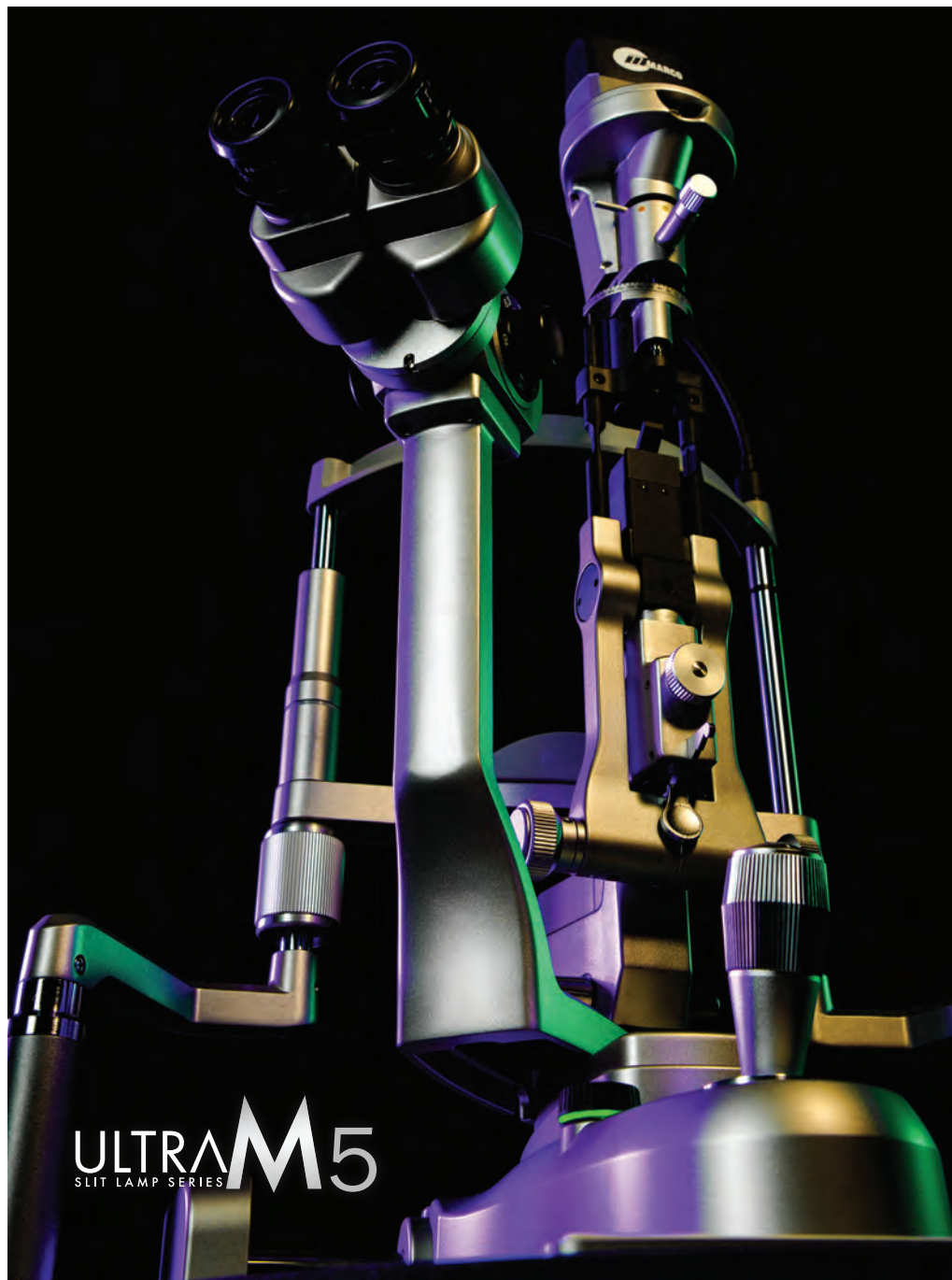
## **An Integrated Approach**

To effectively streamline the slit lamps, the entire low-voltage, “Dual” LED electronic system in the Ultra M Series has been efficiently integrated into the base of the slit lamp, eliminating bulky external transformers and exposed cables. Even additional wiring necessary for attached imaging systems can be cleverly routed and concealed. Not only does this provide a cleaner appearance, but the absence of these external components also provides more leg room for both the patient and practitioner.

## **Patient Interface Considerations**

The efficiencies and ergonomics in the Ultra M Series stretch to both sides of the slit lamp. A creatively designed patient headrest helps to accommodate larger patients who sometimes have difficulty fitting into a standard, traditional headrest. This new chinrest design also provides a more comfortable resting and grip position, and effectively addresses some of the common challenges associated with examining the larger patient population.

Collectively, the new Ultra M Series expands the boundaries of traditional slit lamp design, function, and performance. Never have more relevant and advanced enhancements been assembled in a single slit lamp series.



# ULTRA M SERIES Optics



6-degree converging binocular tubes

## Pedigree Born of Lens Quality

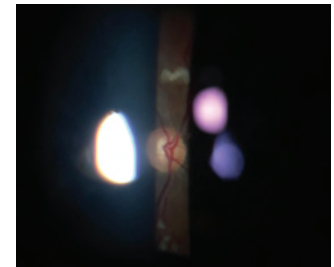
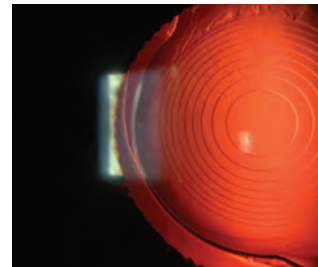
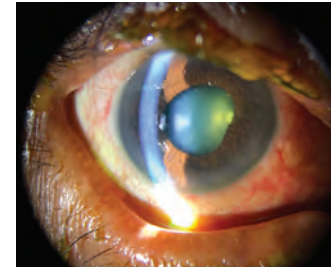
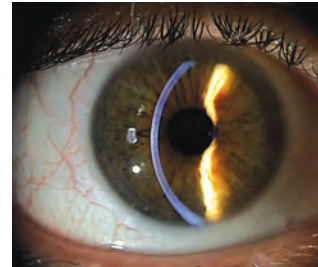
Without question, optics are the heart and soul of any microscope, and you can be sure the exacting tolerances that established the original “Ultra Optics” as an industry standard have been precisely upheld, and significantly enhanced. Ultra Optics are precision ground to the highest specifications, utilizing a multi-layered, multi-coated system which transmits light more efficiently, while improving contrast, color, and brightness of the viewed image. This sophisticated process not only produces superior “light gathering” transmission, but measurably expands the field of view and increases the depth of focus. Quite simply, no other optical system is engineered like Ultra Optics.

## Physician Comfort and Feel

In addition to the unique composition and structure of the Ultra Optical System, the Galilean microscope head on the M2, M4, and M5 models feature a “natural” 6-degree convergence angle on the binocular tubes which assists with binocular fusion, and helps to reduce fatigue and improve physician comfort. Another unique detail is a “flattened” area on the magnification knob which helps identify low & high mag positions, allowing the operator to adjust power simply by feel.

## Ultra Clear Anterior and Posterior Observations

Increased transmission is paramount whenever digital imaging systems are added to the Ultra M Series. The highest possible resolution is essential when quality images need to be captured and integrated into EHR systems. Our continuous pursuit of maintaining superior resolution and clarity of the anterior segment, while improving visibility of the fundus, has resulted in the brightest, sharpest image in the Ultra M Series.





# ULTRA M SERIES Illumination



## New Optimized LED System

We simply didn't modify or replace an existing halogen light source with LED. The Ultra M Series illumination system has been completely redesigned and engineered to maximize the benefits of superior new LED technology. LED illumination allows greater visibility and clarity of anatomy and tissue structure. The single-element, high-luminance LED also produces a beautifully consistent and uniform light compared to multiple-element LED's. With a color temperature of 3500K, the LED provides a much brighter, clearer, and sharper image.

## Integrated Electronics

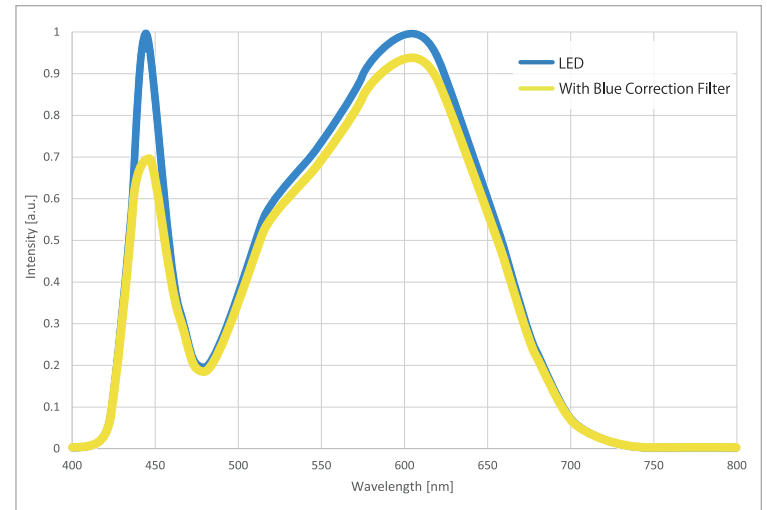
The electronic system in the Ultra M Series is efficiently integrated into the base of the slit lamp, eliminating bulky external transformers and exposed cables. Even additional cables necessary for attached imaging systems can be cleverly concealed. The absence of these external components also provides more leg room for the patient and physician.

## Patented Background Illumination System

The Ultra M Series is completely optimized for advanced anterior segment imaging, documentation, and patient education. A unique built-in background illumination system is creatively integrated into the primary LED light source, and is independently controlled by an additional rheostat located next to the joystick. Because these complimentary illumination systems share the same LED light source, the color balance of an image is not compromised. A joystick capture trigger is also standard for convenient and immediate image acquisition.



Integrated electronics with background illumination system.

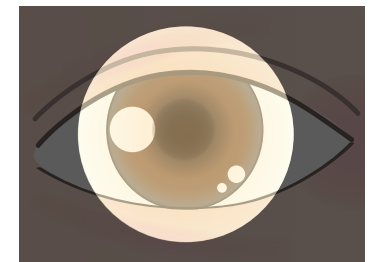


## Filtered Reduction of Blue Light

With the special Blue LED correction filter, the projected light is softer and more comfortable on the patients' eyes as the peak of the blue band spectrum of LED light has been corrected for greater comfort during extended, high intensity exposure.



A continuously variable 0-14mm slit aperture provides a wider area of anterior segment illumination.



# ULTRA M SERIES Design Features & Accessories



The Ultra M Series is truly optimized for **anterior segment imaging** by combining a proprietary intra-optics beam-splitter/smartphone adapter with the advanced computing and imaging power of Apple® Technology. The ion imaging system is a wireless, highly intuitive “mainstream” imaging product that emphasizes image quality, efficiency, and most importantly, simplicity.

**ion**  
IMAGING.

A **self-contained patient headrest** and baseplate assembly keeps all components neatly together and secure.



A special “**platformed**” patient headrest band provides a more comfortable and secure examination position for hand-held lenses.

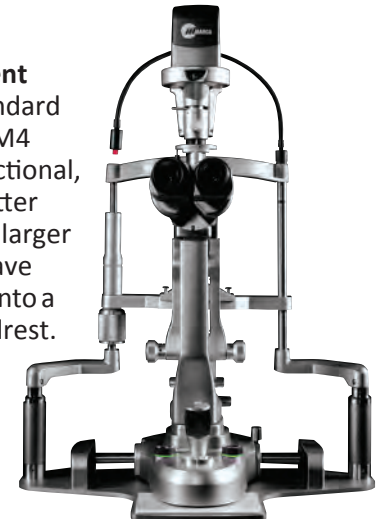
**NEW**  
AT-9 Applanation  
Tonometer  
mounts  
comfortably on  
M3 and M5  
models.



The **continuously adjustable (0-90 degrees) inclined microscope head** that helps eliminate head and neck strain. A fixed-position inclined adapter is also available, creating a standard 13-degree examination angle.



**Expanded Patient Headrest** is standard on the models M4 and M5. Its functional, open design better accommodates larger patients who have difficulty fitting into a traditional headrest.



**Assistantscope kits** are also optional accessories on the M2, M4, and M5 models.



ULTRA M SERIES MODELS	ULTRA M2	ULTRA M4	ULTRA M3	ULTRA M5
Type Binocular Stereomicroscope	Parallel (Galilean)	Parallel (Galilean)	Convergent (Greenough)	Parallel (Galilean)
Light Source	LED	LED	LED	LED
Light Source Configuration	Compact/horizontal	Compact/horizontal	Tower with Tilt	Tower with Tilt
Background Illumination	Not standard (option only)	Yes	Not standard	Yes
Light Filters	Cobalt Blue, Red-free, Blue LED Correction	Cobalt Blue, Red-free, Blue LED Correction	Cobalt Blue, Red-free, Blue LED Correction, Yellow	Cobalt Blue, Red-free, Blue LED Correction, Yellow
Slit Width	0-14mm continuous variable	0-14mm continuous variable	0-14mm continuous variable	0-14mm continuous variable
Aperture Diaphragm Diameter (∅)	14, 8, 5, 3, 0.3mm	14, 8, 5, 3, 0.3mm	14, 10, 5, 3, 2, 1, 0.2mm	14, 10, 5, 3, 2, 1, 0.2mm
Total # Power Magnifications	3 (10x, 16x, 25x)	5 (6.3x, 10x, 16x, 25x, 40x)	2 (10x, 16x) [3 (25x with 16x eyepieces)]	5 (6.3x, 10x, 16x, 25x, 40x)
Magnification Change	3 Position Rotating Drum	5 Position Rotating Drum	2-position switch revolving objective	5 Position Rotating Drum
Eye Pieces	16x wide-field, high-eyepoint	16x wide-field, high-eyepoint	10x, (16x optional)	16x wide-field, high-eyepoint
Field of View (∅)	23.3mm, 14mm, 8.8mm	35.9mm, 23.3mm, 14mm, 8.8mm, 5.5mm	18, 11.25 (with 10x eyepieces) 15, 9.3mm (with 16x eyepieces)	35.9mm, 23.3mm, 14mm, 8.8mm, 5.5mm
Interpupillary Adjustment	52-82mm	52-82mm	52-82mm	52-82mm
Diopter Adjustment Range	(+/-) 7 diopters	(+/-) 7 diopters	(+/-) 8 diopters w 10x eyepieces (+/-) 10 diopters w 16x eyepieces	(+/-) 7 diopters
Horizontal Coarse Movement	105mm	105mm	105mm	105mm
Horizontal Fine Movement	15mm	15mm	15mm	15mm
Vertical Movement	30mm	30mm	30mm	30mm
Fixation Light Source	Red LED on Flexible Arm	Red LED on Flexible Arm	Red LED on Flexible Arm	Red LED on Flexible Arm
Expanded Patient Chin Rest	Not standard (option only)	Yes	Not standard (option only)	Yes
Chin Rest Elevation	85mm	95mm	95mm	85mm
Power Supply	AC100V-240V (+/-10%)	AC100V-240V (+/-10%)	AC100V-240V (+/-10%)	AC100V-240V (+/-10%)
Power Consumption	DC5V 2A	DC5V 2A	DC5V 2A	DC5V 2A
Weight	11Kg	11.5Kg	12.5Kg	12.5Kg
Dimensions/Illustrations	462mm h x 348mm w (front) 462mm h x 369mm w (side)	462mm h x 484mm w (front) 462mm h x 329mm w (side)	676mm h x 348mm w (front) 676mm h x 369mm w (side) [420mm to optics]	676mm h x 484mm w (front) 676mm h x 329mm w (side) [420mm to optics]

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