

mw 50D series

# LED Slit Lamp

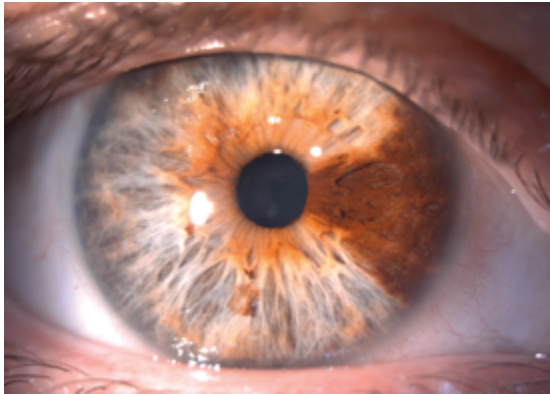


# New MAGWIDE Slit Lamp: a towards revolution in super-wide magnification fine optics



- Employs a natural color LED light source with reduced blue light that is perfect for slit images.
- Wide magnification range enables both wide angle view and detailed observation.
- All optics are multi-coated and provide a brighter viewing system with 22% higher transmittance than existing models.
- There are no cables between the chin rest and the light tower, and the wire to the light tower is exposed for easier maintenance.

# Wide range of measurements



## UNIQUE MAG WIDE\* - ULTRA-WIDE MAGNIFICATION RANGE

A newly-developed microscope with drum-type 5-step zoom and fine optics. A new optical system enables bright imaging even at 50x magnification. Drum-type zooming makes it easier to adjust the magnification within the wider range of 5x to 50x. All optics for observation are multi-coated to enable clear and high-resolution images, resulting in extremely high quality optics.

Magnifications: 5x ( $\phi 44.5$ ), 10x ( $\phi 22.3$ ), 16x ( $\phi 14.2$ ), 25x ( $\phi 9.0$ ), 50x ( $\phi 4.5$ )\* Mag Wide: a term combined from "magnification" and "wide"



## HIGH FIELD OF VIEW EYEPIECE

Wide field of view observation is possible even when wearing eyeglasses. Eyepieces can be fixed to the microscope tube to reduce gaps.



## 15° TILTING TUBE (OPTION)

15° tilting angle allows observation at a natural posture for taller users. It is also possible to reduce the angle for shorter users.



## BACKGROUND ILLUMINATION

Background illumination is achieved by adjusting the brightness and the conveniently positioned knob turns illumination on and off quickly and easily. Detachable background illumination is also available as an option to allow the examiner to change lighting position.

# Simple and stable



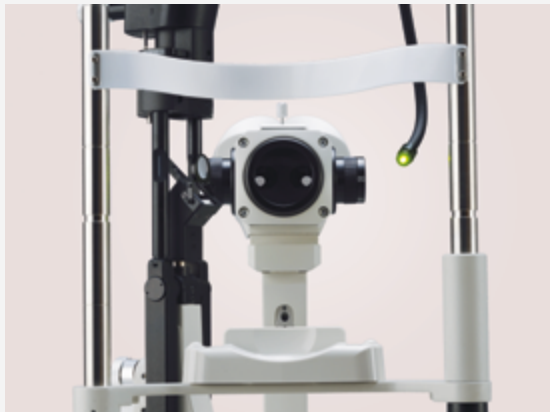
## CONVERGENCE TYPE EYEPIECE TUBE

The eyepiece tube converges at 8° from parallel optics for easy fusion, making more efficient and natural observation possible.



## BUILT-IN BARRIER FILTER

Simple slide operation makes it easy to insert and extract barrier filters. High contrast fluorescence images can be captured when a blue (exciter) filter is used.



## FIXATION LAMP

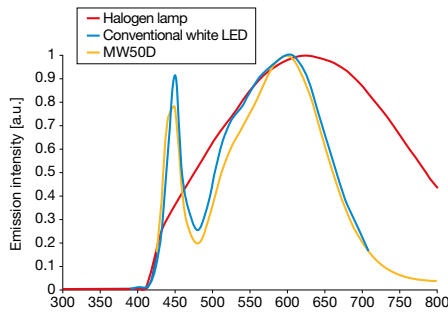
The yellow-green LED fixation lamp is attached to with an easy-to-use flexible arm.



## HIGH OPERABILITY

A new plate is employed for stress-free smooth focus adjustment.

# Bright colors



## HALOGEN COLOR LED LIGHT SOURCE

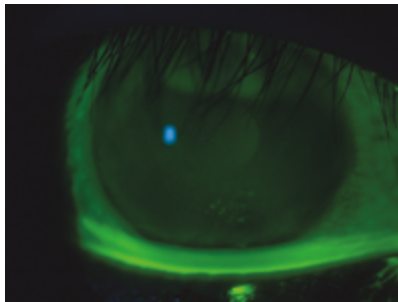
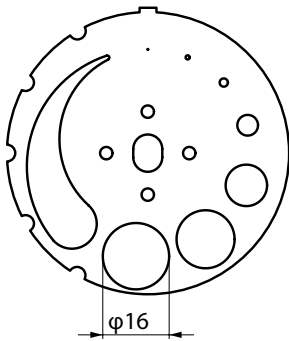
An LED light source, whose wavelength is much closer to a halogen lamp, has been employed to give the slit lamp a bright, natural color. This eliminates the need for a filter to remove the common “bluish LED light” problem.

## BRIGHT SLIT WITH SHARP EDGES

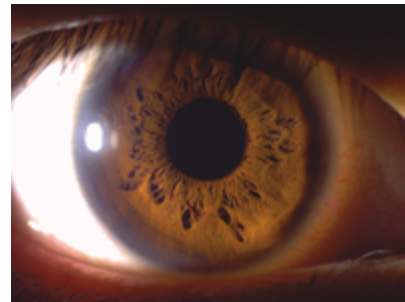
The bright LED light source provides a slit with sharp edges and consistent lightning.

## A LONG 16MM SLIT TOWER HEIGHT AND FILTERS

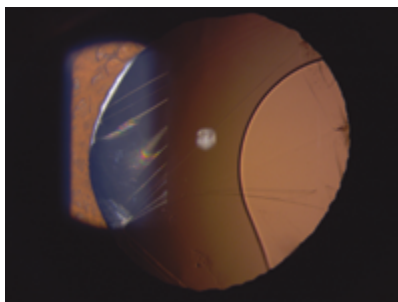
The 16mm slit tower height is compatible with a 5x wide view. The height can be adjusted in 7 steps (0.2mm, 1mm, 2mm, 5mm, 10mm, 14mm, 16mm) and enables seamless adjustment between 0mm to 12mm. Fully transparent ND (12.5% reduction), green, blue, UV cut incorporated.



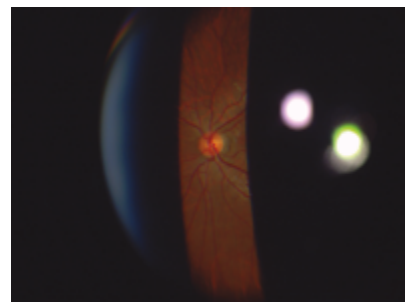
Fluorescence image



Iris (tangential illumination)

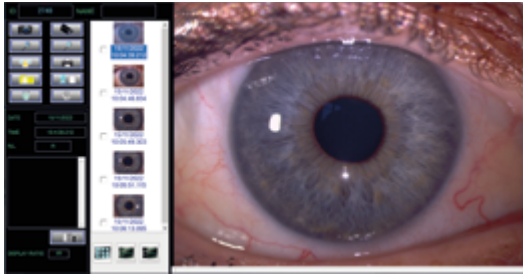


Transillumination



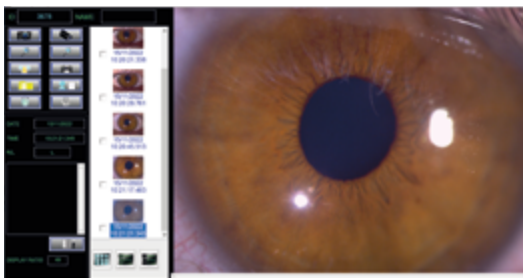
Disk (with 90D lens)

# Digital Photo System



## DIGITAL CAMERA

- 5M pixel wide dynamic range CMOS camera that reproduces natural colors
- Captures images at a high frame rate of 30 fps for smooth movies
- By pressing the joystick button, the image is captured and saved automatically without needing to use a computer keyboard
- When the cross slide table is moved, the MW50D automatically detects right or left eye
- Beam-splitter ratio is 70% for camera and 30% for eyepiece
- Camera cables are housed in the MW50D body even when the camera is attached



## IMAGE FILE MW FILE

- User-friendly, easy-to-view layout to suit wide monitors
- Automatic barcode reading to speed up patient profile input process
- 5 frame continuous imaging (Burst shot)
- High-resolution live view and movie capturing at 1296 x 972 pixels
- Enables black and white multi-band fundus photography
- One set required for each camera



For digital photography

**2 VERSIONS  
AVAILABLE**



For clinics

# Technical specifications

## DIMENSIONS:

WIDTH	350mm
DEPTH	678.5mm
HEIGHT	387mm
WEIGHT	13 kg (without digital unit) 13.8 kg (with digital unit)

## LOW POWER CONSUMPTION AND LONGER LIFE:

	Conventional halogen-lamp model	MW50D LED	
Power consumption	30 W	5 W	◀ 83% Lower
Lifetime*	50 hours	60,000 hours (Lumen maintenance factor 70% )	◀ 12,000 times longer

\*Lifetime is the design life, and does not reflect the lifetime of the lamp.

Compliance with



### Main body

#### Microscope

Type	Drum-type 5-step zoom (Angle of inclination: 13.2°)
Eyepiece magnification	12.5×
Total magnification	5×, 10×, 16×, 25×, 50×
Eyepiece diopter adjustment range	-8D to+8D
PD adjustment range	55 mm to 80 mm
Working distance	100.5 mm
Reaching distance	314.0 mm

#### Illumination system

Light source	5W white LED
Slit width	0 mm to 16 mm continuously variable
Slit rotation angle	90° to right and left
Slit length	∅ 0.2, 1, 2, 5, 10, 14, 16 mm, 1 to 12 mm continuously variable
Slit vertical angle	0°, 5°, 10°, 15°, 20° from lower angle
Slit tilting width	8 mm to right and left from target surface
Filters	Fully transparent, ND (12.5% reduction), green, blue

#### Arm unit

Rotation angle	90° to right and left
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#### Cross slide table

Interface	US232C, USB, IR
Horizontal movement	100x 110 mm (joystick operation)
Vertical movement	30 mm (joystick rotation)

### Digital camera

CCD	1/2.5» CMOS
Resolution	2592×1944 ppi resolution, 5-megapixel
Video image output	HD 1296×972 pixels
Frame rate	30 fps
Interface	USB3.0
Power supply	Input: 5V, Power consumption: 3W
Weight	790 g
Dimensions	107 (W) × 227 (H) × 55 (D) mm

#### Power unit

Input	AC100V- 240V 50/60Hz
Output	DC12V / 3.75A (max.)
Power consumption	35VA
Weight	450 g
Dimensions	105 (W) × 48.5 (H) × 130 (D) mm

#### MW File

[Download ZIP file](#)

#### System

OS	Windows®7, 8.1, 10 / 64 bit
CPU	Intel Core i5, 1.5 GHz or more
Memory	2 GB or more
Interface	USB3.0 (1 port or more), or USB2.0 (1 port or more)
Monitor resolution	1366x768 pixels or more
Optical drive DVD/CD drive	DVD/CD drive

#### Data storage

Still image	JPEG
Movie	AVI



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