

# Digital Slit Lamp

SL-D701



# SL-D701 DIGITAL SLIT LAMP

LED light source  
sharp, bright and homogeneous illumination



## SL-D701 WITH LED AND HALOGEN LIGHT SOURCE\*

- » Illumination boost
- » New DC-4 digital camera
  - High resolution
  - Smart capture function
  - Still Image with auto exposure function
  - Seamless integration
  - Infra Red sensitivity
- » Blue free filter™ system for superior fluorescent viewing\*\*
- » New BG-5 LED back ground illumination
  - Meibomian gland observation capability



\* Factory option

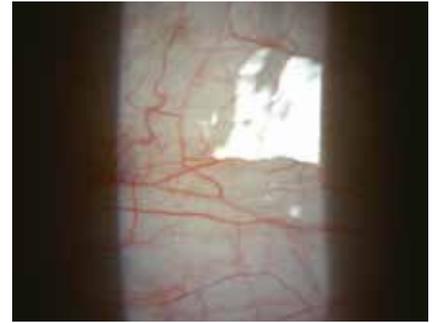
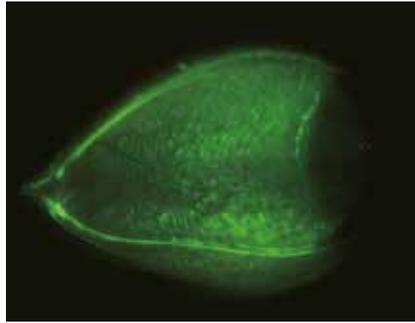
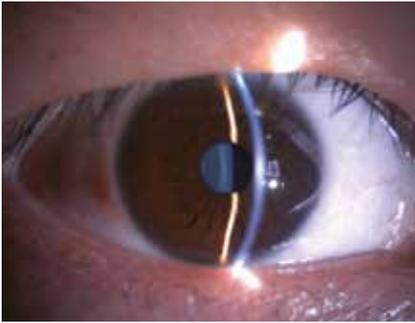
\*\* Fluo model

# ADVANTAGES & BENEFITS OF LED

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## LED LIGHT SOURCE

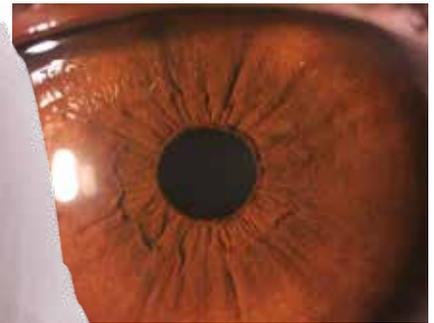
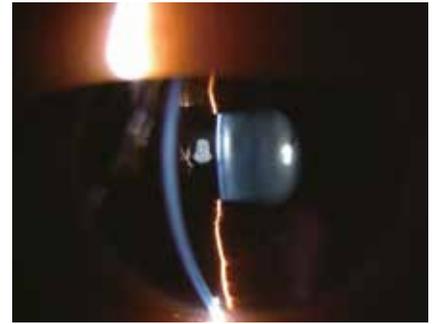
The new LED illumination source allows observation under a brighter, more homogeneous condition than the conventional halogen bulb source. The short wavelength of the LED spectrum enables the operator to see minute details such as flare in the anterior chamber and vitreous. Color temperature remains uniform when adjusting light intensity insuring consistent viewing results throughout the entire eye's optical path.



## LED FEATURES

- » Brighter illumination enhances observation of the eye structures
- » LED wavelength characteristics allow for easy visualization of subtle details such as flare and inflammation
- » Consistent color temperature throughout the entire light intensity adjustment
- » Substantial reduction in bulb replacement
- » Energy efficient and cost saving





## DC-4 Digital camera

### **SMART CAPTURE FUNCTION**

With a simple push of the joystick trigger the operator can obtain a rapid series of images that are quickly saved for later revision and selection. The Smart Capture function minimizes failed images or blurry pictures, especially with children and in conditions of excessive blinking.

### **STILL IMAGE WITH AUTO EXPOSURE (AE) FUNCTION**

By adjusting the shutter speed and sensor gain, the brightness of the image will be automatically compensated. As a result the live image used for alignment and the final picture will have the same color balance.

### **LIVE VIEW**

When using the external PC software in conjunction with the DC-4, a real time live image will be seen on the monitor to facilitate centering and focusing. The live image can be used to show the eye condition to third party individuals for teaching and education. Sensitivity, shutter speed and white balance can be adjusted from the computer.

### **VIDEO CAPABILITY**

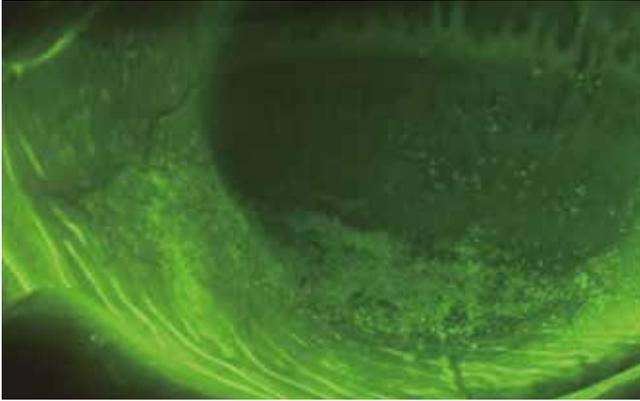
The DC-4 allows for easy acquisition of video clips of the eye movements without interfering with the examination.

# ADDITIONAL FILTERS

## BLUE FREE FILTER™ SYSTEM

Topcon Blue Free Filter observation can be carried out using the exciter\* filter for slit lamp and barrier\* filter for slit lamp. Tear flow details and scars can be clearly viewed with less glare or pooling.

\* Fluo model



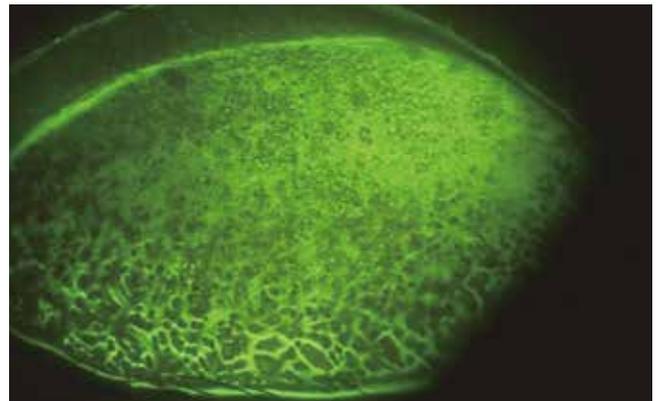
Blue Free Filter™



Cobalt Blue Filter



Blue Free Filter™



Blue Free Filter™

Images provided by Toru Noda, MD, PhD, Department of Ophthalmology, Tokyo Medical Center

## AMBER FILTER

A warmer, more pleasant tone of the skin and eye structures can be obtained by inserting the amber filter. This color correction filter produces a pleasant coloration that is especially useful in slit lamp imaging.



Amber



Non Amber



# MEIBOMIAN GLAND OBSERVATION & OTHER FEATURES

## MEIBOMIAN GLAND OBSERVATION

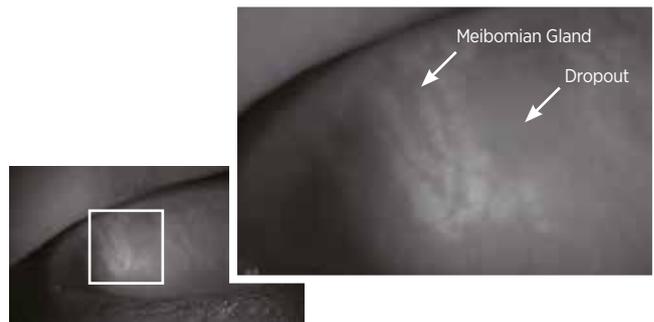
Meibomian gland observation can be performed and documented using the optional meibomian gland observation system\*. Because of the high resolution of the DC-4, fine detail of glandular acinus and subtle changes of meibomian glands can be seen and photographed for a better understanding of its condition.

\* System of SL-D701 +DC-4 (optional) + BG-5 (optional)

## MEIBOSCORE: GRADE 0 ~ 3



## MEIBOMIAN GLAND CLOSE-UP!



\* Images and meiboscore provided by: Reiko Arita, MD, PhD, Itoh Clinic, Department Ophthalmology, the University of Tokyo School of Medicine

## RIGHT / LEFT EYE INDICATOR

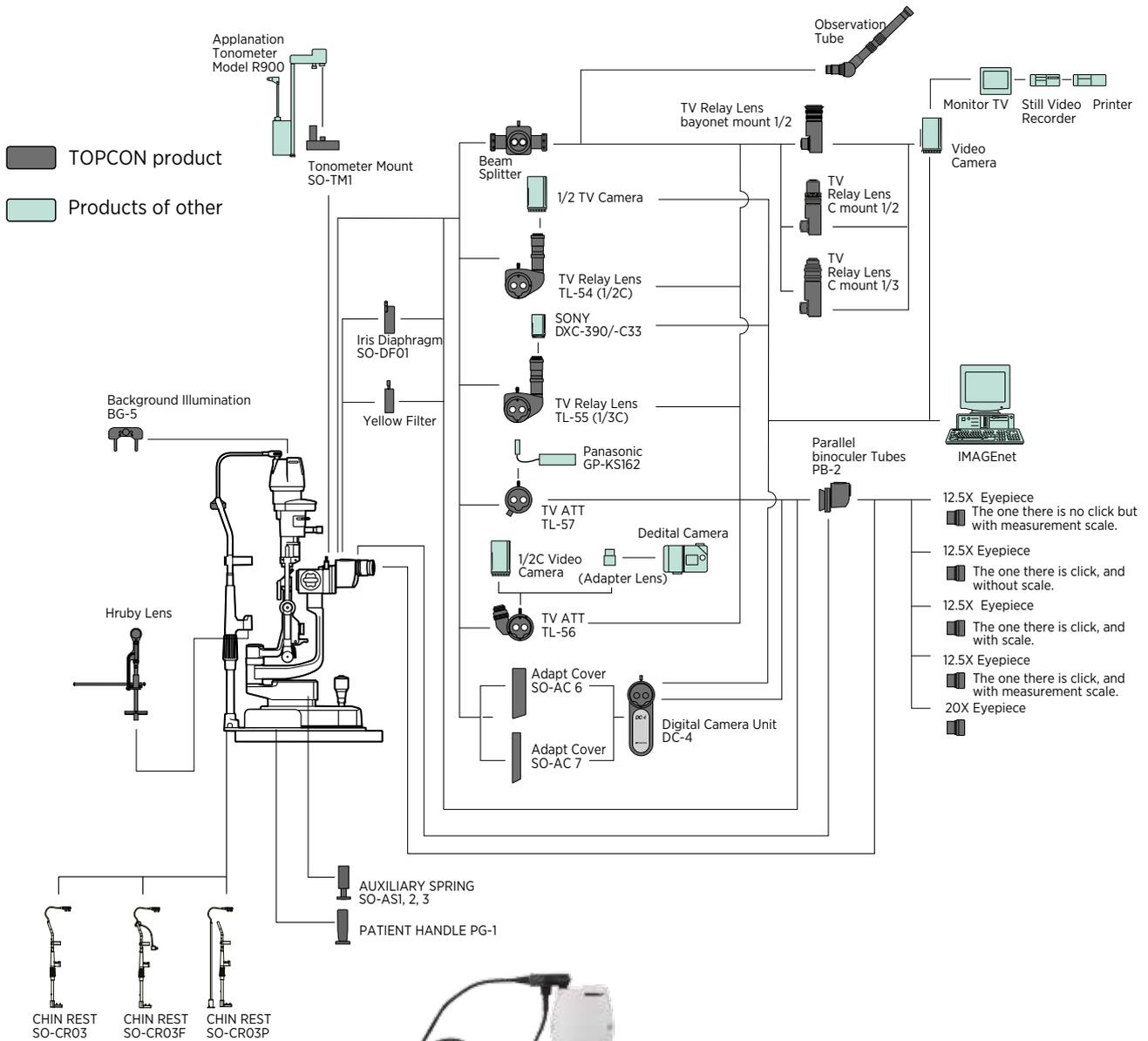
When in photography mode, the SL-D701 automatically recognizes the patient's right and left eye, simplifying the photographic procedure.

## MORE THAN JUST THE BASIC FUNCTION

Versatile lens coatings, including a preservative layer, and the use of apochromatic optics enhance the observation and require less maintenance.



# SYSTEM CHART



## SL-D701 Digital slit lamp



\* Shown with optional DC-4 digital attachment, optional handle bars and optional electric table.

# Specifications

<b>Microscope unit</b>		
Type		Galileo type
Magnification		Drum, 5-step magnification
Magnification steps		6/10/16/25/40
Overall magnification (actual vision field)		6.37 (ø35.1mm)
		9.94 (ø22.5mm)
		15.87 (ø14.1mm)
		25.37 (ø8.8mm)
		39.62 (ø5.6mm)
Eyepiece lens	Magnification	12.5x
	Diopter adjustment range	-5D to +5D
Binocular tubes		PD adjustment: 55 to 78mm
<b>Illumination unit</b>		
Illumination field	Slit width	0 to14mm, can be altered gradually(14mm=circle)tion)
	Slit length	14 to1mm, can be altered gradually(14mm=circle)
	Aperture diameter	ø14, 10, 5, 2, 1, 0.2 mm
Slit direction		Vertical to horizontal, can be altered gradually
		Inclination: 5°/10°/15°/20° Side swing
Filter		Blue filter, red-free filter, amber filter, UV cut filter (normal use), IR cut filter (normal use), ND filter (13% transmission), exciter filter for slit lamp*, barrier filter for slit lamp*
Illumination lamp	Halogen type:	12V, 30W
	LED type:	3A, 10W
<b>Base unit</b>		
Forward-backward movement		90mm
Right-left movement		100mm
Vertical movement		30mm
Amount of movement in all directions		12mm
<b>Chinrest unit</b>		
Amount of vertical movement of chinrest		80mm
Fixation target **		Fixation target with diopter adjustment Luminous fixation target
Fixation lamp		LED (Red)
<b>DC-4 Digital Camera</b>		
Light-Sensitive Pixels		5M pixels
Sensor Type		1/2.5 inch C-MOS
Pixel Size		2.2 x 2.2 µm
Image size		2592 x 1944
Movie size		1294 x 970
Frame Rate		24 fps
Resolution		125 line pair / mm (40x)
Photograph field		12.7 x 17.0 mm (16x)
Beam Split		Right eye path way (50:50)
Filter		Infra-red cut filter
Input		12V DC ± 0.5V 1A
Output		LAN (GigE)
Body size		75 x 228 x 50 mm
Power Supply		100-240V AC, 50-60Hz, 110VA



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## IMPORTANT

Subject to change in design and/or specifications without advanced notice.

In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

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