

# Topcon Slit Lamp Series



# The Combined Result of Optics and Technology

## SL-D series Digital Slit Lamps



The blending of quality, versatility and ease of use make digital image capture smooth and effortless. The SL-D series meets in that way, the needs of demanding eye care specialists.



### Optical Quality

With more than 85 years of experience in lens manufacturing, Topcon produces all the optics to outfit its instruments, providing excellent lens quality and a bright, clear view.



### Ergonomics

Topcon Slit Lamps are ergonomically designed for comfortable use. The SL "D" Series employ sconverging binocular tubes with a comfortable parallel magnification.



### Versatility

Variety of models in different configurations from basic clinical observation to sophisticated image capture. The Topcon series will satisfy any need and budget.



### LED Illumination

As a leader in Ophthalmic Instrumentation, Topcon is incorporating LED as the main illumination in some models of its slit lamps. The lifetime of the LED is substantially longer than conventional halogen bulbs. LEDs don't need frequent replacement making Topcon slit lamps environmentally sound.

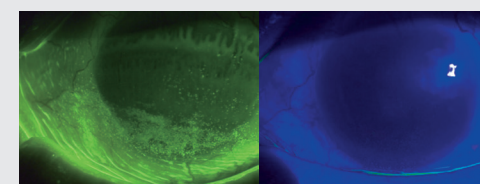
## Filter System



### Topcon Blue Free Filter™ System<sup>1</sup>

The Blue Free Filter™ observation can be performed by using the incorporated exciter filter and the optional barrier filter for slit lamp. Tear flow details and scars can be clearly viewed with less glare or pooling<sup>2</sup>.

1. Optional accessory
2. Shizuka Koh et., "Diagnosing Dry Eye Using a Blue-free Barrier Filter", AMERICAN JOURNAL OF OPHTHALMOLOGY, 2013 September
3. Images provided by Toru Noda, M.D, Department of Ophthalmology, Tokyo Medical Center



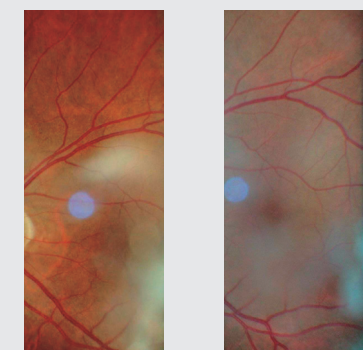
Blue Free Filter<sup>3</sup>

Cobalt Blue Filter<sup>3</sup>



### Amber Filter

The SL-D Series incorporates an amber filter, which can be easily inserted or removed.



Amber

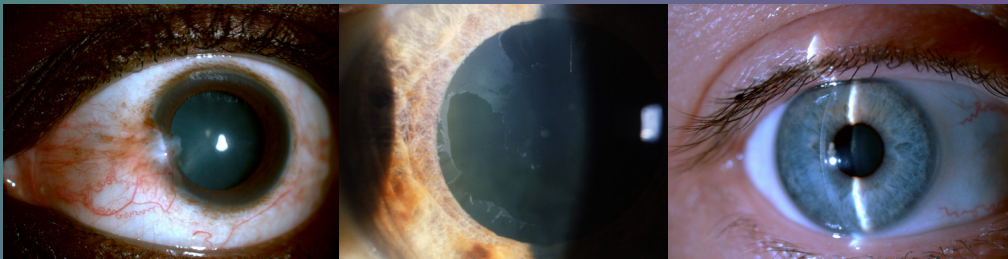
Non Amber



# High quality digital images with the DC-4 Digital Photo Attachment\*

The DC-4 Digital Camera can be easily mounted on any of the “D” series of Topcon Slit Lamps converting them into an ophthalmic imaging instrument.

The DC-4 captures color and monochrome images of the eye. When used in conjunction with the BG-5 background illuminator, the Infra-red capabilities allow viewing and documenting meibomian glands.



\* Optional

## Features



**Smart Capture Function**  
five images captured in rapid sequence.



**Live View**  
see exactly what you are capturing on screen.



**Still Image with Auto Exposure (AE) Function**  
always the correct color and brightness balance



**Video Capability**  
video clips are easily obtained and displayed



**Meibomian Gland Observation**  
view and document meibomian glands condition with infrared viewing

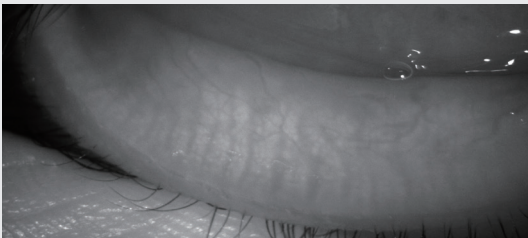
## Meibomian Gland Observation

Meibomian gland observation can be performed and documented using the optional illumination system in selected models.<sup>\*1\*2</sup>

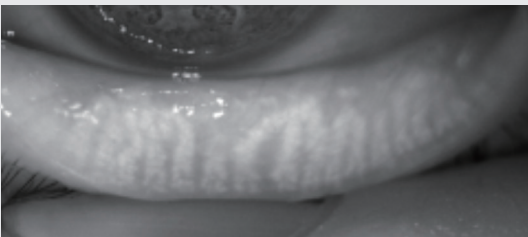
<sup>\*1</sup> The selected configuration is Digital Slit Lamp SL-D701 + Digital Camera DC-4 + background illuminator BG-5.  
<sup>\*2</sup> Arita Reiko et., "Development of Definitive and Reliable Grading Scales for Meibomian Gland Dysfunction", AMERICAN JOURNAL OF OPHTHALMOLOGY SEPTEMBER 2016 ;169:125-137



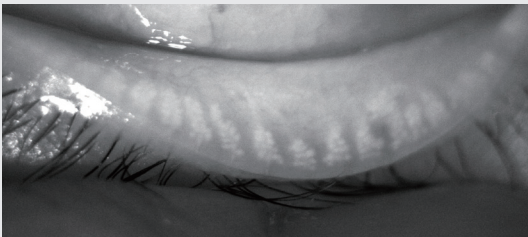
Grade 0



Grade 1



Grade 2



Grade 3

Courtesy for the Meibomian gland images: Reiko Arita, MD, PhD, Itoh Clinic, Department Ophthalmology, the University of Tokyo School of Medicine.

## Image samples

The DC-4 digital sensor provides natural color and sharp, clear images.

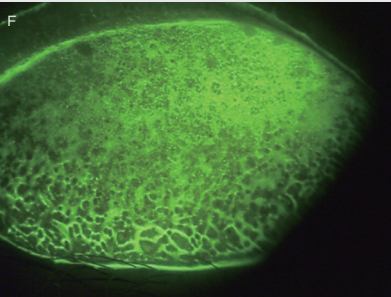
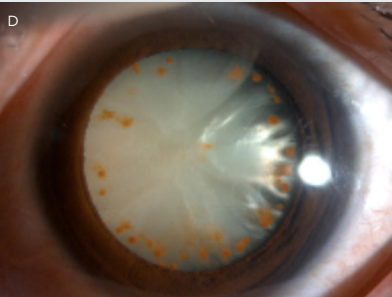
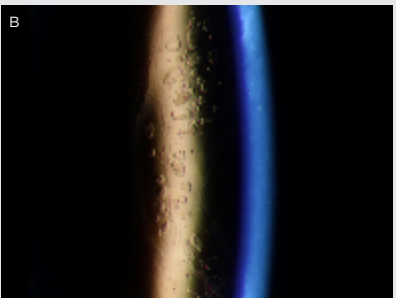


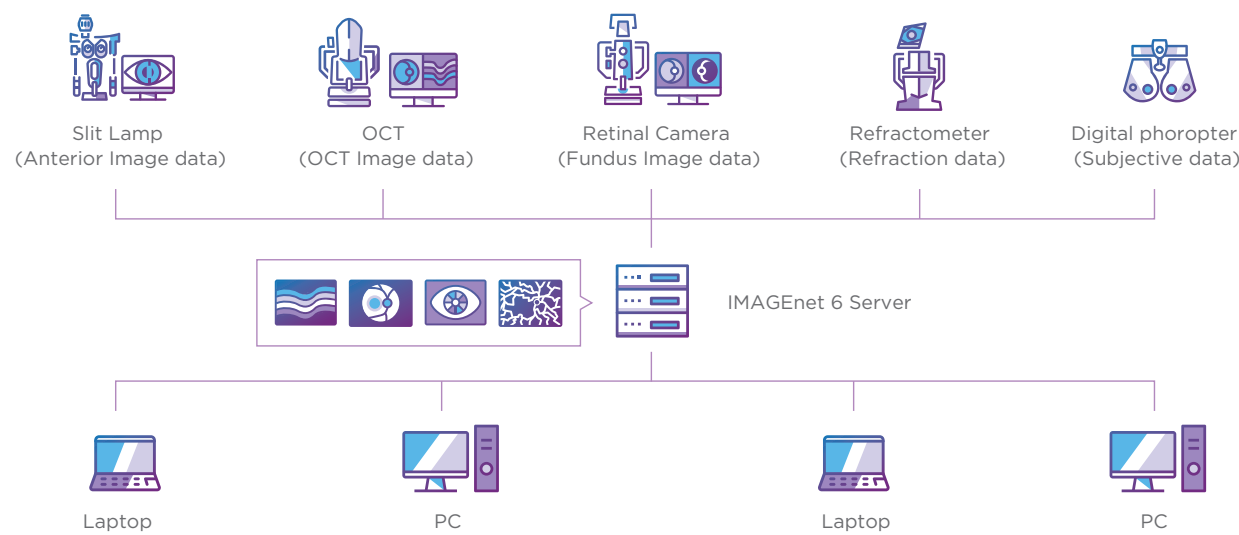
Image courtesy:  
A,B,C,D and E: Zhang Yang, M.D, Beijing Tongren hospital  
F: Toru Noda, M.D, Department of Ophthalmology, Tokyo Medical Center

# Connectivity

When used in combination with the DC-4 Digital Attachment, all SL “D” Series Slit Lamps can capture and transfer images to the IMAGEnet 6 ophthalmic data system. IMAGEnet 6 is Topcon’s proprietary data management software capable of capture, store, display and enhance digital images obtained with Topcon devices.



## Topcon IMAGEnet 6 Data Management System



The balanced combination of LED and halogen illumination models plus a selection of optional accessories provide versatility and convenience .

### Slit Lamp halogen type



#### SL-D2/D4

Digital Slit Lamp

**SL-D2:** A basic slit lamp with three magnifications, halogen illumination and digitally ready for use with the DC-4 attachment.  
**SL-D4:** Five magnifications, halogen illumination and digitally ready for use with the DC-4 attachment.



#### SL-D301

Digital Slit Lamp

Basic three magnification slit lamp with halogen tower illumination system and digitally ready for use with the DC-4 attachment.



#### SL-D701

Digital Slit Lamp

Halogen illumination, five magnification and digitally ready for use with the DC-4 attachment. Accepts the BG-5 background illuminator with infra-red capability for meibography capture and the blue-free filter system for fluorescent observation.

### Slit Lamp LED type



#### SL-2G

LED Slit Lamp

Basic, economical and environmentally friendly with three magnifications and LED illumination.



#### SL-D4 (Type: LED)

Digital Slit Lamp

Five magnifications, LED illumination and digitally ready for use with the DC-4 attachment. Includes exciter filter for use with optional blue-free observation system.



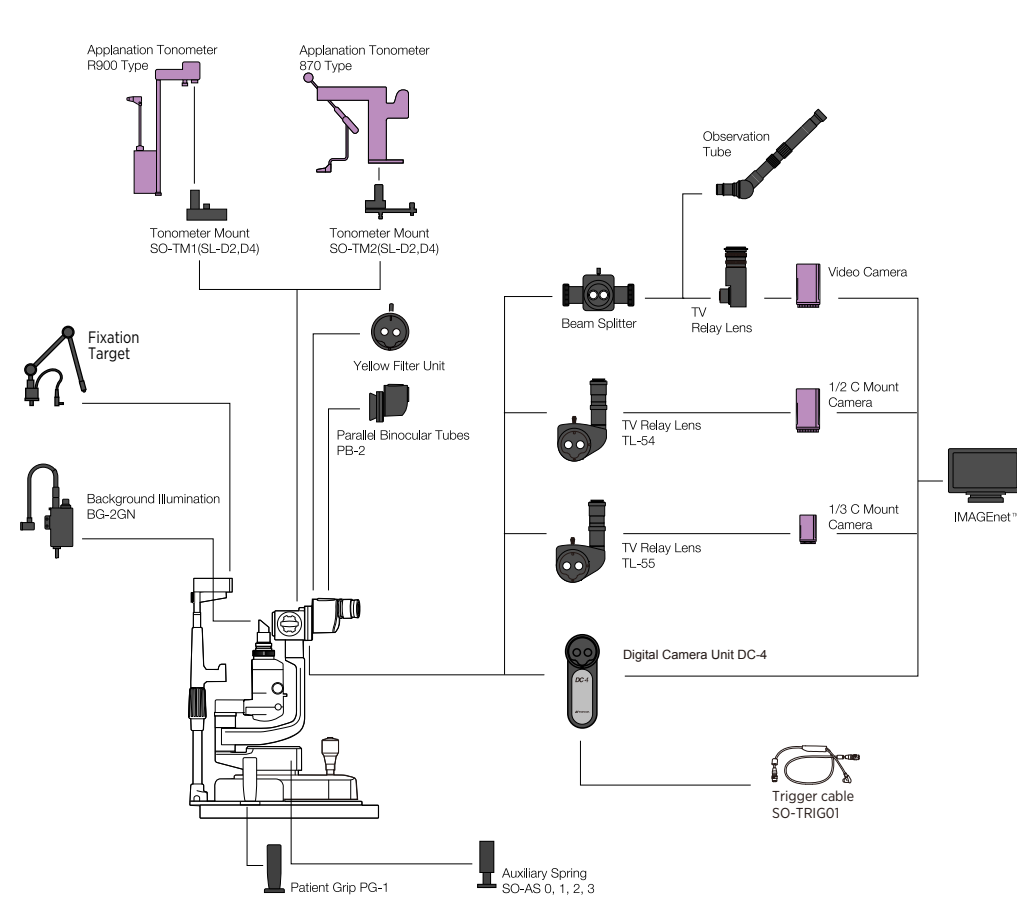
#### SL-D701

Digital Slit Lamp

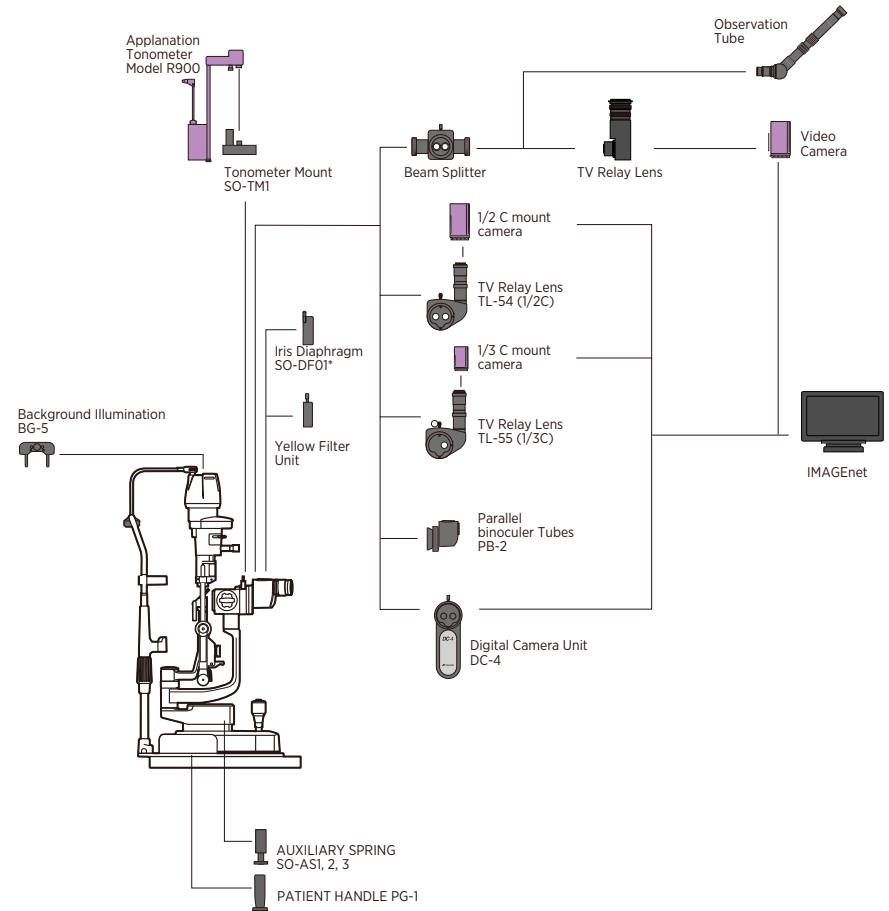
LED illumination, five magnification and digitally ready for use with the DC-4 attachment. Accepts the BG-5 background illuminator with infra-red capability for meibography capture and the blue-free filter system for fluorescent observation.



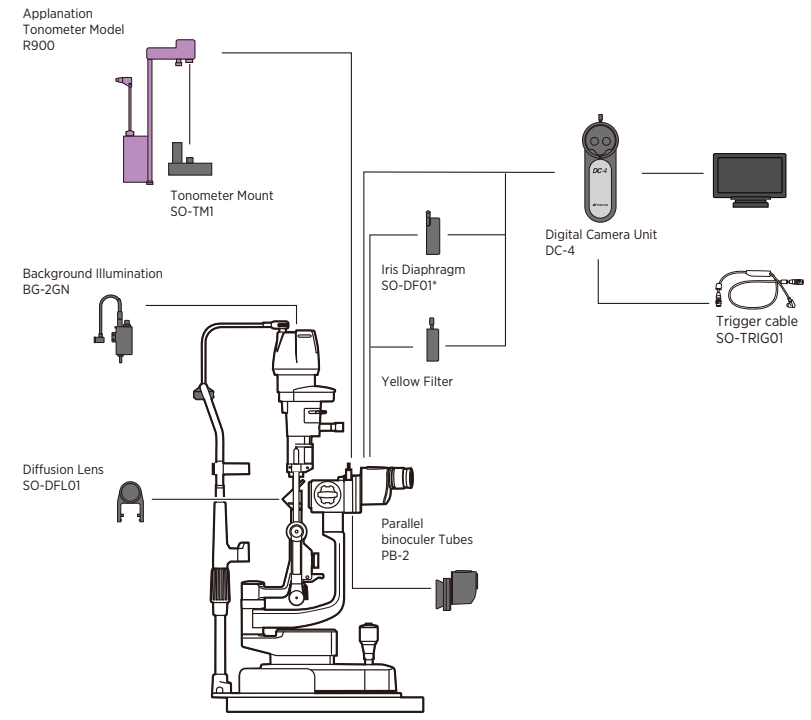
System Configuration: SL-D2/D4 (Type:LED )



System Configuration: SL-D701



System Configuration: SL-D301



Topcon's product Third party product

Optional Accessories



\* Not available for all countries. Please check with distributor in your region for availability.

Microscope		SL-2G		SL-D2		SL-D4/ SL-D4(Type:LED)		SL-D301		SL-D701	
Type		Galilean type		Galilean type				Galilean type		Galilean type	
Magnification Selection		3 steps by drum rotation		3 steps by drum rotation		5 steps by drum rotation		3 steps by drum rotation		5 steps by drum rotation	
Eyeiece		12.5x		12.5x		12.5x		12.5x		12.5x	
Magnification Ratio (Field of View)		10x(22.5mm) 16x(14.1mm) 25x(8.8mm)		10x(22.5mm) 16x(14.1mm) 25x(8.8mm)		6x(35.1mm) 10x(22.5mm) 16x(14.1mm) 25x(8.8mm) 40x(5.6mm)		10x(22.5mm) 16x(14.1mm) 25x(8.8mm)		6x(35.1mm) 10x(22.5mm) 16x(14.1mm) 25x(8.8mm) 40x(5.6mm)	
Slit Illumination											
Slit Width		0 -14mm, can be altered gradually(14mm=circle)		0 -14mm, can be altered gradually(14mm=circle)		0 - 9mm, can be altered gradually (9mm=circle)		0 -14mm, can be altered gradually(14mm=circle)			
Slit Length		1-14mm, can be altered gradually(14mm=circle)		1-14mm, can be altered gradually(14mm=circle)		1-8mm, can be altered gradually		1-14mm, can be altered gradually(14mm=circle)			
Filters		Blue, Red-Free		Blue, Red-Free, Amber UV Cut (Normal Use), IR Cut (Normal Use)		Blue, Red-Free UV Cut (Normal Use), IR Cut (Normal Use) ND filter (13% transmission)		Blue filter, Red-Free filter, Amber filter, UV Cut (normal use), IR Cut (normal use), ND filter (13% transmission), exciter filter for slit lamp*, barrier filter for slit lamp*			
Illumination Lamp		LED		SL-D2/D4: Halogen SL-D4(Type:LED): LED		Halogen		Halogen		LED	
Base											
Longitudinal Movement		90mm		90mm		90mm		90mm			
Lateral Movement		100mm		100mm		100mm		100mm			
Fine Base Movement		12mm		SL-D2/D4: 15mm , SL-D4LED: 12mm		12mm		12mm			
Vertical Movement		30mm		30mm		30mm		30mm			
Chinrest											
Vertical Movement		80mm		80mm		80mm		80mm			
Power											
Input (Primary)		100-240V		100-240V		100-240V		100-240V			
Frequency		50/60Hz		50/60Hz		50/60Hz		50/60Hz			
Power Consumption		40VA		SL-D2/D4:160VA, SL-D4(Type:LED):110VA		80VA		110VA			
Dimensions											
w/ Table		550mm(W) x 399mm(D) x 520mm(H)		550mm x 399mm x 558mm		550mm x 430mm x 760-790mm		550mm(W) x 420mm(D) x 752 to 782mm(H)			
w/ Unit Table		440mm(W) x 379mm x 558mm(H)		440mm x 379mm x 558mm		440mm x 410mm x 760-790mm		440mm(W) x 397mm(D) x 752 to 782mm(H)			
w/o Table and Chinrest		329mm(W) x 293mm(D) x 414-444mm(H)		SL-D2/D4: 329mm x 306mm x 415-445mm, SL-D4(Type:LED) 329mm(W) x 331mm(D) x 426 to 456mm(H)		312mm x 296mm x 646-676mm		329mm(W) x 331(304)mm(D) x 652 to 682mm(H)			
Weight											
w/ Table		15.2 Kg		17kg		17.5kg		19kg			
w/ Unit Table		14.8 Kg		16kg		17kg		18kg			
w/o Table and Chinrest		8.0 Kg		9.5kg		12kg		11.5kg			

\* A model with standard cobalt blue filter instead of the exciter/barrier filter combination is also available.

DC-4 Digital Camera Unit (Option)

System	Beam flux division by beam splitter
Beam splitter division ratio	Operator side: 50%; Camera side: 50%
Focus distance	35.7mm
Sensor type	1/2.5 type CMOS; Effective pixel number: 5.04 M pixels
Dimensions	76mm(W) x 163mm(D) x 304mm(H)
Weight	430g



DC-4  
Digital Camera Unit



SL-2G  
Slit Lamp



SL-D2  
Slit Lamp



SL-D4/D4(Type:LED)  
Slit Lamp



SL-D301  
Slit Lamp



SL-D701  
Slit Lamp



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**IMPORTANT** In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.  
Not all products, services, or offers are available in all markets. Contact your local distributor for country-specific information and availability.



TOPCON CORPORATION



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