

Topcon Slit Lamp Series

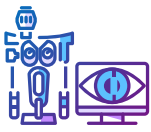


The Combined Result of Optics and Technology

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 the varied demands of eye care specialists.



Optical Quality

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



Ergonomics

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



Versatility

A variety of models in different configurations offering primary clinical observation through to sophisticated image capture. The Topcon series will satisfy any need and budget.



LED Illumination

As a leader in ophthalmic instrumentation, Topcon offers LED as the recommended illumination in many of its Slit Lamp models. The lifetime of LED is substantially longer than conventional halogen bulbs. LEDs don't need frequent replacement, making Topcon Slit Lamps environmentally sound.

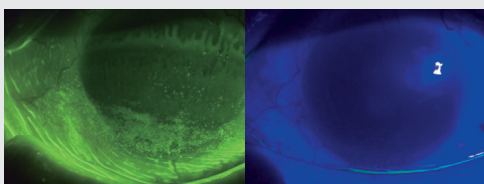
Filter System



Topcon Blue-Free Filter™ System¹

Observation can be performed using the Blue-Free Filter™ System, by using the incorporated exciter filter with the optional barrier filter². Tear dynamics and subtle ocular surface damage can be more clearly viewed, with greater contrast and fewer artefacts.⁴

1. Optional accessory
2. Shizuka Koh et al., "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
4. Arita R, Morishige N, Fujii T, et al., "Tear Interferometric Patterns Reflect Clinical Tear Dynamics in Dry Eye Patients", Investigative Ophthalmology and Visual Science, July 2016



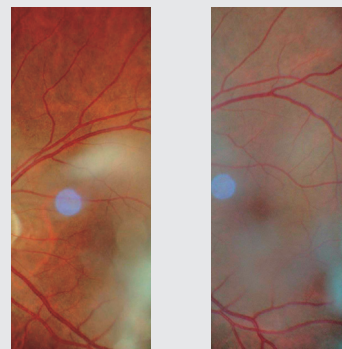
Blue-Free Filter³

Cobalt Blue Filter³



Amber Filter

The SL-D Series incorporates an amber filter, which can be easily selected.



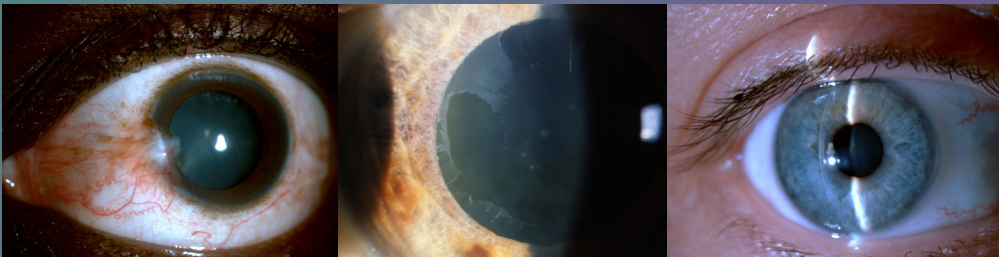
Amber

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 Topcon Slit Lamps, converting them into an ophthalmic image recording system

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



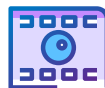
* Optional

Features



Smart Capture Function

five images captured in rapid succession



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 Status

view and document Meibomian glands condition with infrared viewing

Meibomian Gland Observation

The Meibomian glands can be examined and their status documented using the optional BG-5 illumination system in selected models.^{*1*2}

^{*1} The selected configuration is Digital Slit Lamp SL-D701 + Digital Camera DC-4 + background illuminator BG-5.

^{*2} Arita Reiko et., "Development of Definitive and Reliable Grading Scales for Meibomian Gland Dysfunction", American journal of ophthalmology September 2016 ;169:125-137

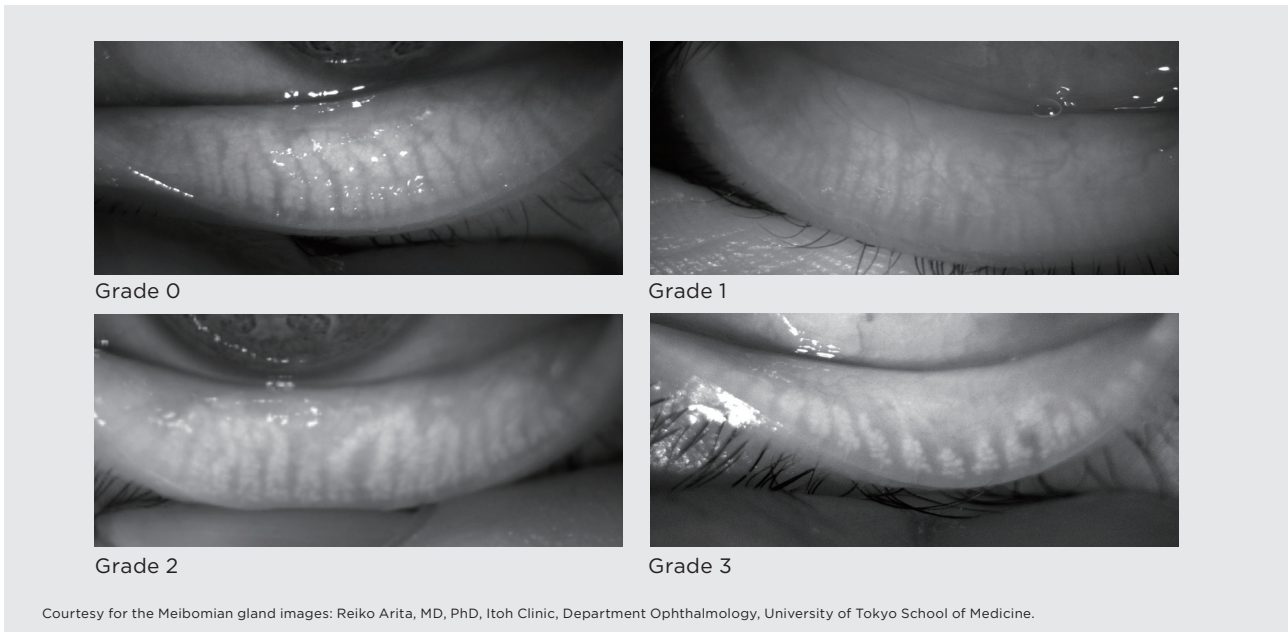


Image Examples

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

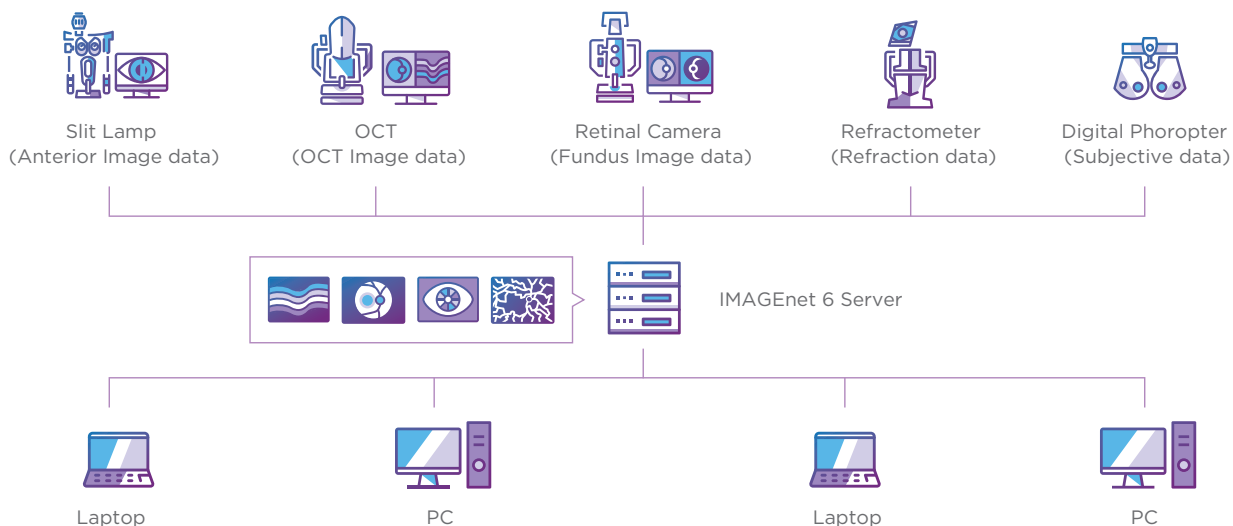


Connectivity

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, storage, display and enhancement of digital images obtained with Topcon devices.



Topcon IMAGEnet® 6 Data Management System



The balanced offering of LED and halogen illumination models plus a selection of optional accessories, provides 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 magnifications 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 magnifications and digitally ready for use with the DC-4 attachment. Accepts the BG-5 background illuminator with infrared capability for meibography capture and the Blue-Free™ Filter System for fluorescein 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™ Filter observation system.

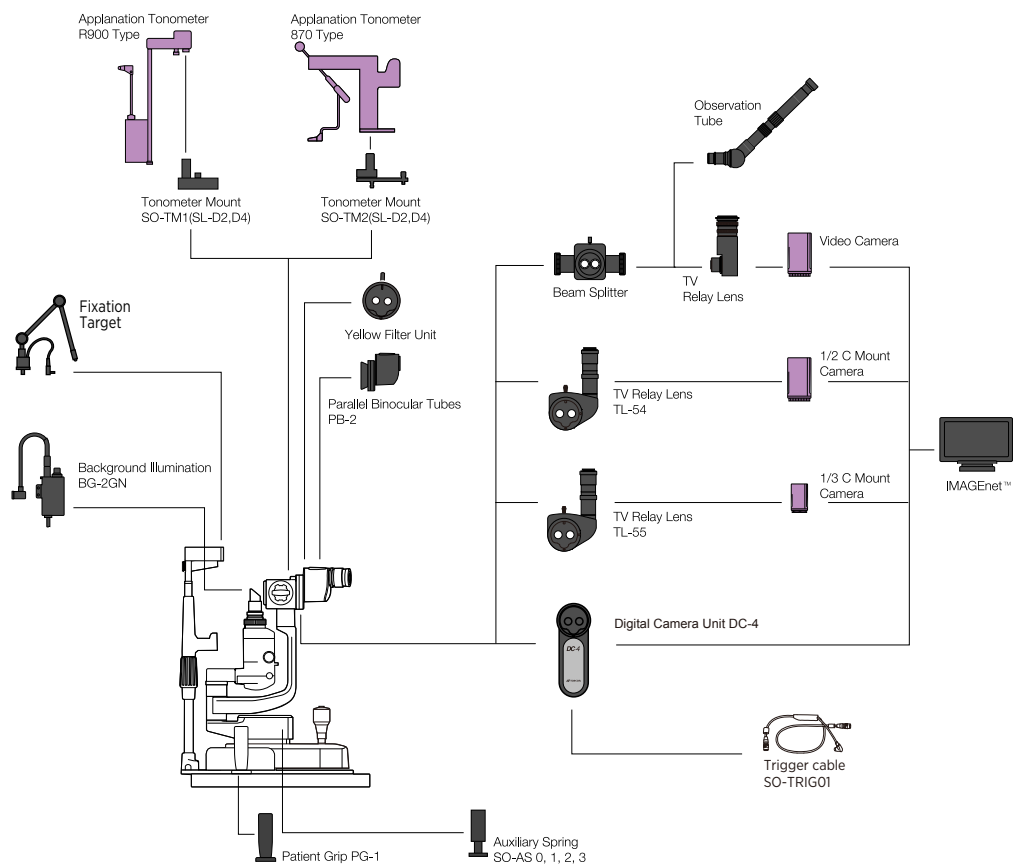


SL-D701

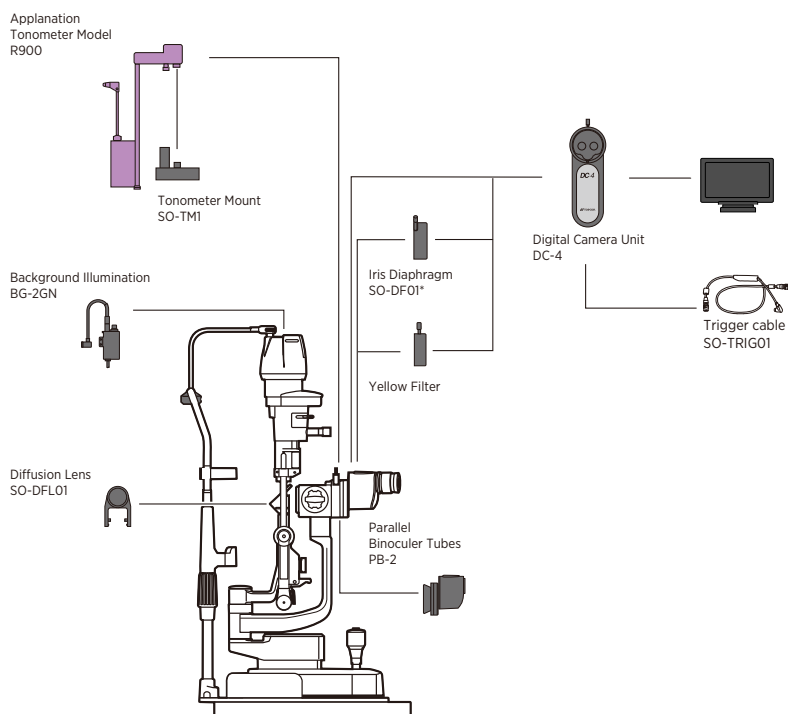
Digital Slit Lamp

LED illumination, five magnifications and digitally ready for use with the DC-4 attachment. Accepts the BG-5 background illuminator with infrared capability for meibography capture and the Blue-Free™ Filter System for fluorescein observation.

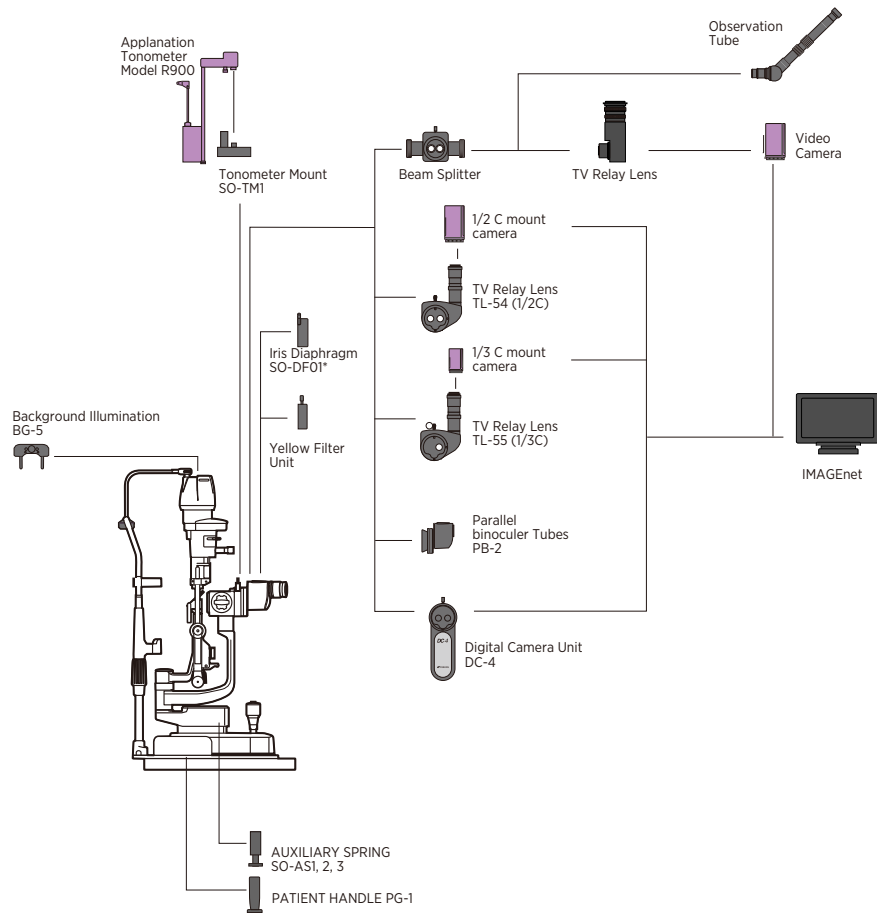
System Configuration: SL-D2/D4 (Type: LED)



System Configuration: SL-D301



System Configuration: SL-D701



■ Topcon product

■ Third party product

Optional Accessories



Background Illuminator
BG-2GN



Background Illuminator BG-5



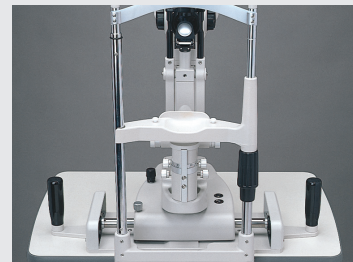
Yellow Filter Unit



TV Relay Lens



Observation Tube



Patient grip PG-1

Microscope	SL-2G	SL-D2	SL-D4/ SL-D4(Type:LED)
Type	Galilean type	Galilean type	
Magnification Selection	3 steps by drum rotation	3 steps by drum rotation	5 steps by drum rotation
Eyepiece	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)

Slit Illumination

Slit Width	0 -14mm, can be altered gradually (14mm=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)	
Filters	Blue, Red-Free	Blue, Red-Free, Amber UV Cut (Normal Use), IR Cut (Normal Use)	
Illumination Lamp	LED	SL-D2/D4: Halogen SL-D4 (Type:LED): LED	

Base

Longitudinal Movement	90mm	90mm	
Lateral Movement	100mm	100mm	
Fine Base Movement	12mm	SL-D2/D4: 15mm , SL-D4LED: 12mm	
Vertical Movement	30mm	30mm	

Chinrest

Vertical Movement	80mm	80mm	
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Power

Input (Primary)	100-240V	100-240V	
Frequency	50/60Hz	50/60Hz	
Power Consumption	40VA	SL-D2/D4: 160VA, SL-D4 (Type:LED): 110VA	

Dimensions

w/ Table	550mm(W) x 399mm(D) x 520mm(H)	550mm x 399mm x 558mm	
w/ Unit Table	440mm(W) x 379mm x 558mm(H)	440mm x 379mm x 558mm	
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)	

Weight

w/ Table	15.2 Kg	17kg	
w/ Unit Table	14.8 Kg	16kg	
w/o Table and Chinrest	8.0 Kg	9.5kg	

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-D301**SL-D701**

Galilean type 3 steps by drum rotation 12.5x 10x(22.5mm) 16x(14.1mm) 25x(8.8mm)	Galilean type 5 steps by drum rotation 12.5x 6x(35.1mm) 10x(22.5mm) 16x(14.1mm) 25x(8.8mm) 40x(5.6mm)
0 - 9mm, can be altered gradually (9mm=circle) 1-8mm, can be altered gradually Blue, Red-Free UV Cut (Normal Use), IR Cut (Normal Use) ND filter (13% transmission)	0 -14mm, can be altered gradually (14mm=circle) 1-14mm, can be altered gradually (14mm=circle) 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*
Halogen	Halogen LED
90mm 100mm 12mm 30mm	90mm 100mm 12mm 30mm
80mm	80mm
100-240V 50/60Hz 80VA	100-240V 50/60Hz 110VA
550mm x 430mm x 760-790mm 440mm x 410mm x 760-790mm 312mm x 296mm x 646-676mm	550mm(W) x 420mm(D) x 752 to 782mm(H) 440mm(W) x 397mm(D) x 752 to 782mm(H) 329mm(W) x 331(304)mm(D) x 652 to 682mm(H)
17.5kg 17kg 12kg	19kg 18kg 11.5kg

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



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 approved or offered in every market, and products vary from one country to another. Contact your local distributor for country-specific information and availability.

 **TOPCON Healthcare**

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