

SL-D SERIES

Digital Slit Lamp

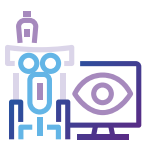


The Combined Result of Optics and Technology

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.

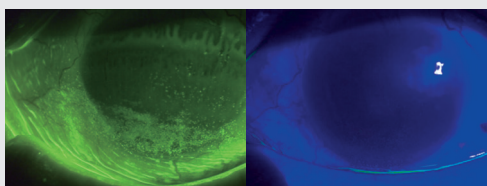
Filter System



Topcon Blue-Free Filter™ System¹

Observation can be performed using the Blue-Free Filter™ System, tear dynamics and subtle ocular surface damage can be more clearly viewed, with greater contrast and fewer artefacts.³

1. Only available in SL-D701 E/B model
2. Images provided by Toru Noda, M.D, Department of Ophthalmology, Tokyo Medical Center
3. 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



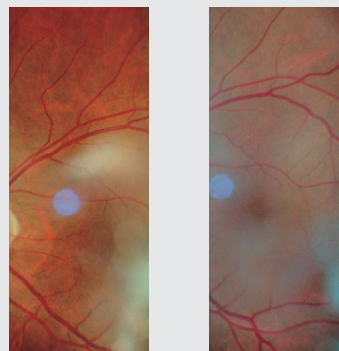
Blue-Free Filter²

Cobalt Blue Filter²



Amber Filter

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



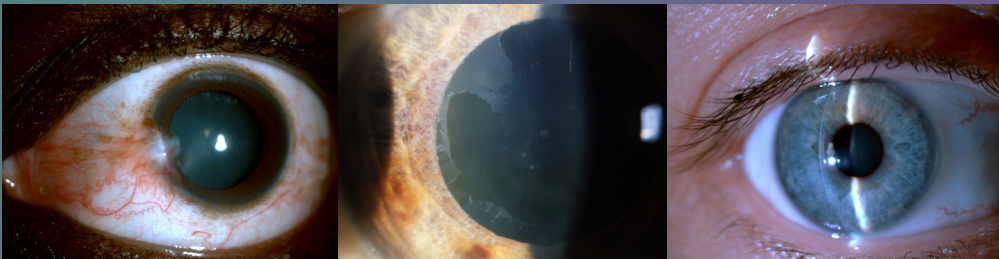
Amber

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 SL-D series, 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

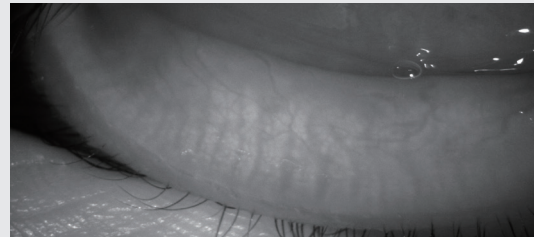
The Meibomian glands can be examined and their status documented using the optional BG-5 illumination system in selected models.^{*1*2}

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

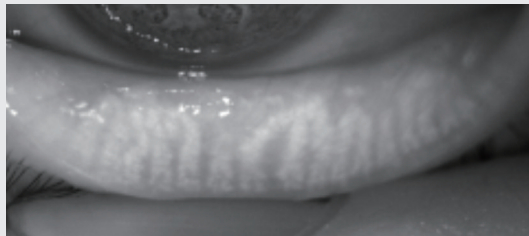
^{*2} Arita Reiko et., "Development of Definitive and Reliable Grading Scales for Meibomian Gland Dysfunction", American journal of ophthalmology September 2016 ;169:125-137



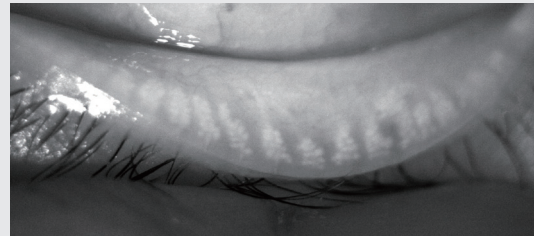
Grade 0



Grade 1



Grade 2



Grade 3

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

Image Examples

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

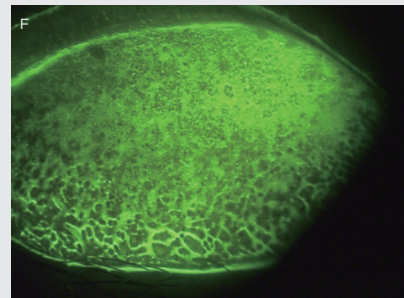
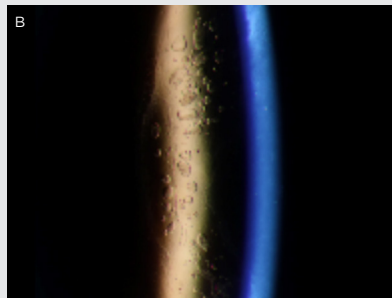
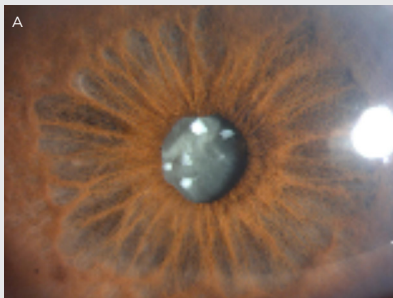


Image courtesy:

A, B, C, D and E: Zhang Yang, M.D, Beijing Tongren Hospital

F: Toru Noda, M.D, Department of Ophthalmology, Tokyo Medical Center

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.

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.

SL-D701 Series



SL-D701

Halogen or LED illumination

Offering halogen or 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.

SL-D701 E/B

Halogen or LED illumination

Offering halogen or 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(TM) Filter System for fluorescein observation. Includes exciter filter and barrier filter as standard for optimal Blue-Free observation.

Optional Accessories



Background Illuminator
BG-2GN



Background Illuminator BG-5



Yellow Filter Unit



TV Relay Lens



Observation Tube



Patient grip PG-1

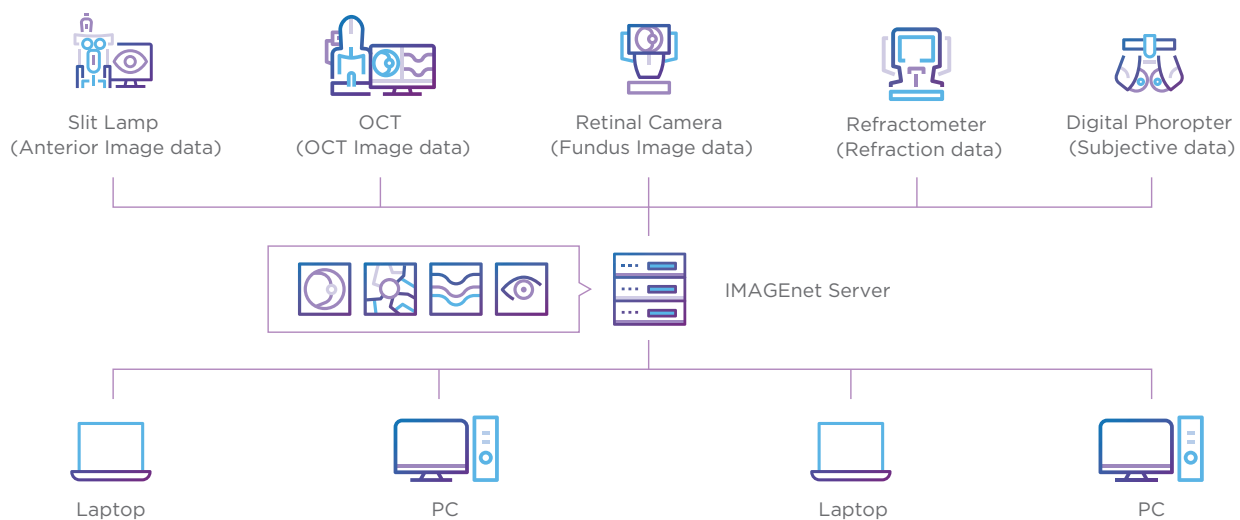
Connectivity



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



Topcon IMAGEnet® Data Management System



Specifications

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	
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 (D) 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
Image output	JPEG, TIFF
Video output	MPEG4



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) Cobalt 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

* Only available in the SL-D701 E/B model.



SL-2G
Slit Lamp



SL-D2
Slit Lamp



SL-D4
SL-D4 (LED type)
Slit Lamp



SL-D301
Slit Lamp



SL-D701
SL-D701 E/B
Slit Lamp

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 HEALTHCARE SOLUTIONS
EMEA OY**

Saaristonkatu 9, 00100 Oulu,
FINLAND
Phone: +358-20-734-8190
E-mail: thsemea.sales@topcon.com
www.topconhealthcare.eu



TOPCON EUROPE MEDICAL B.V.

Essebaan 69, 2908 LJ Capelle a/d
IJssel THE NETHERLANDS
Phone: +31-(0)10-4585077
Fax: +31-(0)10-4585045
E-mail: medical@topcon.com
www.topconhealthcare.eu

TOPCON DANMARK MEDICAL

Praestemarksvej 25, 4000 Roskilde
DANMARK
Phone: +45-46-327500
Fax: +45-46-327555
E-mail: info.todk@topcon.com
www.topconhealthcare.eu/dk_DK

TOPCON SCANDINAVIA

Neongatan 2, P.O.Box 25, 43151
Mölnådal SWEDEN
Phone: +46-(0)31-7109200
Fax: +46-(0)31-7109249
E-mail: info.hcs.se@topcon.com
www.topconhealthcare.eu/sv_SE

TOPCON ESPAÑA

Oficina Principal en España
Frederic Mompou, 4,
08960 Sant Just Desvern, Barcelona,
SPAIN
Phone: +34-93-4734057
Fax: +34-93-4733932
E-mail: medica@topcon.com
www.topconhealthcare.eu/es_ES

TOPCON ITALY

Viale dell'Industria 60,
20037 Paderno Dugnano, (MI) ITALY
Phone: +39-02-9186671
E-mail: info_tit@topcon.com
www.topconhealthcare.eu/it_IT

TOPCON FRANCE MEDICAL

1 rue des Vergers, Parc Swen,
Bâtiment 2, 69760 Limonest,
FRANCE
Phone: +33-(0)4-37 58 19 40
Fax: +33-(0)4-72 23 86 60
E-mail: topconfrance@topcon.com
www.topconhealthcare.eu/fr_FR

TOPCON DEUTSCHLAND MEDICAL

Hanns-Martin-Schleyer-Strasse 41,
D-47877 Willich, GERMANY
Phone: (+49)2154-885-0
Fax: (+49)2154-885-177
E-mail: info@topcon-medical.de
www.topconhealthcare.eu/de_DE

TOPCON POLSKA SP. Z. O. O.

ul. Warszawska 23, 42-470 Siewierz
POLAND
Phone: +48-(0)32-670-50-45
Fax: +48-(0)32-671-34-05
E-mail: info.tpl@topcon.com
www.topconhealthcare.eu/pl_PL

TOPCON GREAT BRITAIN MEDICAL

Topcon House, Kennet Side, Bone
Lane, Newbury, Berkshire RG14 5PX
UNITED KINGDOM
Phone: +44-(0)1635-551120
Fax: +44-(0)1635-551170
E-mail: medical.tgbm@topcon.com
www.topconhealthcare.eu/en_UK

TOPCON IRELAND MEDICAL

Unit 292, Block G, Blanchardstown,
Corporate Park 2 Ballycoolin
Dublin 15, D15 DX58, IRELAND
Phone: +353-12233280
E-mail: medical.ie@topcon.com
www.topconhealthcare.eu/en_IE

TOPCON NORWAY MEDICAL

St. Hansveien 10, 3614 Kongsberg,
NORWAY
Phone: +47-32720072
E-mail: info.hcs.no@topcon.com
www.topconhealthcare.eu/nb_NO

**TOPCON FINLAND MEDICAL,
TOPCON EUROPE MEDICAL
B.V.:N SUOMEN SIVULIIKE**

Martintalo complex, 3. floor
Jaakonkatu 2 01620 Vantaa
FINLAND
Phone: +358-29-123-1260
E-mail: info.hcs.fi@topcon.com
www.topconhealthcare.eu/fi_FI



TOPCON CORPORATION

75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580, JAPAN
Phone: +81-(0)3-3558-2522/2502
Fax: +81-(0)3-3965-6898
www.topconhealthcare.jp

