

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.

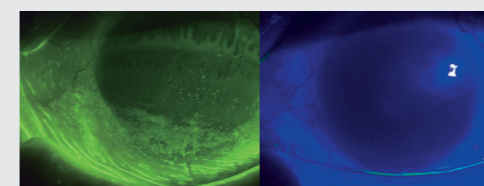
Filter System



Topcon Blue Free Filter™ System¹

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 pooling².

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



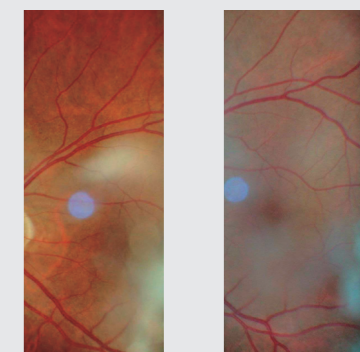
Blue Free Filter³

Cobalt Blue Filter³



Amber Filter

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



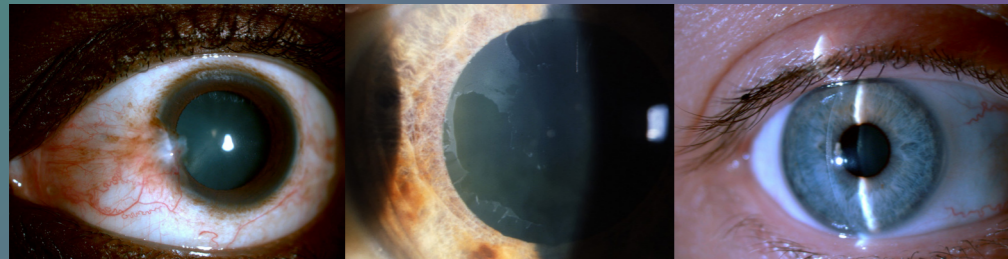
Amber

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.

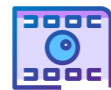


* Optional

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

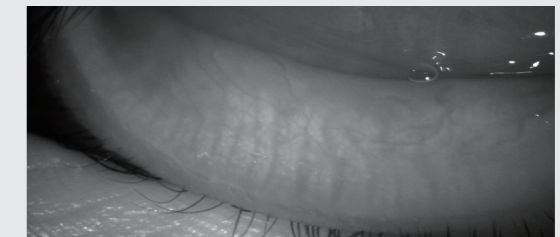
Meibomian gland observation can be performed and documented using the optional illumination system in selected models.^{1,2}

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

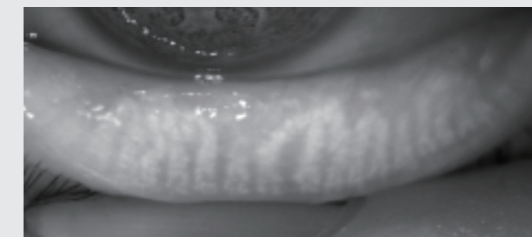
²Arita Reiko et., "Development of Definitive and Reliable Grading Scales for Meibomian Gland Dysfunction", AMERICAN JOURNAL OF OPHTHALMOLOGY SEPTEMBER 2016 ;169:125-137



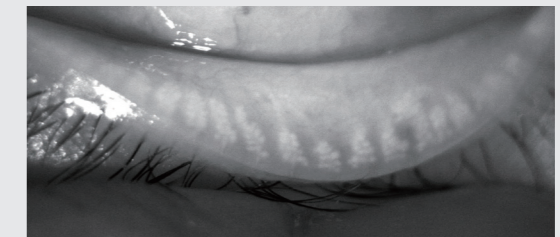
Grade 0



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.

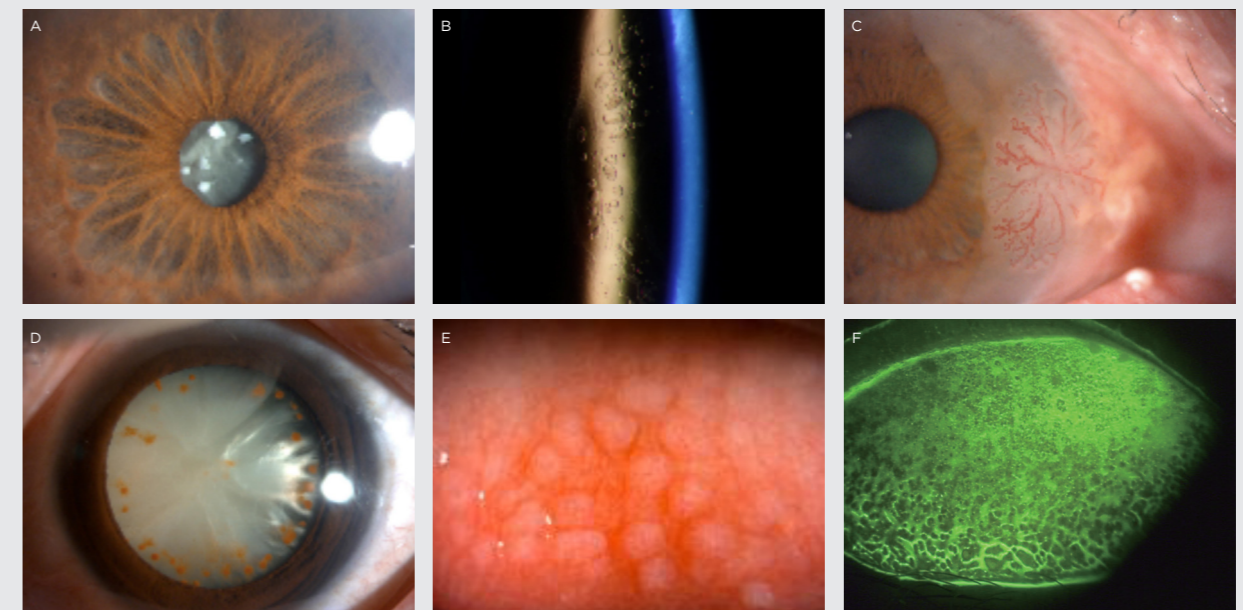


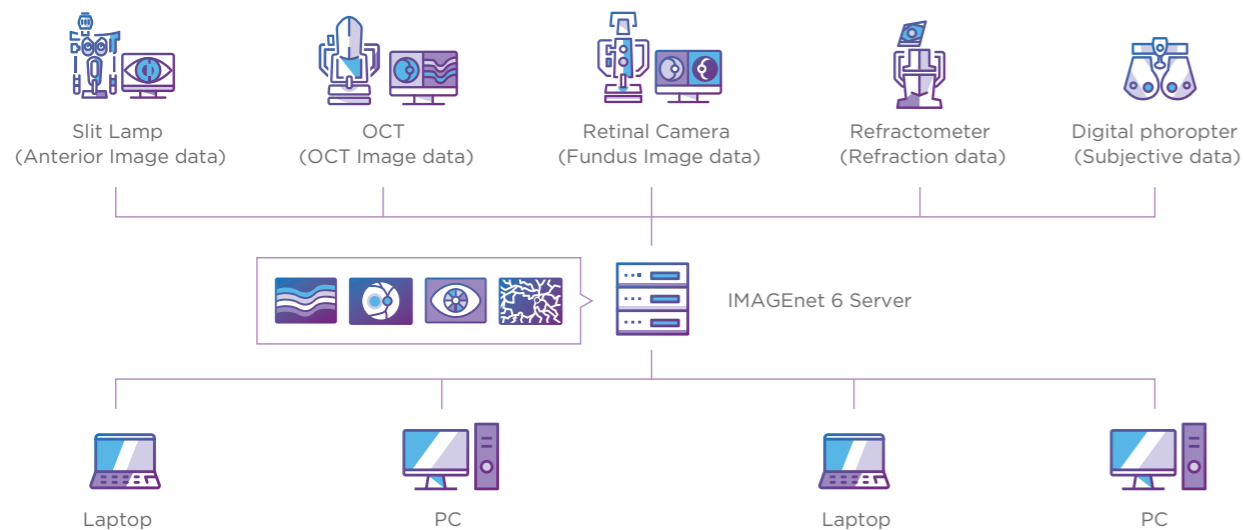
Image courtesy:
A, B, C, D and E: Zhang Yang, M.D, Beijing Tongren hospital
F: Toru Noda, M.D, Department of Ophthalmology, Tokyo Medical Center

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.

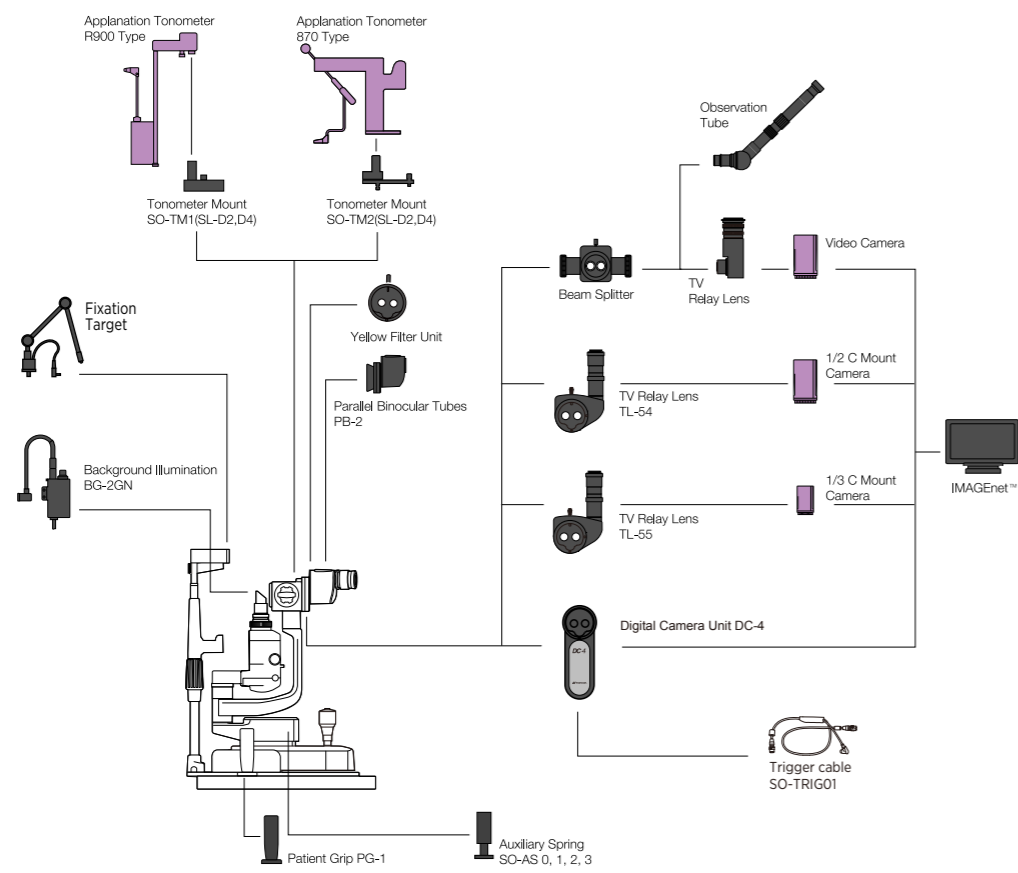


SL-D701

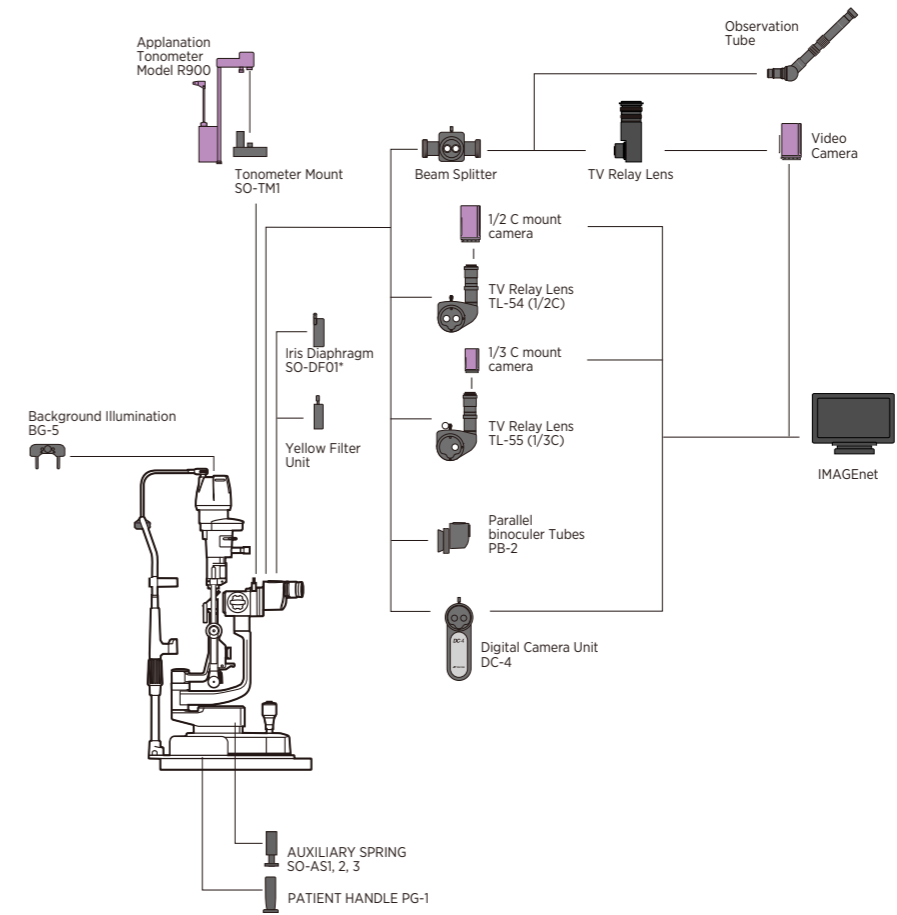
Digital Slit Lamp

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.

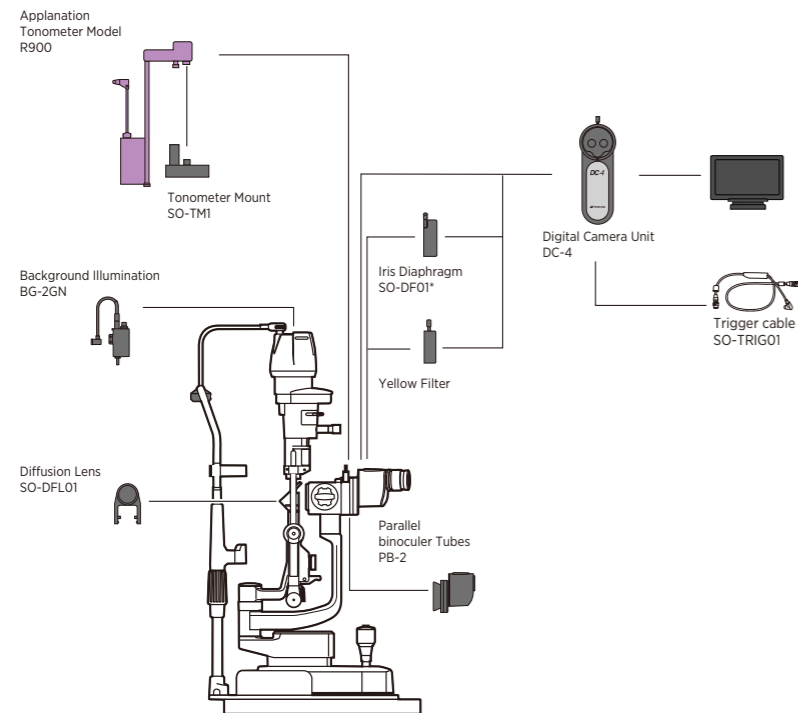
System Configuration: SL-D2/D4 (Type:LED)



System Configuration: SL-D701



System Configuration: SL-D301



■ Topcon's product ■ Third party product

Optional Accessories



Background Illumination BG-2GN



Background Illumination BG-5



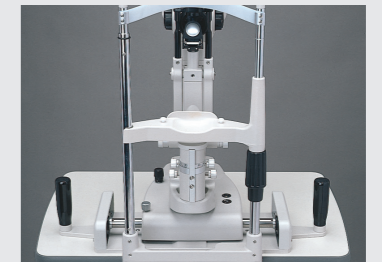
Yellow Filter Unit



TV Relay Lens



Observation Tube



Patient grip PG-1

Microscope	SL-2G	SL-D2	SL-D4/ SL-D4(Type:LED)	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
Eyepiece	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 available for sale in all countries. Please check with your local distributor for availability in your country