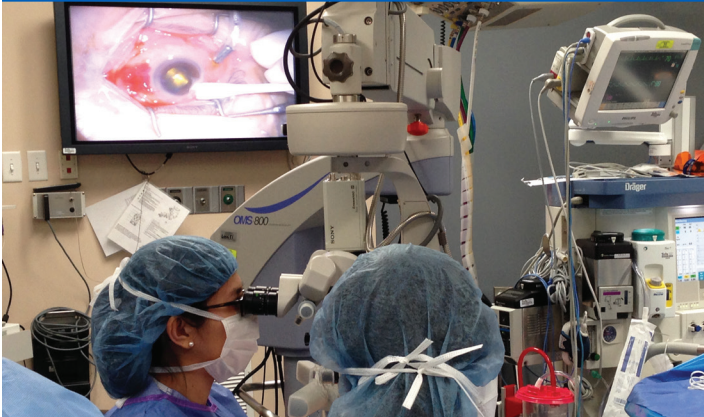
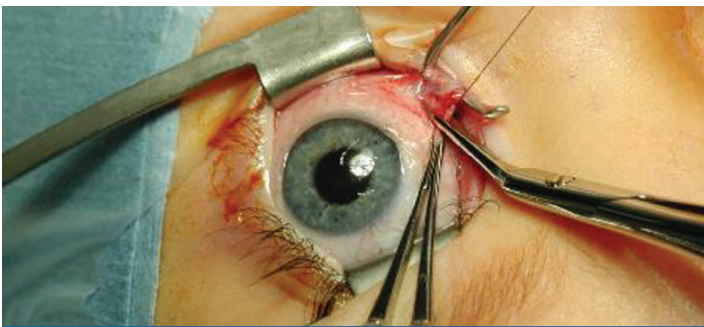


HD Video System for Microscopes



The HD Video System for Microscopes and Medical Applications allows for live viewing of surgical procedures performed with any of the current Topcon Operation Microscopes.



The optional 26" Full HD Widescreen Color Monitor displays a bright and clear image of the surgeon's view in real time for teaching and educational purposes. The compact HD video camera mounts unobtrusively on either side of the microscope optical head via an optional TV relay lens and beam splitter.



The HD Camera Head and HD Camera Control Unit (CCU) feature a compact, aesthetic, 1/3 type full HD single MOS sensor, 1080/59.94p, 50p resolution at HDMI output, various video outputs, multi-format, and other functions. The CCU can be placed at a convenient distance from the microscope thanks to the 6m interface cable included. (Other cable lengths are also available.)



The optional Medical Grade Memory Card Portable Recorder model MDR25 provides full digital recording capability in compatible H.264 format on SDHC memory cards. Double SD Memory Card Slots and a Relay Recording function enable two memory cards to be consecutively used. Clear video recordings of surgical procedures can be obtained for presentations, teaching and training.



YOUR VISION. OUR FOCUS.

MICROSCOPE HD VIDEO SYSTEM TECHNICAL SPECIFICATIONS

GENERAL

Device	1/3 type full HD single MOS sensor
Camera Head Weight	0.1 lbs. (43g)
Camera Head Dimensions (W x H x D)	1-3/32 x 1-1/16 x 1-17/32 in. (28 x 27 x 39mm)
CAMERA	
Resolution	1080/60p resolution from HDMI output
Horizontal Resolution	900 TV lines (typical) at horizontal resolution
Illumination (minimum)	2000 lx at F8 (required); 5 lx at F1.4
CCU Dimensions (W x H x D)	4-3/4 x 1-13/32 x 6-3/16 in. (120 x 36 x 157mm)
Multi-function Control	Camera title, ELC, Electronic shutter, Gain adjustment, Electronic sensitivity enhancement, White balance, Electronic zoom (up to 2.5x), Freeze, Flip, Mirror, Status display
Sensitivity	5 lx at F1.4
Video Output	(GP-KH232CUA) HDMI, RGB/YPbPr, S-video (GP-KH232CSA) HDMI, RGB/YPbPr, SDI
Synchronization	Internal or External
Signal-to-noise Ratio	54db (at output using 1080i)

Specifications subject to change without notice.

MICROSCOPE HDVTS OPTIONAL RECORDER MDR25 TECHNICAL SPECIFICATIONS

Recording Mode		Image Size	Bit Rate	Frame Rate		Audio	Recording Time (approx.)
				59.94 Hz	60.00 Hz		
MP4*	4K (UHD)	8840x2160	50 Mbps (VBR)	29.97p 23.98p	25p	LPCM 1.5Mbps	5 hours 20 minutes
AVCHD	PS	1920x1080	25 Mbps (VBR)	59.94p	50p	Dolby Audio 384kbps	11 hours
	PH		21 Mbps (VBR)	59.95i 23.98p	50i		12 hours 30 minutes
	HA		17 Mbps (VBR)	59.95i	50i	Dolby Audio 256kbps	17 hours
	HE	1440x1080	5 Mbps (VBR)	59.95i	50i		56 hours
	PH	1820x720	21 Mbps (VBR)	59.95p	50p	Dolby Audio 384kbps	12 hours 30 minutes
	PM		8 Mbps (VBR)	59.95p	50p	Dolby Audio 256kbps	35 hours

*When using the AG-MDC20Gj

Note: Memory cards not included.

The SD Memory Card media for the optional Medical Grade Memory Card Portable Recorder is totally free from abrasion and dropout. There is no drive mechanism required, as there is for tape and disc-based recorders, so power consumption is low, and size and weight are reduced. Malfunctions are less likely to occur, and there is no need to replace heads or transport components. This translates into lower costs and easier maintenance, greater energy savings, and less waste when the unit is eventually disposed of. All of these features help to conserve the environment.



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