

## **Features**

- 3-CMOS HD Sensors, 2.1MP, progressive, 1/2.9"
- 3G-SDI/HD-SDI and DVI-D output, 1920 x 1080
- Switchable between 1080p and 1080i
- Up to 1,000 TV lines resolution
- 5 User-configurable scene files
- Binning mode for 4x increase in sensitivity
- Image flip and mirror
- Gen-lock for 3D and multi-camera use
- Remote control via RS232
- C-mount lens mount

# For enhanced near-infrared applications

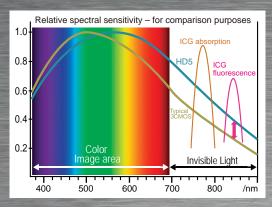
- Removable optical low pass filter
- Provides switchable output between full-HD video in visible and near-infrared spectrums
- Approximately 3dB increased sensitivity in near IR
- Expanded menu functions for red filter IR mode

# **IK-HD5U** configuration

- USB3.0 and DVI-D outputs
- 1920 x 1080 at 59.94fps via USB3.0 or 10fps in USB2.0
- Addition of front panel freeze frame
- Long exposure mode up to 60 frames, (1 second)



Toshiba introduces the latest 3-CMOS camera innovation, a progressive-scan full-HD 1080p/1080i video camera featuring 3G-SDI/HD-SDI and DVI-D or USB3.0 and DVI-D outputs and removable optical low pass filter (OLPF) for dual-mode imaging applications switchable between visible light and near-infrared visualization. IK-HD5U configuration includes advanced features particularly well suited for microscopy applications including USB3 output, freeze frame and longer exposure up to 1 second (60 frames). This HD camera can be used for any HD video application as well as applications which use fluorescing agents. While the IK-HD5 is not an approved IEC60601 medical device, its imaging capabilities are well-suited as a component of surgical microscopy, endoscopy, IR inspection and defense imaging systems.



Incorporating Toshiba's innovative three-chip technology, the IK-HD5 provides approximately 3dB increased sensitivity in the near-infrared spectrum through 700-870 nm. When equipped with the appropriate optics and filters, the IK-HD5 can be used for both visible light and near IR imaging applications such as indocyanine green (ICG) and other fluorescing agents.

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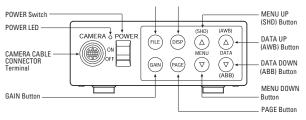
# Camera Head Specifications

#### **IK-HD5H**

Image Sensor	3-CMOS, 1/2.9 inch, 2.1MP progressive
Output Resolution	Horizontal : 1920, Vertical : 1080
Resolution : H : V	1000 TV lines standard 1000 TV lines standard
Sensitivity	F10 standard (59.94 Hz setting) F11 standard (50 Hz setting) (at 2000 lx, 3000 K)
Minimum Illumination	4.8 lx (59.94 Hz setting) 4.0 lx (50 Hz setting)) at F2.2 , 20 dB, BINNING: ON 9.6 lx (59.94 Hz setting) 8.0 lx (50 Hz setting) at F2.2, 20 dB, BINNING: OFF
S/N Ratio	56 dB standard AGC: OFF, Gamma: OFF, Enhance: OFF
Operating Temperature	0°C to 40°C / 32°F to 104°F
Operating Humidity	Less than 90% (non-condensing)
Weight	Approx. 93 g (3.3 oz)
Dimensions	W: 32.6 mm H: 38.6 mm D: 41 mm (1.28" x 1.52" x 1.61") Protruding portion is not included

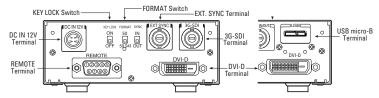
## **Controller Front and Back Panels**

### **IK-HD5E FRONT**



#### **IK-HD5E REAR**

#### IK-HD5U REAR



### System Components

For further details, contact your Toshiba ME/FA distributor.

#### **CAMERA HEAD**

# IK-HD5H CAMERA CONTROL UNIT

IK-HD5E (DVI-D / 3G-SDI or HD-SDI)
IK-HD5U (DVI-D / USB3.0 micro-B)

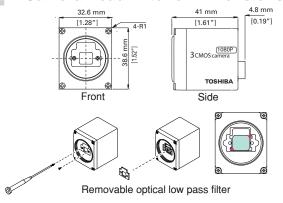
#### **CAMERA CABLE**

Model	Length	
EXC-3HD03	3 m	
EXC-3HD06	6 m	
EXC-3HD10	10 m	
EXC-3HD15	15 m	

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When used for medical imaging applications, the customer assumes full responsibility and liabilities to determine suitability for use as well as responsibility for documentation and testing to comply with relevant medical device standards. Toshiba assumes no liabilities for such applications.

## **Camera Head Exterior Dimensions**



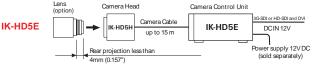
## IK-HD5E / IK-HD5U Controller Specifications

Power Supply	12V DC±10%
Power Consumption	10.3 W
Scanning System	Progressive / Interlaced (Selectable)
Scan Frequency	H: 67.433 kHz, V:59.94 Hz :1080p / 59.94 Hz
	H: 56.250 kHz, V:50 Hz :1080p / 50 Hz
	H: 33.716 kHz, V:59.94 Hz : 1080i / 59.94 Hz
	H: 28.125 kHz, V:50 Hz : 1080i / 50 Hz
Operating Temperature	0°C to 40°C / 32°F to 104°F
Operating Humidity	Less than 90% (non-condensing)
Weight	Approx. 600 g (1.32 lbs.)
Dimensions	W: 110 mm, H: 40 mm, D: 186 mm
	(4.33" x 1.58" x 7.32")
Scene Files	5 User-configurable scene files
White Balance	Auto / Manual (Selectable)
Gain	Auto (-15dB to 20dB); Manual (-15dB to 20 dB), OFF
Output Signal	DVI-D / 3G-SDI or HD-SDI (IK-HD5E)
	DVI-D / USB micro-B (IK-HD5U)
	1920 x 1080/59.94fps max. USB3.0
	1920 x 1080 10fps max. USB2.0
Electronic Shutter	Auto / Manual (OFF 1/60 - 1/10,000) / Syncro Scan

Complies to FCC Part 15 Subpart B, Class A, EN61000-6-4, EN6000-6-2 Toshiba environmental management exceeds RoHS

#### Connection =

IK-HD5U



Camera Control Unit

IK-HD5U

OVI-D to DVI monitor or display
USB3.0 micro-B to computer

Power supply 12V DC
(sold separately)

Compatible displays, computers, video output cables, USB3.0 cables, and lenses are commercial products, not included.

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