FUJIFILM

FUJIFILM
Value from Innovation

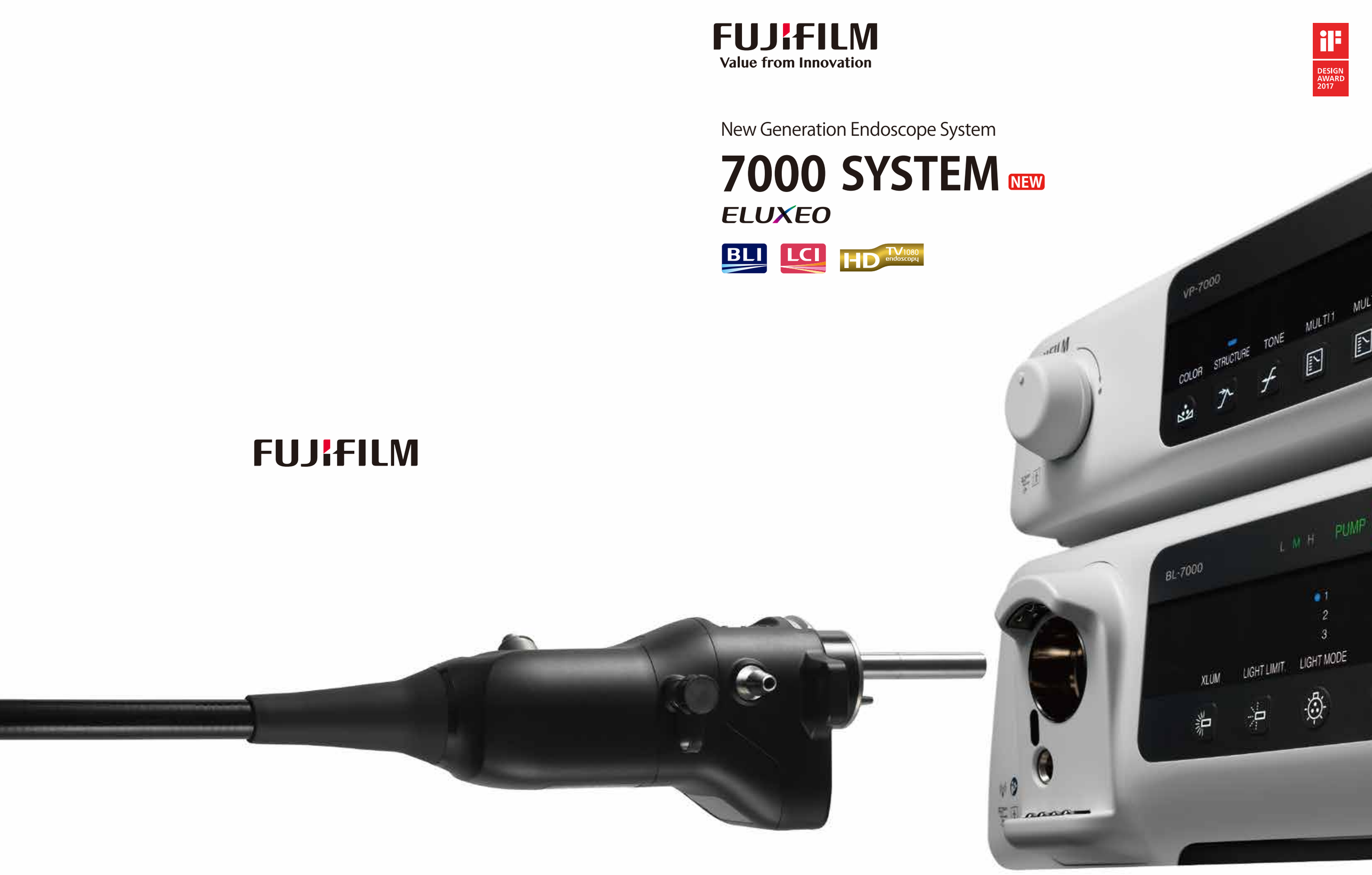
DESIGN AWARD 2017

New Generation Endoscope System

7000 SYSTEM NEW

ELUXEO

BLI LCI HD TV1080 endoscopy



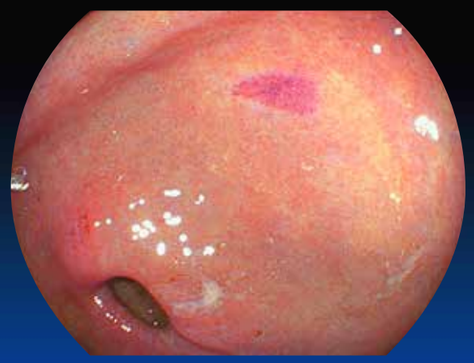
FUJIFILM

FUJIFILM Asia Pacific Pte. Ltd.
10 New Industrial Road, FUJIFILM Building, Singapore 536201
http://www.fujifilm.com.sg

This is a simulated image. Actual image will differ.

Welcome to BLI & LCI World

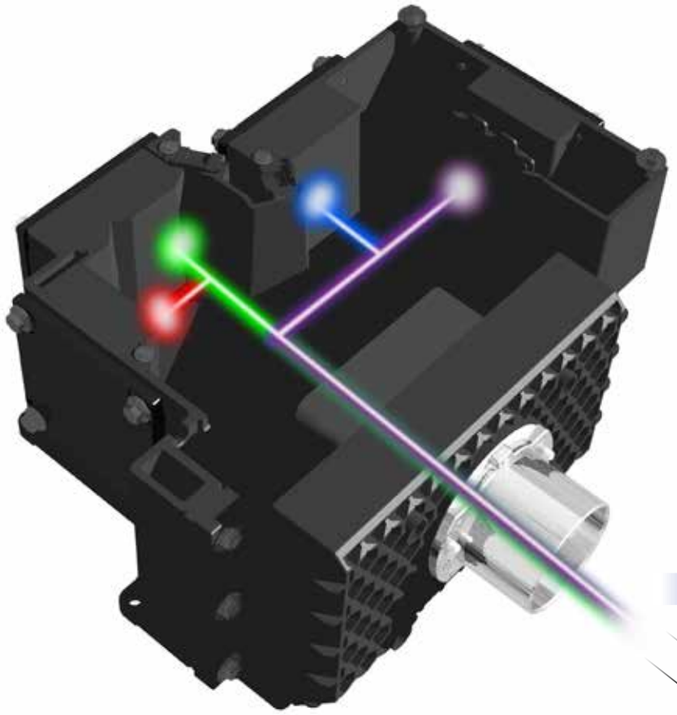
BLI Blue Light Imaging



LCI Linked Color Imaging

- Superior Diagnosis
- Superior Usability

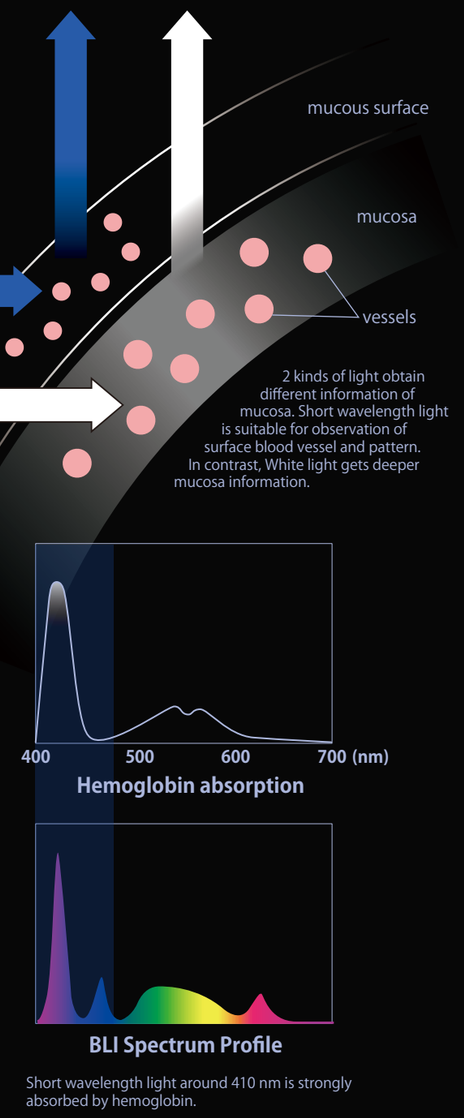
Superior Diagnosis



Multi-Light Technology

High-intensity 4 LED lights are controlled independently with high accuracy.
Blue LED creates short wavelength light, Red/Green/Blue LED are combined as white light. Short wavelength light and white light are invented on 7000 system.

Image processing

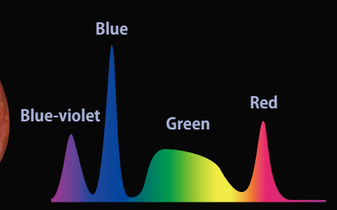


2 kinds of light obtain different information of mucosa. Short wavelength light is suitable for observation of surface blood vessel and pattern. In contrast, White light gets deeper mucosa information.

Hemoglobin absorption

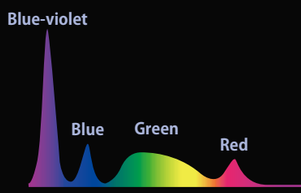
BLI Spectrum Profile

Short wavelength light around 410 nm is strongly absorbed by hemoglobin.



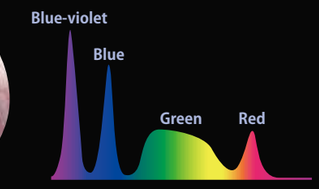
White Light

Bright and clear images are accomplished. Contrast is added with Blue-violet.



BLI

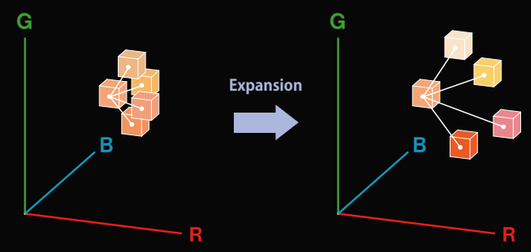
High contrast images can be established with short wavelength component.



LCI

LCI is combined features of both BLI and White Light mode.
Contrast and brightness are compatible.

LCI Principle



Pre-processing

Post-processing

Expanding processing increases the color contrast nearby mucosal "Redness".

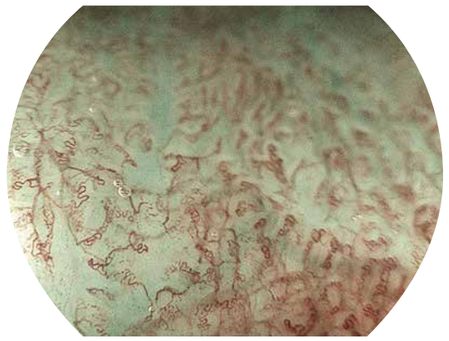
1 BLI (Blue Light Imaging) BLI

Colon

White Light mode

BLI mode

Esophagus



BLI mode

Colon

BLI mode

High contrast images suitable for observing microvascular and microsurface pattern are provided.
Magnifying endoscopy is exellent with BLI.

2 LCI (Linked Color Imaging) LCI

Stomach

White Light mode

LCI mode

Esophagus

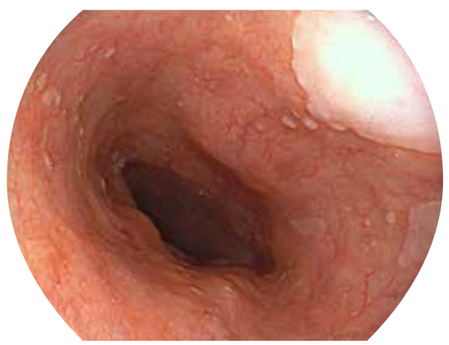
White Light mode

LCI mode

LCI would be helpful for detection with surface pattern and vessels.
Slight color difference is visualized with natural tone, using “Red” component.

White Light

Esophagus



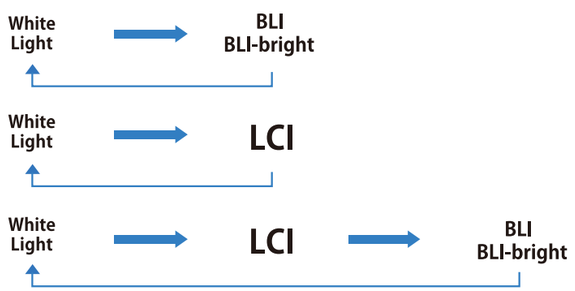
White Light mode

Stomach

White Light mode

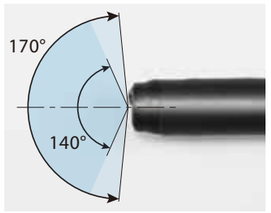
Bright, sharp, and stereoscopic images are accomplished with similar color tones to Xenon light source.
Mega-pixel CMOS enables high-definition and quite low-level noise compatible.

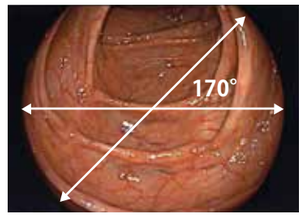
Observation modes can be switched by scope button.



Scope button “2” enables observation modes to be switched in the default setting.

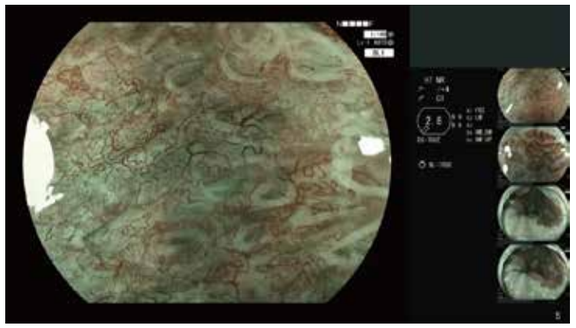
3 Wide 170° field of view





Wide 170° field of view is available with EC-760R-V.
Even areas that are hard to observe such as the reverse side of folds could be observed and approached smoothly.

4 Megapixel CMOS + HDTV output



Full HD display

High-definition images with quite low noise level are established by Megapixel CMOS sensor.
It allows superior visualization for Full HD display.

5 Multi Zoom

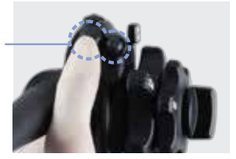
Zoom function

Magnification / Mode		Normal	Low	Middle	Hight	Maximum (x145*)
Continuous		●	●	●	●	●
Step zoom	2 Step	●	●			
	3 Step	●	●	●		
	5 Step	●	●	●	●	●

*When using a 26 inch HD LCD monitor

Multi Zoom function are equipped on EG-760Z / EC-760ZP-V.
With Continuous mode, Step Zoom mode of “2 Step”, “3 Step” and “5 Step” are available. In this modes, images can be magnified in stages by simple press of button.

Switches for zoom in/out



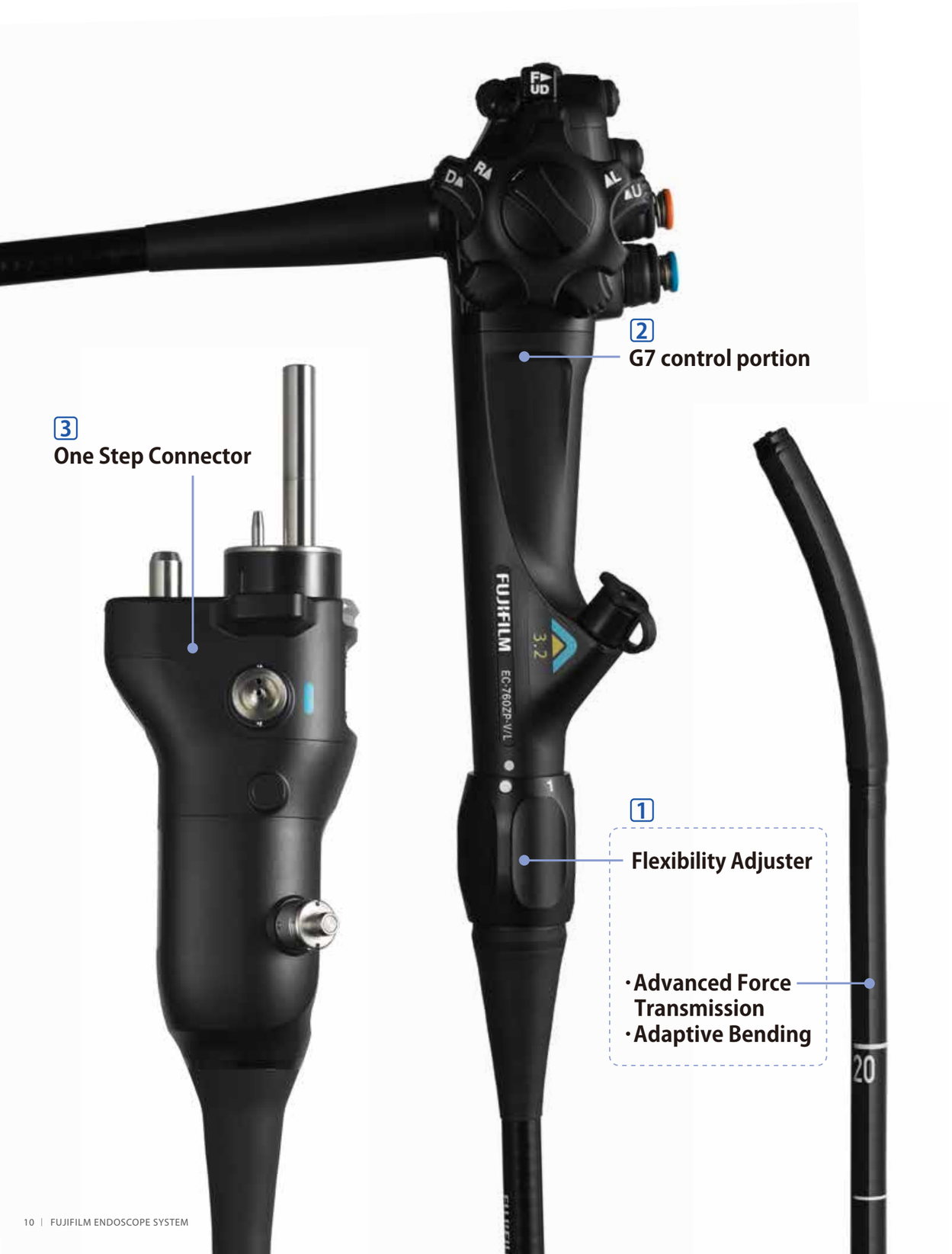
Magnification Images

Low

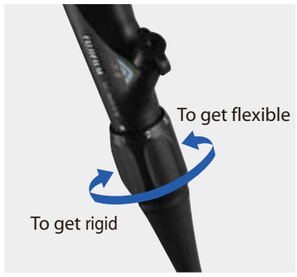
Middle

Maximum

Superior Usability



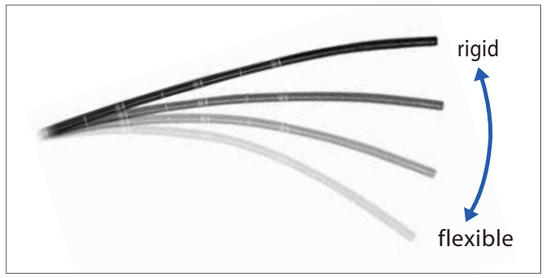
1 Flexibility Adjuster



1 2 3

flexible rigid

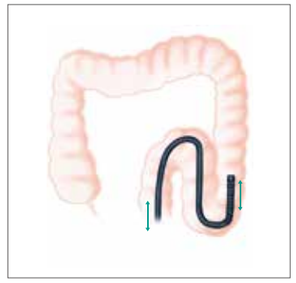
Index on flexibility adjustment ring



Flexibility Adjuster is equipped on EC-760R-V and EC-760ZP-V.
The flexibility of insertion tube can be adjusted with adjustment ring.

Advanced Force Transmission

The flexible portion is designed to transmit operator's movements, pushing, pulling and rotating, to the distal end of endoscope.



Passing the sigmoid colon

In deep insertion

Adaptive Bending

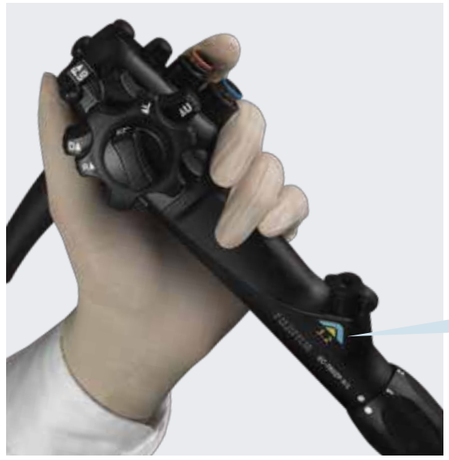
The end of flexible portion is soft, allowing the scope to bend with the angulations. Flexible portion is elastic, and easy to return to its straight shape after passing through angulations.

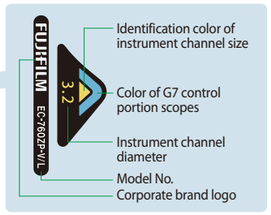
Passing the angulations

After passing through angulations

2 G7 control portion

G7 control portion is developed from ergonomics point of view.
Scope has a rounded surface to fit the hand, and button layout makes intuitive operation possible.





Labels attached to the control portion, which show the model number and instrument channel inlet size.

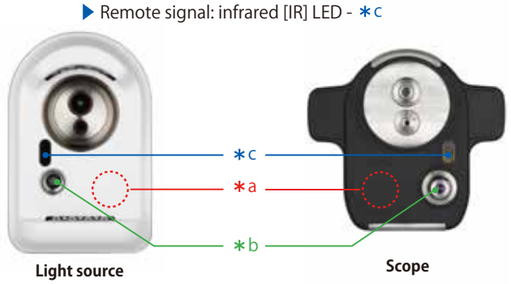
3 One Step Connector
with Contact-free Technology

Scopes can be connected to light source in just 1 step operation.
Scope cable connection is no longer required in setting up. One Step Connector enhances efficiency of clinical workflow.

Contact-free Technology

This's the generic name of below 3 points. It means connectors do not need to touch to transmit power and image data.
By this technology, durability and reliability of scopes is expected to improve.

- Power feed: Wireless electrical supply - ＊a
- Image transmission: High speed optical laser - ＊b
- Remote signal: infrared [IR] LED - ＊c



4 Wide compatibility to conventional endoscope

Compatible with 700 series, 600 / 500 series endoscopes.

700 Series

&

Conventional 600 / 500 Series

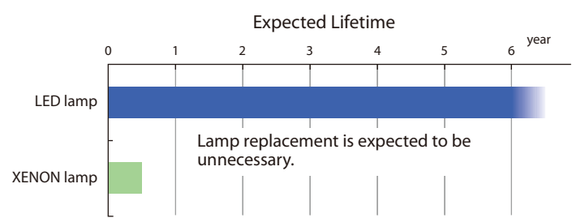
	BLI	BLI-bright	LCI	WLI	FICE
700 Series	○	○	○	○	○
600 / 500 Series	×	×	×	○	○

600/500 endoscopes can be used with
White light and FICE mode.
* FICE : Flexible spectral Imaging Color Enhancement

5 Low-energy, long-lasting and bright light source

When compared to standard xenon light sources,
the LED light source* consumes about a third of the energy and lasts longer.
Life time of the 4 LED light is expected for 6 years based on Fujifilm evaluation condition.
Intensity of BL-7000 qualifies that of 300W Xenon lamp.

*The warranty period is 1 year after date of purchase.



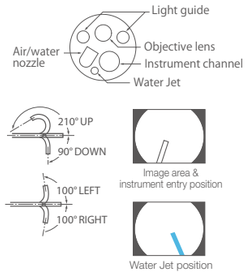
Specification

HD Ultra High Resolution Scopes (Upper G.I. tract)

EG-760R

Field of view	140°
Viewing direction	0° (Forward)
Observation range	2～100 mm
Bending capability	UP: 210° DOWN: 90° RIGHT: 100° LEFT: 100°
Working length	1,100 mm
Total length	1,400 mm
Distal end diameter	9.2 mm
Flexible portion diameter	9.3 mm
Minimum instrument channel diameter	2.8 mm
Image size	Super image

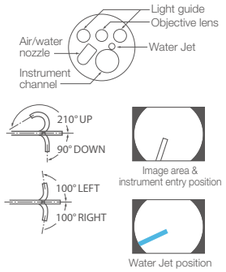
Product name: Video Endoscope GMDN: 38805
Generic name: Flexible video gastroduodenoscope



EG-760Z

Field of view	Normal: 140° Close: 56°
Viewing direction	0° (Forward)
Observation range	1.5～100 mm Normal: 3～100 mm Close: 1.5～2.5 mm
Bending capability	UP: 210° DOWN: 90° RIGHT: 100° LEFT: 100°
Working length	1,100 mm
Total length	1,400 mm
Distal end diameter	9.9 mm
Flexible portion diameter	9.8 mm
Minimum instrument channel diameter	2.8 mm
Image size	Super image

Product name: Video Endoscope GMDN: 38805
Generic name: Flexible video gastroduodenoscope

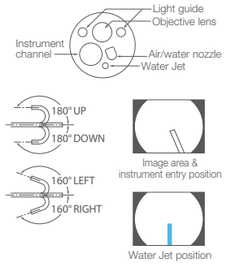


HD Ultra High Resolution Scopes (Lower G.I. tract)

EC-760R-V/M, I, L

Field of view	170°
Viewing direction	0° (Forward)
Observation range	2～100 mm
Bending capability	UP: 180° DOWN: 180° RIGHT: 160° LEFT: 160°
Working length	1,330 mm (M) /1,520 mm (I) / 1,690 mm (L)
Total length	1,650 mm (M) /1,840 mm (I) / 2,010 mm (L)
Distal end diameter	12.0 mm
Flexible portion diameter	12.0 mm
Minimum instrument channel diameter	3.8 mm
Image size	Super image
Flexibility Adjustment	Available

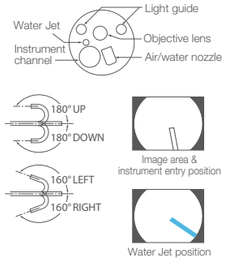
Product name: Video Endoscope GMDN: 36117
Generic name: Flexible video colonoscope



EC-760ZP-V/M, L

Field of view	Normal: 140° Close: 56°
Viewing direction	0° (Forward)
Observation range	1.5～100 mm Normal: 3～100 mm Close: 1.5～2.5 mm
Bending capability	UP: 180° DOWN: 180° RIGHT: 160° LEFT: 160°
Working length	1,330 mm (M) /1,690 mm (L)
Total length	1,650 mm (M) /2,010 mm (L)
Distal end diameter	11.7 mm
Flexible portion diameter	11.8 mm
Minimum instrument channel diameter	3.2 mm
Image size	Super image
Flexibility Adjustment	Available

Product name: Video Endoscope GMDN: 36117
Generic name: Flexible video colonoscope



VP-7000

Power rating	Voltage	100 to 240 V ± 10 %
	Frequency	50/60 Hz
	Current consumption	0.8-0.5 A
Dimensions(W×H×D)		390×110×485 mm (incl. projection)
Weight		9.0 Kg
Observation	Type of color	NTSC/PAL
	Digital HDTV	HD-SDI: 2, DVI-D: 2
	Analog/Digital HDTV	DVI-I: 1
	Analog SDTV	RGB TV: 1, S VIDEO: 1, VIDEO: 1
	Screen resolution	SXGA (Default), Full HD
	Color adjustment	Brightness, Red, Green, Blue, Red tone, Chroma in nine levels (-4 to +4). Contrast in five levels (-1 to +4).
	Contrast	Available in three levels (-1 to +1).
	Iris mode	Function to control the screen brightness. AVE (controls brightness in general), PEAK (controls brightness in highlight areas), AUTO (sets average or peak iris automatically)
	Structure emphasis	Function to adjust the sharpness of the subject structure. SE (Structure Emphasis) 4 level, DH (fine section) -4~+9, DL (structure section) -4~+9.
	Tone	Function to emphasize slight differences between colors by emphasizing the degree of vividness of color. ON/OFF.
	Enlargement of the image	Function to enlarge the endoscopic image.
	Special light observation mode	BLI, BLI-bright, LCI
	FICE	Ten settings available.
	Mask types	Type 1, Type 2, Type 2/Dual Mode.
	Freeze mode	Function to freeze the endoscopic images.
	Peak detection	Function to obtain the highest contrast image.
	Shutter speed	Normal 1/60-1/200, High 1/100-1/400, High (zoom scope) 1/100-1/800
	Assignment of switches	Scope Switch (1-5), Multi buttons on the front panel (1.2), Foot Switch (1,2). *1
	Other functions	Electronic Zoom, PoP Function, Network function, Dual Mode function.
Applicable endoscope		700/ 600/ 500 series endoscope
Data display	Remote control	Fujifilm specified peripherals can be controled.
	Patient information	Patient ID, Patient Name, Sex, Age, Date of Birth, Comments, Hospital name, Doctor name *2
	Other information	Timer, Laptime
	Recording status	Digital printer status, shooting counter, number of recordable images in internal storage device
	Image quality setting status	Structure emphasis, Tone, Electronic Zoom Ratio, IEE observation modes, Focus Indicator.
Image recording	Image compression rate	TIFF; no compression, JPEG; approx. 1/5 , 1/10, 1/20
	Number of recordable images in internal storage device	TIFF: 840, JPEG 1/20: 21,690, JPEG 1/10: 16,270, JPEG 1/5: 5,910 *3
	Recommended external storage device	Swissbit SFU-22048 E1BP2TO-I-MS-111-STD or SFU22048E3BP2TO-I-MS-121-STD *4
	Searching and displaying images	Search screen: Inspection No., Patient ID, Date of Inspection. Display: List, Thumbnail, Enlargement.
Data presetting	Doctors' name	Up to 20 doctors' names.
	Setting by doctor	The information such as color tone, iris mode, contrast, brightness, IEE observation modes are kept by setting the doctor's name.
	Clinical procedure	Up to 20 procedures.
Memory backup	When using lithium battery	6 years (based on FUJIFILM criteria)
Control connector		Light source: 1, Remote: 2, Peripherals: 2, Keyboard: 1, Card reader: 1, Digital printer: 1, Footswitch: 1, Network: 1.
Category of medical electric equipment	Type of protection against electric shock	Class I equipment
	Degree of protection against electric shock	Type BF applied part
	Degree of explosion protection	Prohibited in oxygen-rich environment/ flammable gas atmosphere.

*1 Some limitations by endoscopes.
*2 Max. 45 patients
*3 The number of recordable images varies depending on the type of image.
*4 Concerning other external storage devices, please contact your representative or local dealer.

Product name: Processor GMDN: 18034
Generic name: Endoscopic Video image processor

BL-7000

Power rating	Voltage	100V to 240 V ~ ± 10 %
	Frequency	50/60 Hz
	Current consumption	1.2-0.7 A
Dimensions(W×H×D)		390×155×485 mm (incl. projection)
Weight		12Kg
Illumination	Illumination source	LED, qualifies 300W Xenon lamp intensity
	Durability of LED	6 years (based on FUJIFILM criteria)
	Lighting system	Switching regulator
	Light control method	LED Auto power control
	Light cooling method	Forced air cooling
	Special light observation mode	BLI, BLI-bright, LCI
	Maximum light output	1400 lm (based on FUJIFILM criteria)
	Maximum air supply pressure	65 kPa
Automatic brightness adjustment	Automatic brightness adjustment method	Brightness is automatically adjusted according to the video output (manually possible).
Air supply	Pump	Diaphragm method pump
	Air supply pump	HI/MID/LOW/OFF
Water supply	Method	Feeds water by pressurizing the detachable water container with air.
Indicators on front panel	Transmitted illumination	The light flashes with the maximum light intensity. Used to check the position of the distal end from outside the body.
	Light limitation	To avoid the blood of a bleeding patient becoming clotted by the illuminating light. Used to limit the maximum light intensity.
	Illumination mode	OFF/1/2/3. Observation modes can be switched by pressing the illumination mode button.
Memory of set value		Set values are maintained even after turning off the system.
Category of medical electric equipment	Type of protection against electric shock	Class I equipment
	Degree of protection against electric shock	Type BF applied part
	Degree of explosion protection	Prohibited in oxygen-rich environment/ flammable gas atmosphere.

Product name: Light source GMDN: 35158
Generic name: Endoscopic light source, line-powered

VP-7000
BL-7000

New Accessories (Valve, Tank)

For routine examination

Air / Water Valve
AW-603

Suction Valve
SB-605

Water Tank
WT-603

Used with CO_2 Regulator "GW-100"

Air / Water Valve
AW-604G

Water Tank
WT-604G