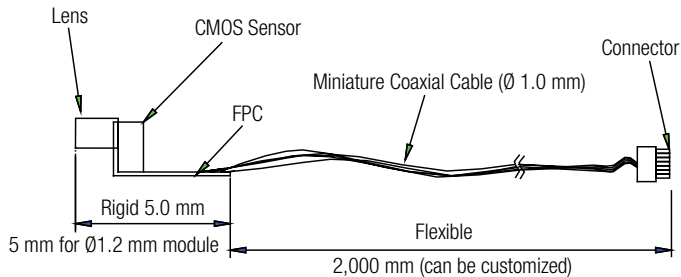


## PRELIMINARY

# Miniature CMOS Imaging Module with 29K Pixel CMOS Sensor for < 2mm Endoscopes

Fujikura's second generation 29K Pixel Miniature CMOS Imaging Sensor Module combines a newly developed miniature color CMOS imaging sensor with a market-leading flexible printed circuit and a miniature coaxial cable. With high flexibility and fast sensibility, the CMOS module is the perfect solution for high resolution, disposable endoscopes as small as 2.0 mm in diameter. Specifications can be modified by Fujikura to meet specific customer requests.



### Advantages

- High Flexibility
- Fast Sensibility
- Small Diameter Module
- Key Enabler for Disposable Flexible Endoscope Applications
- Potentially Replacing Leached Image Bundles in Existing Scope Design

### 29K Pixel CMOS Module Structure (O.D. Ø1.2mm)

### CMOS Image Sensor Parameters

- Resolution: 170 x 170 (28,900 pixels)
- Pixel Size: 2.2  $\mu\text{m}$  x 2.2  $\mu\text{m}$
- Chip Size: 0.74 mm x 0.79 mm x 0.3 mm
- Frame Rate: 50 fps @ Full Resolution
- Dynamic Range: 60 dB
- Output Format: RAW Analog Signal

### Lens Characteristics (Forward View, Customizable)

- Field of View: 120 degrees
- Working Distance: 10 mm
- Lens Type: Combination Lenses
- Lens Diameter: 0.6 mm



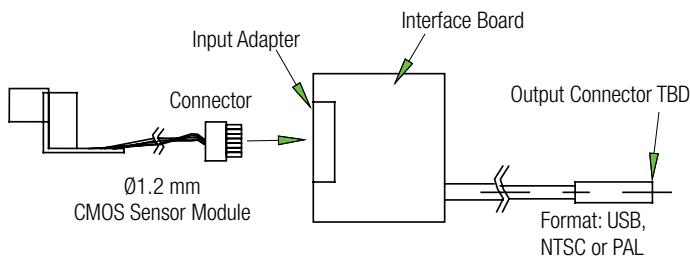
CMOS Module



Pictures Taken by 29K Pixel CMOS Module



An interface board and software that are compatible with the CMOS module can be provided. Interface board design can be customized for output format, display, software features, etc. Available output formats include USB, NTSC or PAL. Therefore, either a personal computer or a portable monitor can be used to display the images captured by the CMOS module.



### CMOS Module with Interface Board and Software (not shown)

### For additional information, contact:

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