Iron CoaXPress
Small Form Factor, Ruggedized Camera

Innovative Approach

The **Iron CoaXPress 13** is a low-cost, low-power, high-speed global shutter CMOS camera with up to 4 channels of CoaXPress 2.0 12G Interface ((Micro-BNC connector) which supports 1280×864 high-quality video at rates up to 3500fps.

Intelligent Design

The Camera incorporates a 10 μm global shutter sensor and a direct lens control (optional) without need of external devices. With compact outline and low power design this camera could fit in tight spaces.

Applications:

- Slow Motion
- High speed
- Motion analysis
- Broadcast
- Traffic control
- Industrial inspection markets

Key Features:

- 1.1 Megapixel up to 3500 fps
- Increased speed with reduced ROI
- Monochrome and Color models
- Up to 10W power at full rate
- 4 x 12Gbps CoaXPress interface
- Commercial and rugged industrial grade options
- Full EMVA1288 report
- Full built-in self-test (BIT)
- Full built-in voltage testing
- Customization as per user requirements

Technical Data

| Feature	Description
Pixel Size	10 µm x 10 µm
Resolution	1280 (H) x 864 (V)
Optical Format	4/3''
Sensor	LUX13HS
Video Output	x 4 channels CoaXPress 2.0 up to 50 (12.5 x 4) Gbps (CXP3, CXP6, CXP12)
Interface connector	x 4 Micro-BNC
Output Resolution	8 or 10 bit
Max Frame Rate	3500 fps @8 bit resolution
	1890 fps @10 bit resolution
Image Acquisition	Continuous / Triggered
Electronic Shutter	Global shutter
Monochrome/ Color	Monochrome / Color
Responsivity	20V/Lux's @ 550nm
Temporal Noise	< 17.9 e-
Full Well Charge	12000 e-
Dynamic Range	> 56.1 dB @ 520 nm
Signal-to-Noise Ratio (SNR Max)	41 dB @ 520 nm
Quantum Efficiency (QE) X FF	54.275% @ 520 nm
On Camera Processing	Defect pixel correction
	LUT
	Digital binning (2 x 2)
	Gain (Analog / Digital) – manual / auto
	ROI
	Auto/Manual black level
	Auto Exposure/Gain
	Image H/V flip
Additional Features	Over/under voltage protection
	Reverse voltage polarity protection
	Three points of temperature sensing
	Frame-by-frame shutter speed change
	Per-pixel FPN (optional)
	Global reset

Mechanical & Electrical

| Feature	Description
Dimensions (without lens mount)	62 mm x 62 mm x 44 mm (Height x Width x Depth)
Lens mount	F-Mount, Canon EF-mount, Birger EF-mount or M42-mount
Weight (without lens or mount)	450g
Typical current	375mA @ 24V
Power input	PoCXP full support
	External 10-28V input
Power consumption	<9W @ 24V DC
Mount	Front mount
Heat dissipation	Active airflow (Fan)
Sensor Mechanical Positioning	≤ 0.15°
Operating temperature	Commercial: 0°C to 50°C, 20-85% humidity (non-condensing)
	Industrial: -40°C to 70°C, 20-85% humidity (non-condensing)
Storage temperature	Commercial: 0°C to 55°C, 20-85% humidity (non-condensing)
	Industrial: -40°C to 75°C, 20-85% humidity (non-condensing)
Shock/Vibration [2]	MIL 810F

* KAYA Instruments reserves the right to update the data sheet from time to time without prior notice.

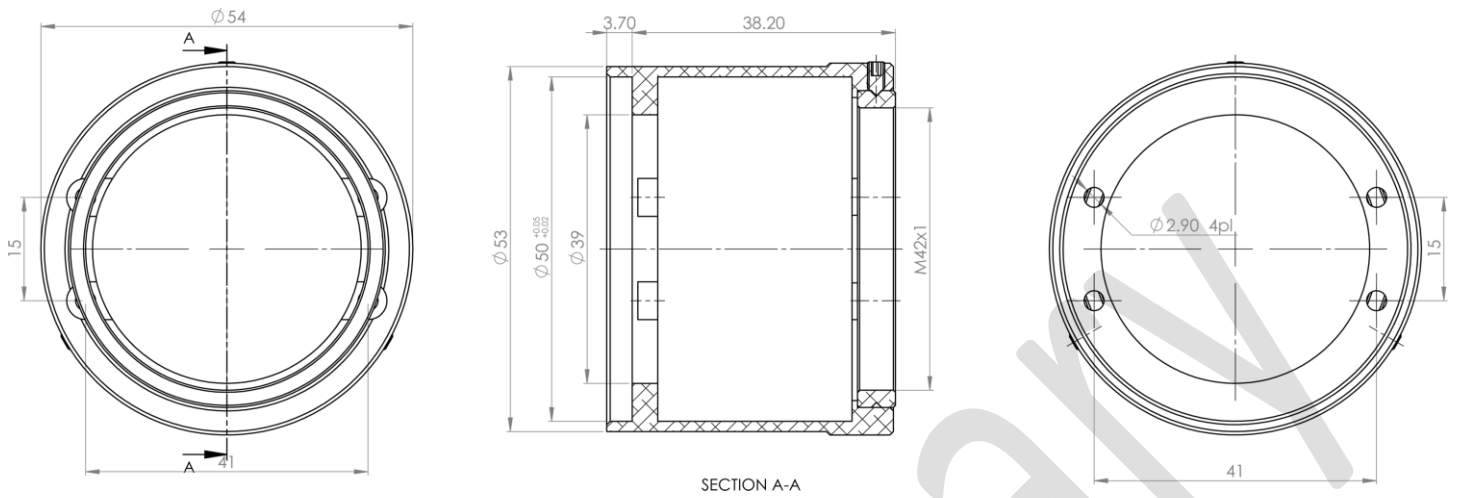## LUX13 Spectral Responses

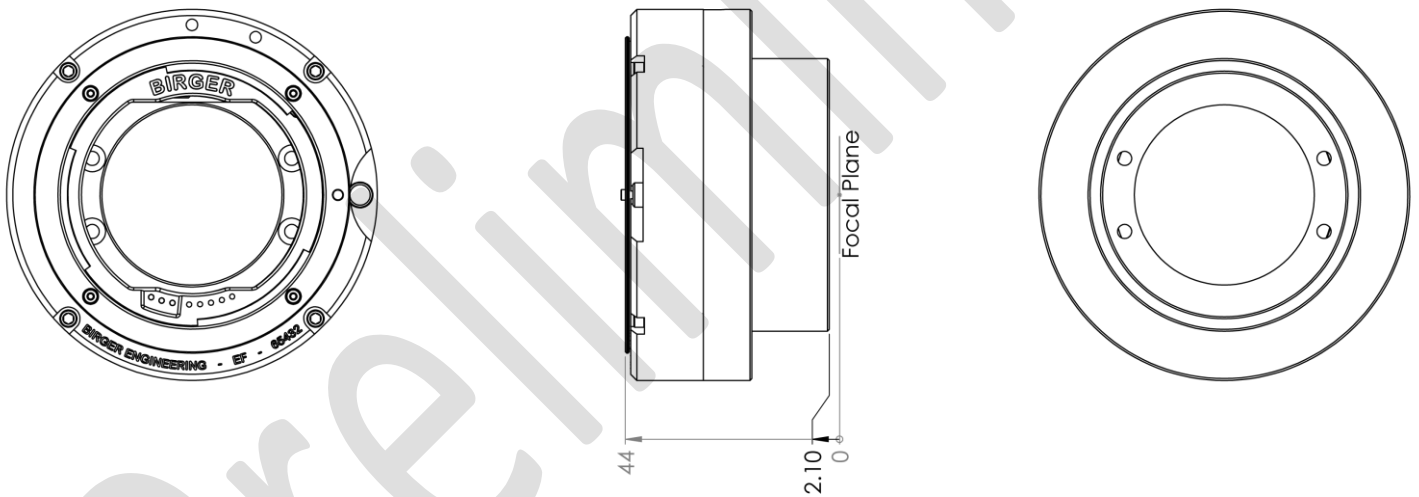**LUX13HS Mono Spectral Response**
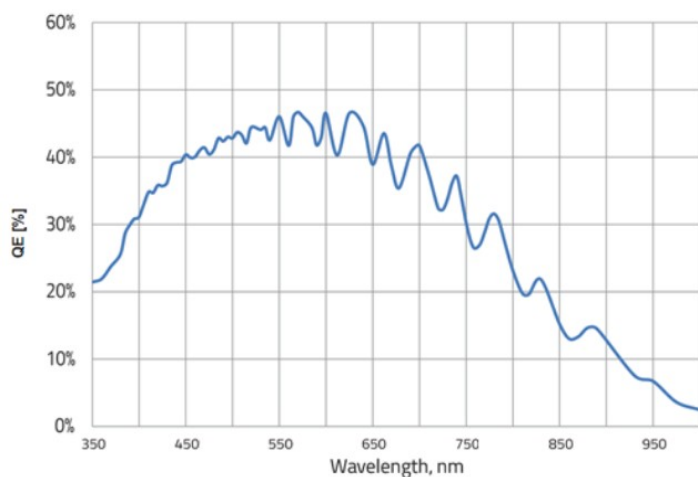
LUX13HS Color Spectral Response
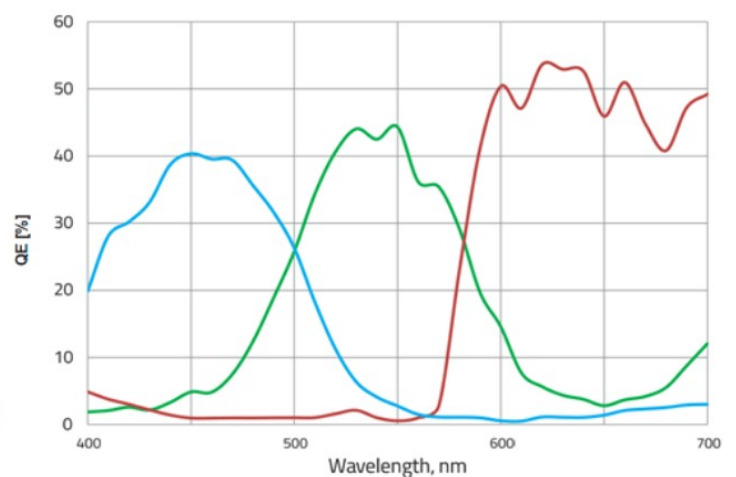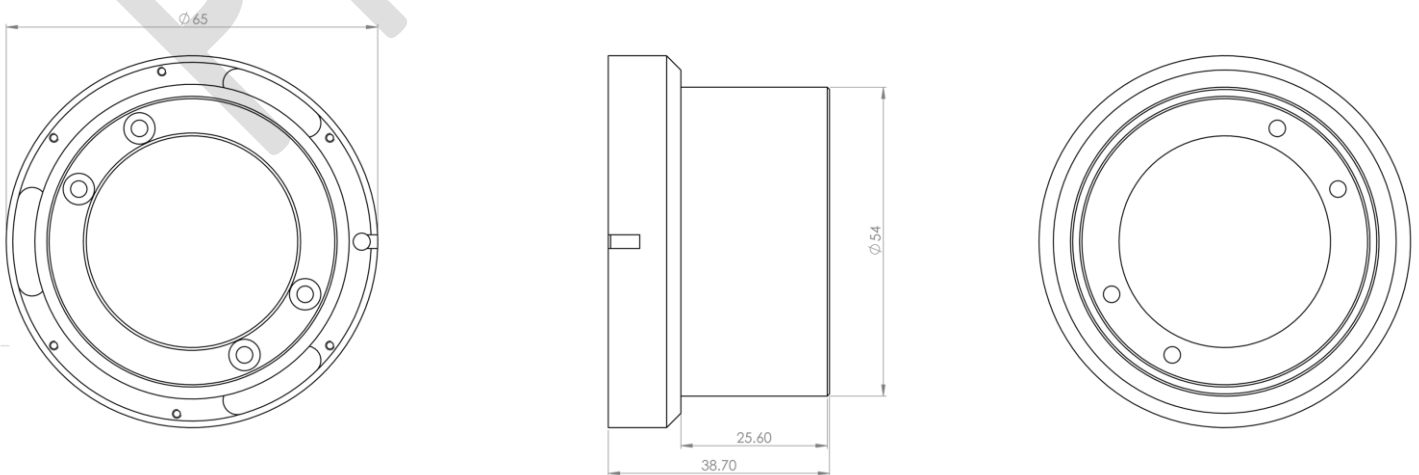
Lens Mounts Mechanical Drawings

Nikon F mount:

SECTION A-A

Birger EF mount:

Canon EF mount:

M42 mount:

SECTION A-A

Mechanical Drawings

Front View

Side View

Back View
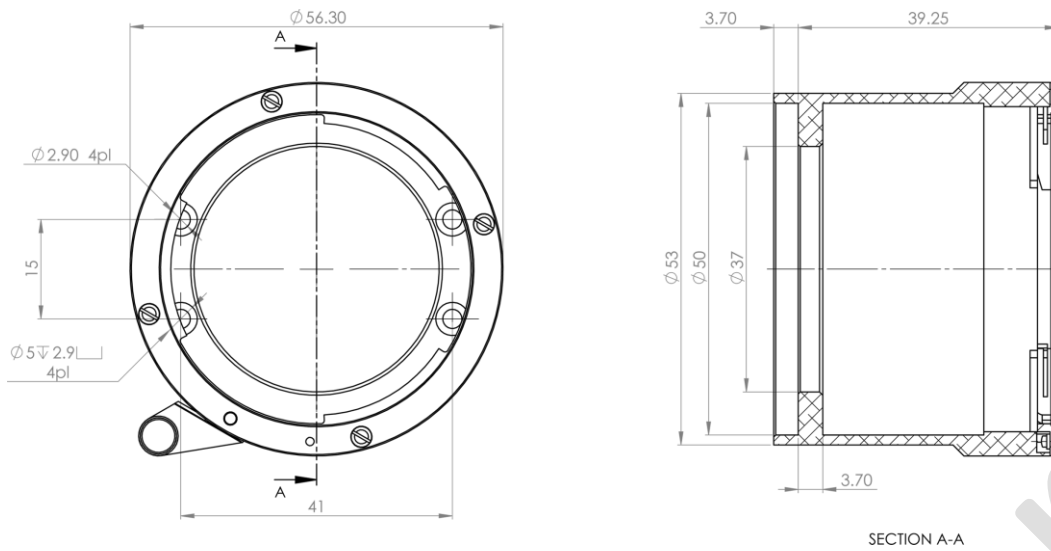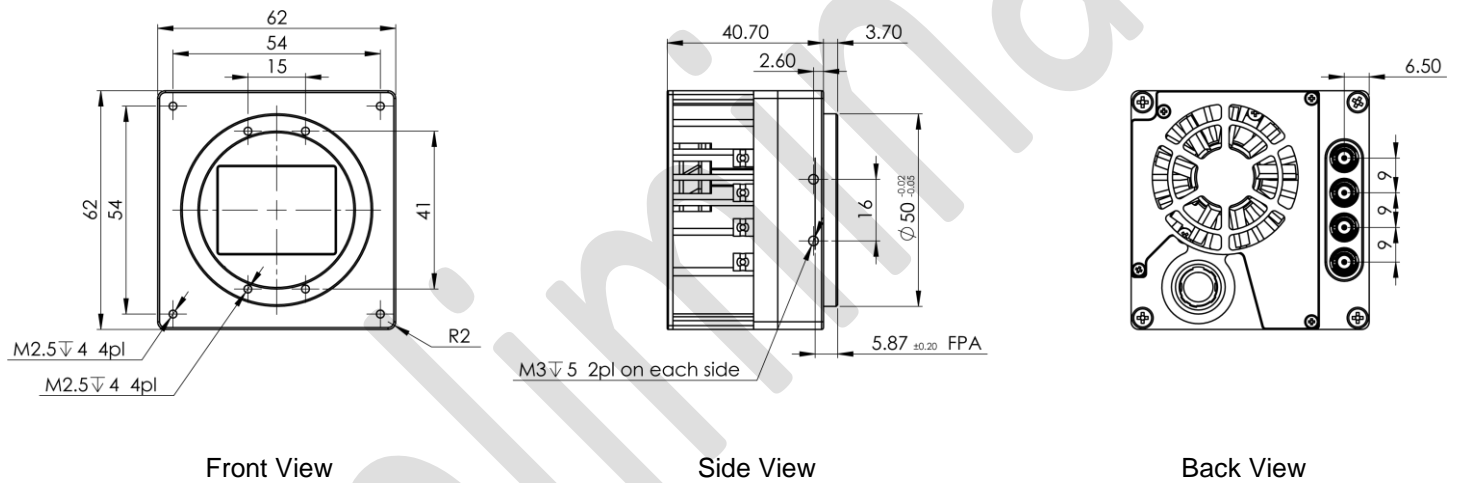
Compatibility

KAYA Instruments creates and maintains compatibility and interfaces for the most common and advanced vision image processing libraries and applications.

❖ Supported vision standards:

❖ Supported vision libraries:

Please feel free to contact our team with any question or further inquiry at **info@skyblue.de** – we will be happy to provide assistance and consultation.

International Distributors

Sky Blue Microsystems GmbH
Geisenhausenerstr. 18
81379 Munich, Germany
+49 89 780 2970, info@skyblue.de
www.skyblue.de

In Great Britain:
Zerif Technologies Ltd.
Winnington House, 2 Woodberry Grove
Finchley, London N12 0DR
+44 115 855 7883, info@zerif.co.uk
www.zerif.co.uk

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