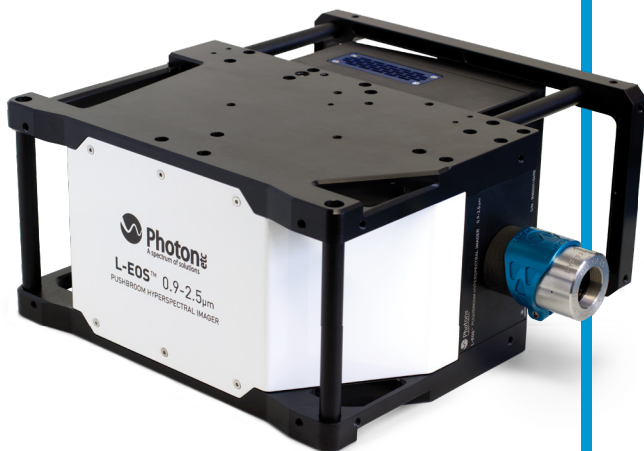


# L-EOS™

## HYPERSPECTRAL CAMERA



The L-EOS is an infrared push broom hyper-spectral system optimized from 0.9 up to 2.8  $\mu\text{m}$ . Using a totally reflective spectrometer at its core, it has fewer interfaces, thus less light losses, no chromatism and very low aberrations. It is combined with Photon etc.'s scientific-grade infrared cameras and objective lenses specifically designed for infrared spectroscopy. The most important added value is the possibility to customize the instrument to specific applications. Our broad expertise covers various applications going from geology to material sorting, recycling and many others. Its 4 stages TE cooling at either  $-50^{\circ}\text{C}$  or  $-80^{\circ}\text{C}$  offers a longer lifetime than other cooling systems and less maintenance. Its robustness makes it industry-ready.

### TECHNICAL SPECIFICATIONS

	L-EOS 1.7	L-EOS 2.5	L-EOS 2.8
Spectral range	900 - 1650 nm	900 - 2500 nm	1000 - 2800 nm
Photon etc.'s camera	InGaAs (ZephIR™ 1.7 or Alizé™ 1.7)	MCT (ZephIR™ 2.5)	MCT (ZephIR™ 2.9)
Spatial resolution (RMS spot radius on sensor)	22 $\mu\text{m}$ (1.5 px)	30 $\mu\text{m}$ (1 px)	30 $\mu\text{m}$ (1 px)
Dispersion - Spectral sampling (nm/px)	1.3	5	5.6
Standard slit width ( $\mu\text{m}$ , customisable)	30	30	30
Slit length (mm)	7.7	7.7	7.7
Spectral channels**	640	320	320
Spatial channels**	512	256	256
Spectral resolution (FWHM Slit Image) for standard slit width	3 nm (2 px)	7.5 nm (1.5 px)	9 nm (1.5 px)
Aperture	f/2.1	f/2.1	f/2.1
Aberrations-corrected	yes	yes	yes
Sensor resolution (px)	512 x 640	256 x 320	256 x 320
Sensor dimension (mm)	7.7 x 9.6	7.7 x 9.6	7.7 x 9.6
Pixel pitch ( $\mu\text{m}$ )	15	30	30
Sensor operating temperature ( $^{\circ}\text{C}$ )	-80 or -50	-80	-80
Max frame rate (Full Window, fps)	250	340	340
Smile (px)	<0.66	<0.33	<0.33
Keystone (px)	<0.66	<0.33	<0.33
Dimensions (L x W x H, cm)	33 x 33 x 23	33 x 33 x 23	33 x 33 x 23
Weight (kg)	10	10	10
Operating temperature ( $^{\circ}\text{C}$ )	10 - 30	10 - 30	10 - 30
Camera control Interface / Digital output format	C-Link / USB3.0	C-Link / USB3.0	C-Link / USB3.0
Mechanical shutter	yes	yes	yes
Harmonic suppression	yes	yes	yes
Power consumption on 12 VDC (W)	33.1 (typ. 20.4)	30.6 (typ. 26.0)	46.2 (typ. 32.4)
Lens options with AFOV (other C-Mount spectroscopic lenses and other mounts available upon request)	HypIRia 11 mm: 37.8° x 0.15° HypIRia 15 mm: 27.8° x 0.11° HypIRia 25 mm: 17.5° x 0.07°	HypIRia 11 mm: 37.8° x 0.15° HypIRia 15 mm: 27.8° x 0.11° HypIRia 25 mm: 17.5° x 0.07°	HypIRia 11 mm: 37.8° x 0.15° HypIRia 15 mm: 27.8° x 0.11° HypIRia 25 mm: 17.5° x 0.07°
Minimum working distance*	15 cm with HypIRia lens Up to 5 cm with macro lens option	15 cm with HypIRia lens Up to 5 cm with macro lens option	15 cm with HypIRia lens Up to 5 cm with macro lens option
**Typically configured to maximize spectral sampling. Spatial sampling optimization also available.			