

NEWSPACE MARKET · COMPANY PROFILE

OXFORD
INSTRUMENTS

First Light Imaging

France · founded 2012 · andor.oxinst.com/products/c-red-series

6

PRODUCTS

1

WITH DATASHEETS

newspacemarket.com/companies/first-light-imaging/

as of 20 August 2026



First Light Imaging

First Light Imaging is a French photonics and scientific imaging company founded in 2012 and based near Aix-en-Provence, France. The company specializes in developing and manufacturing ultra-sensitive scientific cameras based on EMCCD and sCMOS sensor technologies, targeting astronomy, space instrumentation, and biomedical imaging. In the space domain, First Light Imaging's cameras are used on ground-based observatories and have been considered for space-borne observational instruments requiring extreme low-light sensitivity and low noise performance. The company's C-RED series cameras are particularly valued for high-speed wavefront sensing and adaptive optics in large telescope facilities. First Light Imaging was acquired by Oxford Instruments, a leading UK scientific instruments manufacturer, expanding Oxford Instruments' portfolio in high-performance scientific cameras. Under Oxford Instruments' Andor brand, the company's expertise contributes to advanced photon detection solutions for space science and astrophysics research. The company continues to develop next-generation infrared and visible imaging sensors for research institutions, national observatories, and space science programs requiring precise, high-sensitivity photon detection instrumentation.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

Product catalogue



FIRST LIGHT IMAGING

C-RED 2 ER Extended SWIR Camera

Extended SWIR camera on 640x512 ER-InGaAs detectors with sensitivity shifted to 1.9 um or 2.2 um, 600 fps full frame.

Full sensitivity range (QE > 10%)	1100-1900 nm (1.9 um model) / 1300-2150 nm (2.2 um model)
Quantum efficiency > 70%	1150-1800 nm (1.9 um model) / 1380-2050 nm (2.2 um model)
Sensor size	640 x 512 pixels ER-InGaAs
Pixel pitch	15 micrometres
Maximum speed full frame	600 fps
Readout noise	< 50 e- at -40 C (1.9 um) / < 40 e- at -55 C (2.2 um)
Dark current	20 ke/p/s at -40 C (1.9 um) / 120 ke/p/s at -55 C (2.2 um)

price on request



FIRST LIGHT IMAGING

C-RED 2 Lite SWIR Camera

Compact fanless TEC-stabilized SWIR camera running 600 fps with under 30 electrons readout noise, optionally water-cooled.

Spectral range	SWIR 0.9 - 1.7 micrometres
Sensor size	640 x 512 pixels, InGaAs PIN photodiode
Pixel pitch	15 micrometres
Maximum speed full frame	600 fps
Readout noise	< 30 e- at high gain, Tint 50 us, 600 fps full frame at 5 C
Quantization	14 bit
Flat quantum efficiency 1.0-1.65 um	> 70%

price on request



FIRST LIGHT IMAGING

C-RED 2 SWIR Camera

High speed low noise SWIR camera running 600 fps full frame with readout noise under 30 electrons and dark current under 600 e/p/s.

Spectral range	SWIR 0.9 - 1.7 micrometres
Sensor size	640 x 512 pixels, InGaAs PIN photodiode
Pixel pitch	15 micrometres
Maximum speed full frame	600 fps
Readout noise	< 30 e- at high gain, Tint 50 us, 600 fps full frame
Dark current at -40 C	< 600 e/p/s
Quantization	14 bit

price on request



FIRST LIGHT IMAGING

C-RED 3 SWIR Camera

Very compact high-speed uncooled VGA SWIR camera for short exposure times, with patented adaptive bias and OEM core version.

Spectral range	SWIR 0.9 - 1.7 micrometres
Sensor size	640 x 512 pixels, InGaAs PIN photodiode
Pixel pitch	15 micrometres
Maximum speed full frame	600 fps
Readout noise	< 40 e- at high gain, Tint 50 us, 600 fps full frame
Quantization	14 bit
Flat quantum efficiency 1.0-1.65 um	> 70%

price on request



FIRST LIGHT IMAGING

C-RED New Space SWIR Camera Core

SWIR camera core on a space-approved 640x512 InGaAs sensor for satellite optical payloads, 600 fps full frame and up to 32066 fps windowed.

Spectral range	SWIR 0.9 - 1.7 micrometres
Sensor size	640 x 512 pixels (0.3 Mp), InGaAs
Pixel pitch	15 micrometres
Quantization	14 bit
Readout noise	< 30 e- at high gain, Tint 50 us, 600 fps full frame at 5 C
Flat quantum efficiency 1.1-1.65 um	> 70%
Operability	> 99.8% (pixels with signal +/- 0.3 x median at 20 C)

[price on request](#)



FIRST LIGHT IMAGING

C-RED One SWIR Camera

Ultra high-speed photon counting SWIR camera with 320x256 MCT e-APD array, sub-electron readout noise and up to 3500 fps full frame.

Spectral range	SWIR 0.80 - 2.43 micrometres (J, H, K bands)
Sensor	320 x 256 pixels MCT e-APD array
Pixel pitch	24 micrometres
Maximum speed full frame single readout	3500 fps
Readout noise	< 1 e- at 1720 fps CDS readout, gain x50, black body at 80 K
Dark current	< 80 e-/p/s at black body 80 K, e-APD gain x10
Quantization	16 bit

[price on request](#)

[datasheet](#)

Contact First Light Imaging

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

<https://newspacemarket.com/companies/first-light-imaging/>

<https://andor.oxinst.com/products/c-red-series>

© 2026 First Light Imaging — product data. Document compiled by NewSpace Market from the live catalogue on 20 August 2026. May be shared freely.