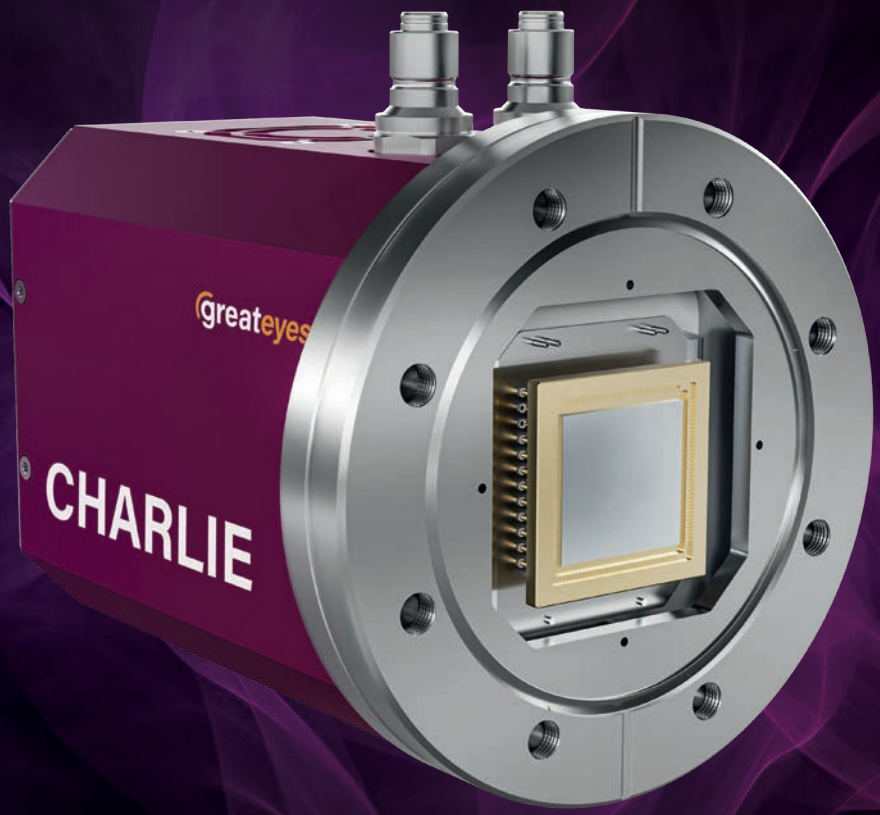
greateyes
EXPAND YOUR VISION

sCMOS CAMERA FOR
IMAGING & SPECTROSCOPY

CHARLIE

Crossing boundaries in X-ray and EUV imaging and spectroscopy, with the lowest noise, in-vacuum back-illuminated sCMOS camera



VUV
EUV
SXR
HXR

High QE up to 99%
with single photon sensitivity

High frame rates
up to 48 fps (full frame)

Deep cooling to -50°C
with very low dark current for better detection limits and lowest noise

GigE & USB 3.0 interface
for local or remote network operation

Compact design
with various flange options, including rotatable

Flexible software options
greateyes Vision software included, and various SDKs and drivers available

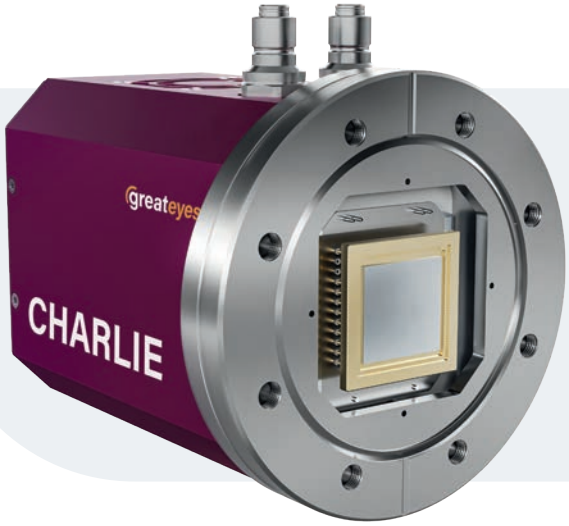
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CHARLIE



Crossing boundaries in X-ray and EUV imaging and spectroscopy

CHARLIE refers to Checkpoint Charlie, the most famous Berlin border crossing during the division of Germany.



CHARLIE 2k2k 11

Sensor cooling: -50°C

Usable pixels: 2048 x 2048

Pixel size: 11 x 11 µm

Full well capacity: 91 ke^- typ. (HDR mode)

Straight out of Berlin comes **CHARLIE**, greateyes' **new back-illuminated sCMOS camera** that combines cutting-edge technology with innovative functionality, to offer unprecedented opportunities for the measurements of tomorrow.

Built on our decades of experience in ultra high vacuum (UHV), **CHARLIE** is specially designed for a broad range of applications in the EUV, VUV and X-ray range.

With low-noise electronics and deep cooling, **CHARLIE** delivers peak Quantum Efficiency, high full well capacity, high dynamic range, and 12-bit SDR and 16-bit HDR modes.

TYPICAL APPLICATIONS

X-ray Spectroscopy

EUV Lithography

High Harmonic Generation Detection

FEL High Rep Rate X-ray Imaging

Coherent Diffraction Imaging

SAXS and RIXS

NEXAFS Spectroscopy

X-ray Ptychography

DS-CHARLIE-series / Rev01 / Jun2025

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Top Unistar

Explore the unknown

Made in Berlin.
Making discoveries worldwide.

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