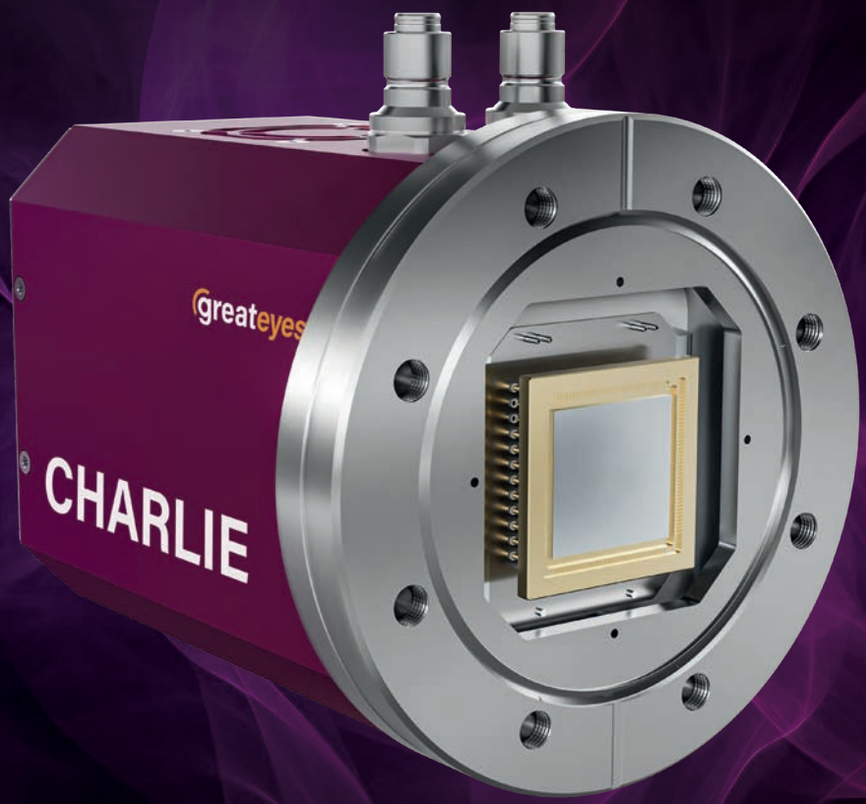
greateyes
EXPAND YOUR VISION

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

High QE up to 99%
with single photon sensitivity

Market-leading -50°C ultra deep cooling
with very low dark current for better detection limits and lowest noise

High frame rates
up to 48 fps (full frame)

10 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

www.greateyes.de

PRECISOMETER
Official representative of Greateyes

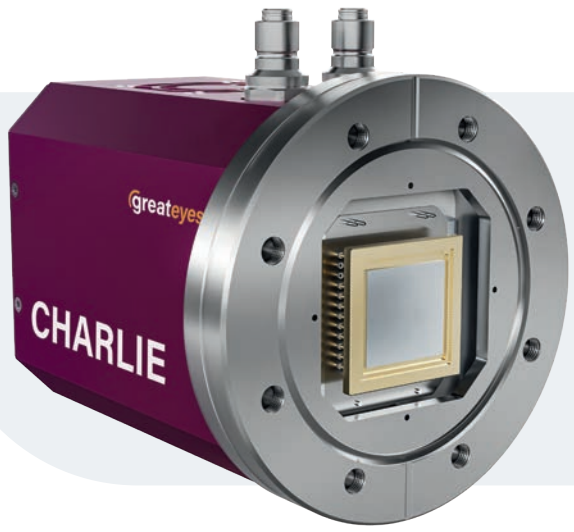
info@precisometer.com
precisometer.com/greateyes

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

Direct detection sCMOS sensor

Sensor cooling: -50°C

Usable pixels: 2048 x 2048

Pixel size: 11 µm 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 unprecendented 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. Ultra low-noise electronics combined with market-leading deep cooling make **CHARLIE** the most sensitive X-ray/EUV/VUV sCMOS camera available.

The detector delivers peak quantum efficiency up to 99%. With direct detection, photon scattering in scintillators does not apply, therefore offering sharper resolution. Furthermore, **CHARLIE** features 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

greateyes
EXPAND YOUR VISION

greateyes GmbH
Ludwig-Boltzmann-Straße 3
12489 Berlin, Germany

T: +49 (0)30 221 844 700
E: info@greateyes.de

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DS-CHARLIE-series / Rev03 / Jan2026

PRECISOMETER
Official representative of Greateyes
Product selection, configuration & integration support

Office & enquiries
Precisometer B.V.
Eisingastraat 9
2201 DJ Noordwijk, Netherlands

Talk to Precisometer
info@precisometer.com
precisometer.com/greateyes

Explore products & discuss your experiment