

NEW CAMERAS FROM QSI

Steve Chambers, QSI/Atik



PRESENTATION

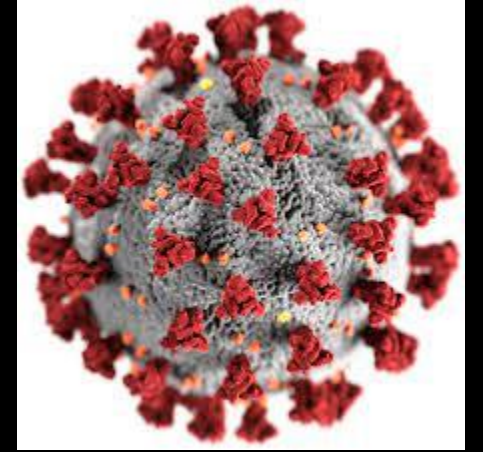
- What's been happening at Atik
- And at QSI
- New cameras
- Image sensor technology
- Camera specifications and features
- Price
- How to get one

ATIK AT 2019

- Most of sales going to science applications
 - Gel Documentation
 - PCR
 - Neutron Imaging
 - Sky Surveillance



COVID 19



- All our customers started to shut down
- Except those making PCR test machines
- 2020-2022 Atik supplied >20,000 cameras (~20% of all PCR machines)
- Conservatively the cameras were used in machines making 100's of millions of PCR COVID tests during pandemic.



ATIK AND QSI

- Atik firmly established in scientific imaging
- QSI now our brand for Amateur Astronomy



- Formed in 2006 Neal Barry
 - 500 series Kodak CCD
 - 600 series Kodak + Sony CCD

- Acquired 2017 by Atik
 - Introduced 6162



QSI RE-FOCUS

MISSION

To design and manufacture class leading cameras in Europe for the amateur astronomy community.

VISION

To enhance and cement our reputation as the high end Amateur Astronomy brand with an optimised range of cameras and accessories for amateur astronomers.

NEW CAMERAS



760 – Full frame 60MP

- IMX455 - Industrial
- 5 or 7 position 2" wheel
- Cooling 45C
- USB3 + USB2 hub
- 12V feed through
- Deliveries April

726 – APS 26MP

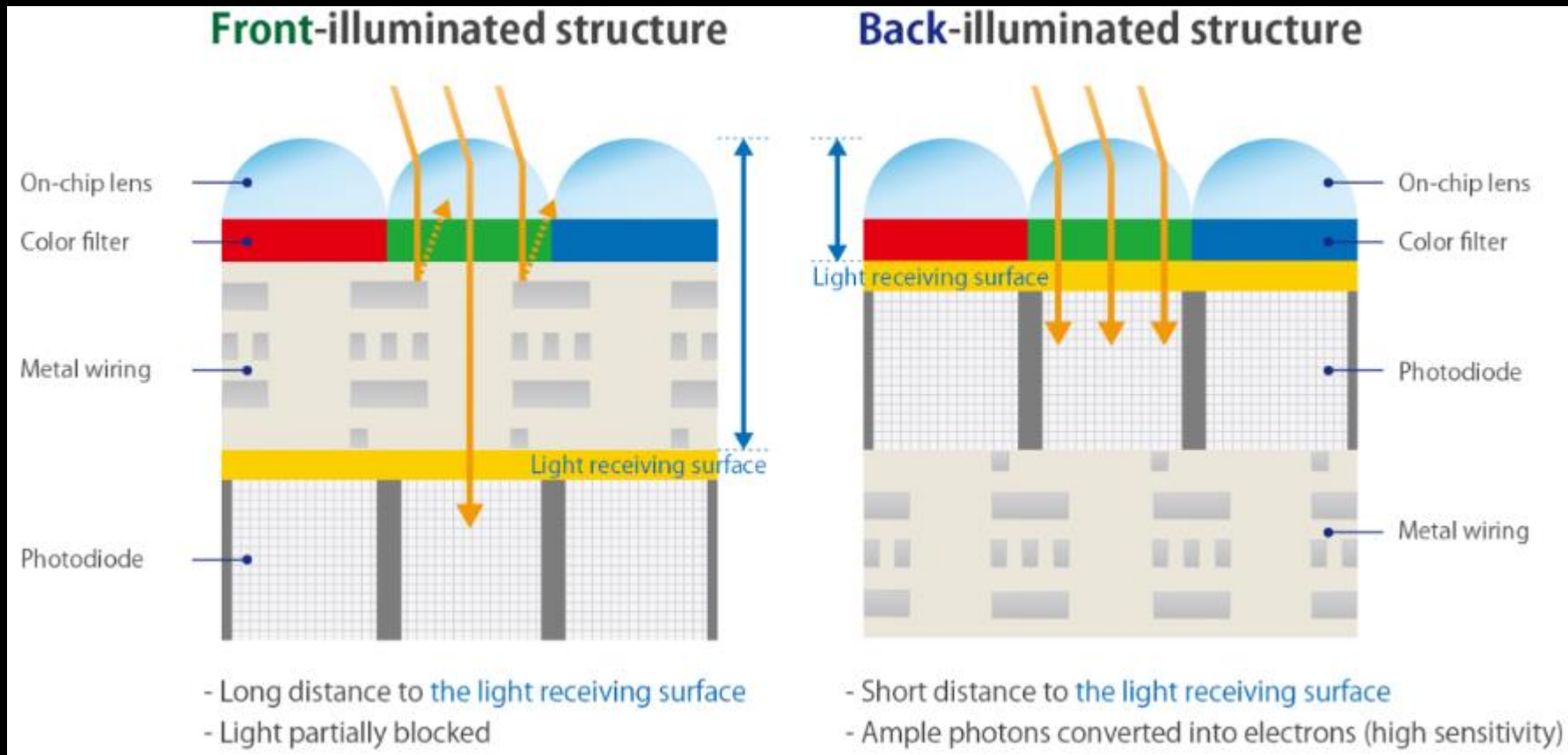
- IMX571 - Industrial
- 7 position 36mm
- Cooling 45C
- USB3 + USB2 hub
- 12V feed through
- Deliveries May/June

European quality at a 20% premium to budget brands.

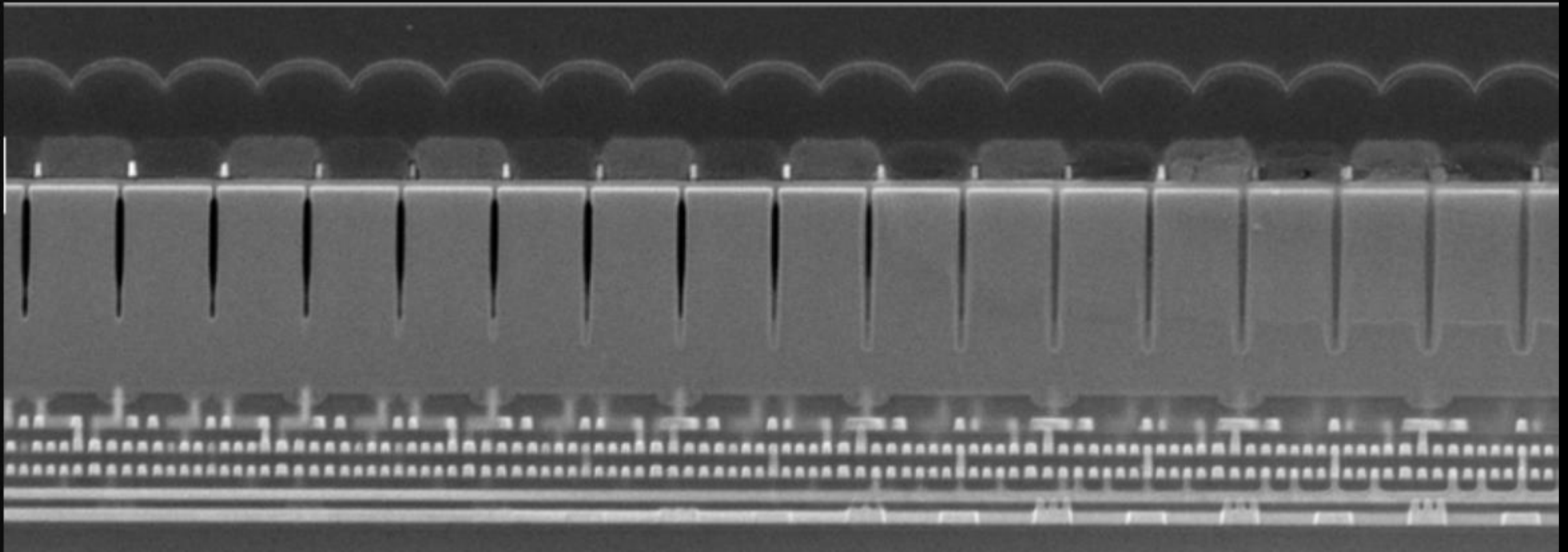
FEATURES – SONY 3.76UM BSI SENSOR

- Full well capacity over 50k e
- 16 bit digitisation
- Back side illumination
- Micro lensed
- High QE
- Low read noise
- Low dark current
- No glows

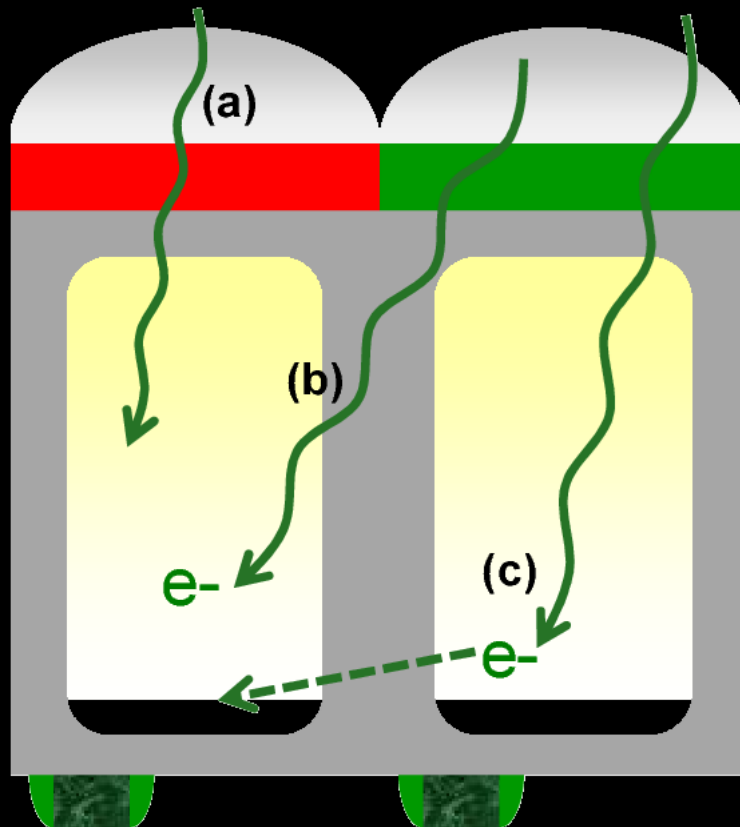
WHY BACK SIDE ILLUMINATED?



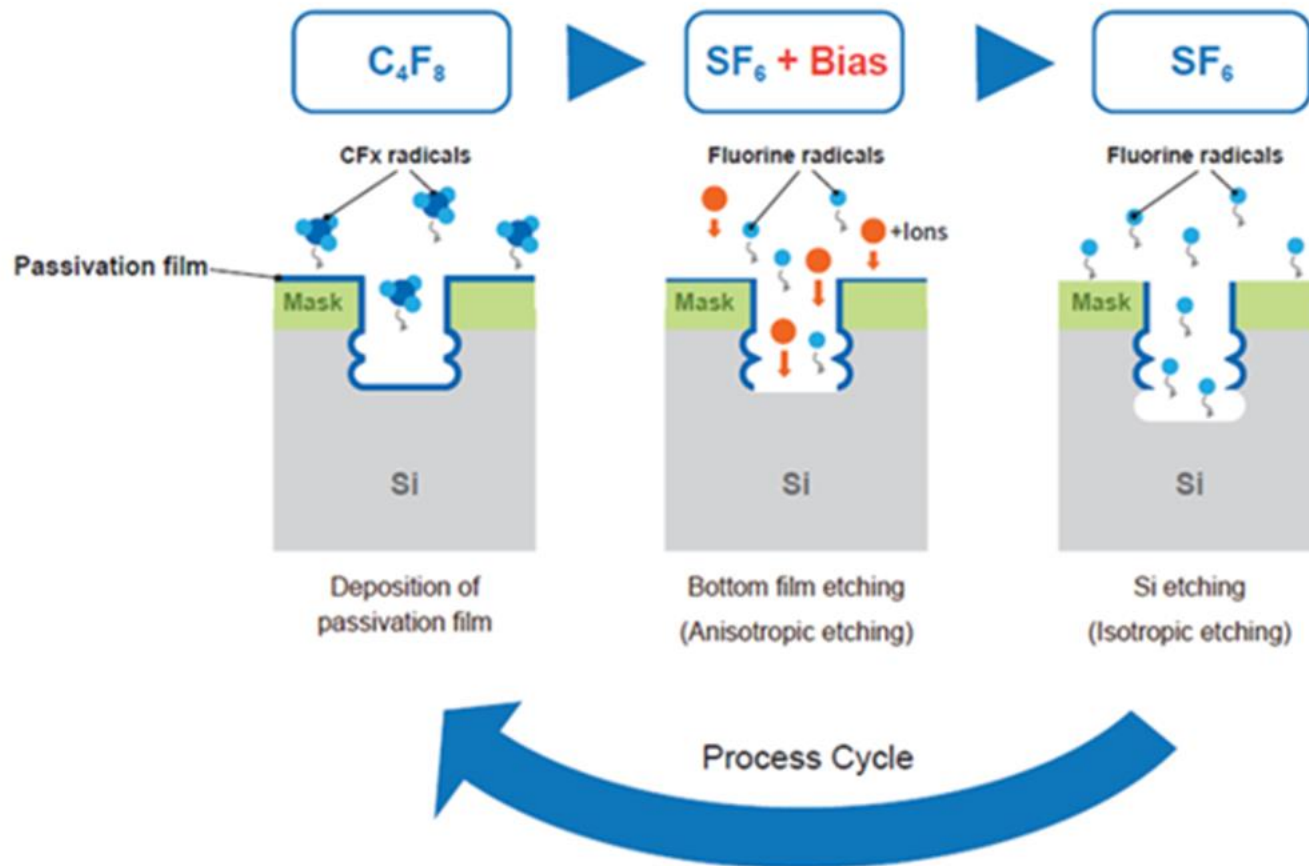
STRUCTURE OF BSI SENSOR



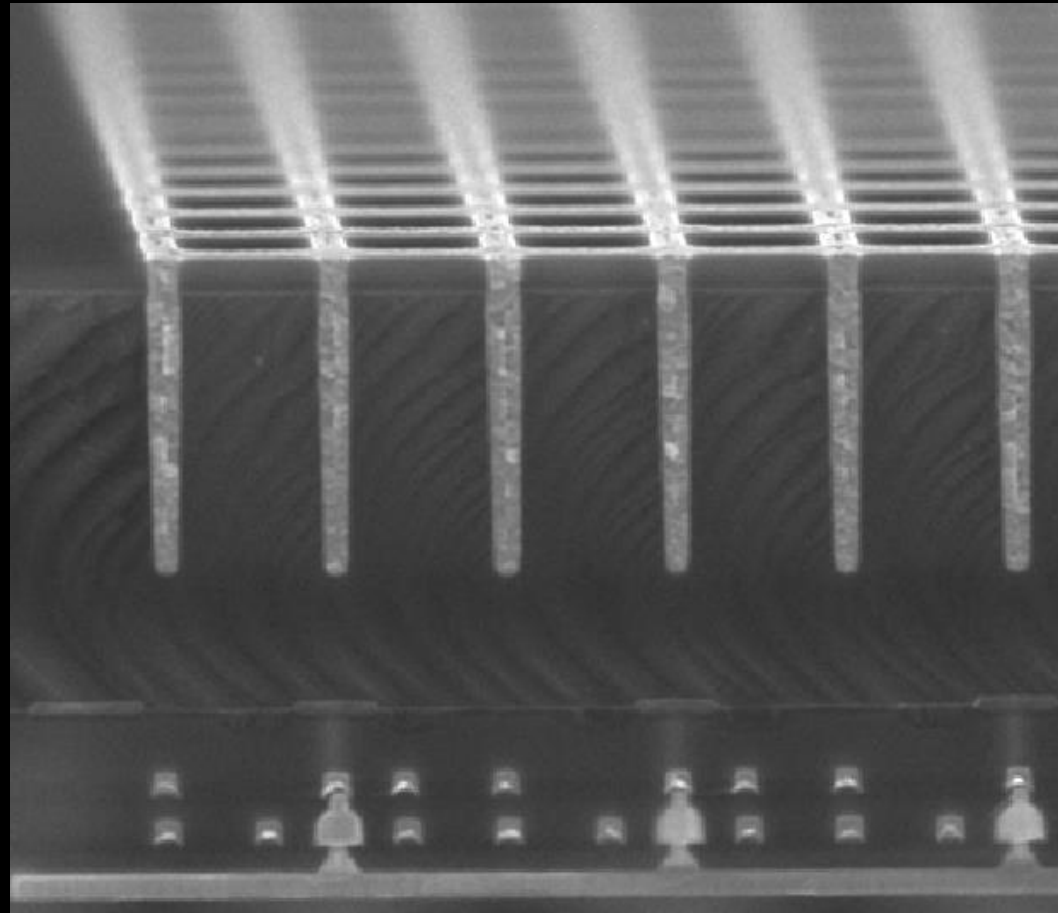
CROSS TALK WITH SMALL DEEP PIXELS



FORMING DTI BOSCH PROCESS



SENSOR STRUCTURE



OPTICAL WINDOW

- Fused Silica

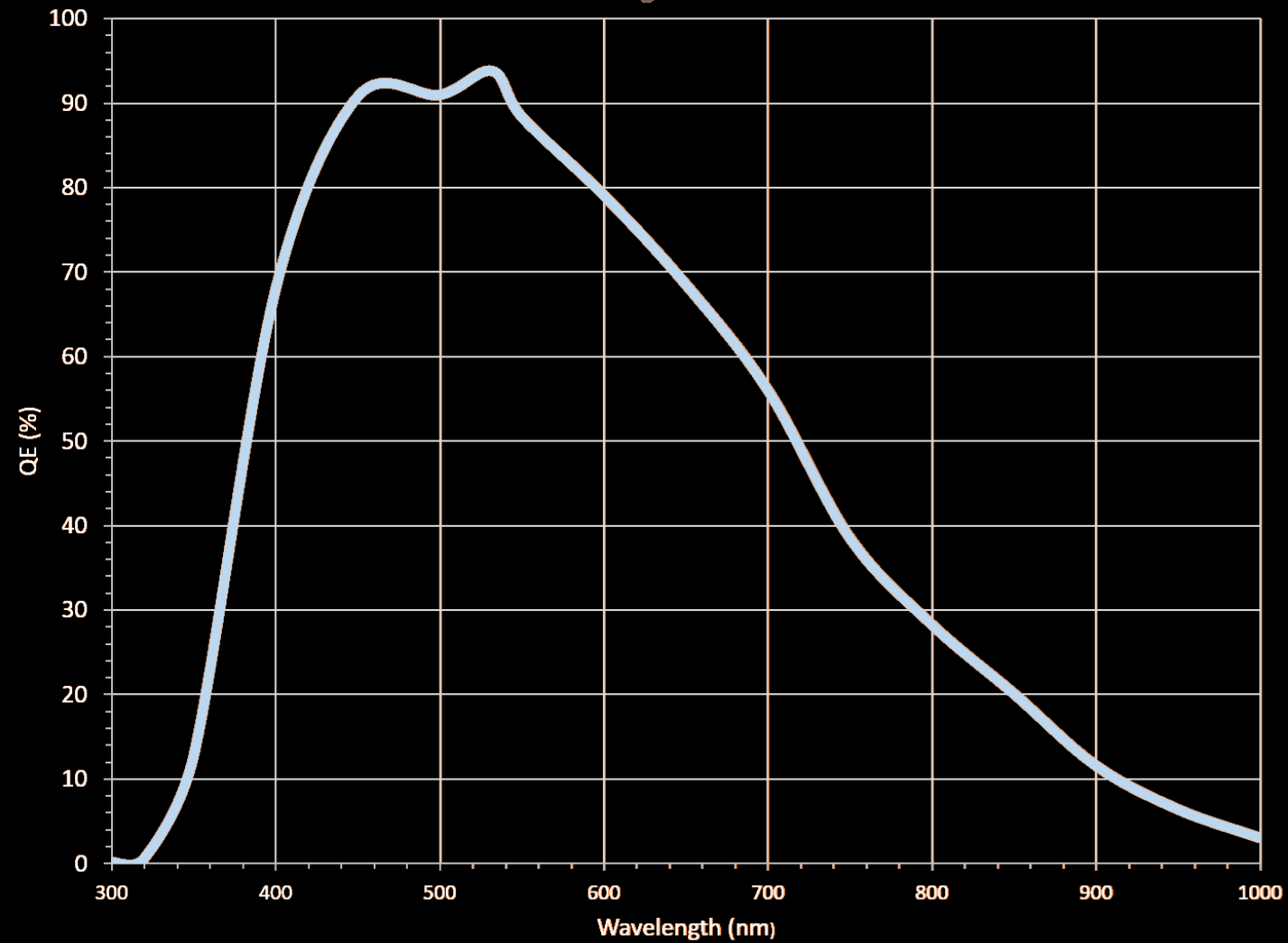
Wavelength nm	Fused Silica T%	BK7 T%
458	93	92
550	93	92
620	94	92
656	94	92

OptoSigma Corporation, CA

- 3 mm thick
- Both sides very high quality AR coatings



QE OF QSI 760



COOLING, USB AND POWER



	760	726
Image Sensor	Sony IMX455 mono CMOS sensor	Sony IMX571 mono CMOS sensor
Resolution	9576 x 6380	6244 x 4168
Pixel Pitch	3.76 μm	3.76 μm
Sensor Size	43.3mm diagonal (36mm x 24mm)	28.3mm diagonal (23.5mm x 15.7mm)
Full Well	51,000 e-	51,000 e-
Read Noise	1.2 e-	1.7 e- (typical)
Set Point Cooling at ambient of 20 C	-25 °C	-25°C
Frame Rate	2 FPS (Full Frame image)	4FPS (Full Frame image)
Mount Type	M54 x 0.75	M54 x 0.75
ADC	16 bit	16 bit
Backfocus Distance	31mm	31mm
Reading Mode	Rolling shutter	Rolling shutter
Exposure Range	1 ms - 24 hours	1 ms - 24 hours
Dark Current	0.005 e-/p/s	0.0008 e-/p/s
Filter Wheel Mechanical indexing for reproducible flats	Filterwheel for 2" or unmounted 50mm filters, 5 or 7 position	Filterwheel for 2" or unmounted 50mm/ 36mm filters
Accessories	Off-Axis guide unit	Off-Axis guide unit
Computer System Requirements	Windows 10+ Linux USB 3.0 8GB Ram 64 bit Operating System.	Windows 10+ Linux USB 3.0 8GB Ram 64 bit Operating System.

SPECIFICATIONS



COMPETITIVE PRICING



	760 7 Position	760 5 Position	726 7 or 5 Position
Retail Price Euro	6985	6773	4467

EXPRESS YOUR INTEREST.

- Production will begin in April, though it's worth noting that the initial batch may be limited in quantity. For those eager to get their hands on one, sending an expression of interest via email is the way to go. By doing so, you'll be placed at the front of the line to acquire these innovative cameras.
- Email:
- info@quantumscientificimaging.co.uk
- Form on vender booth