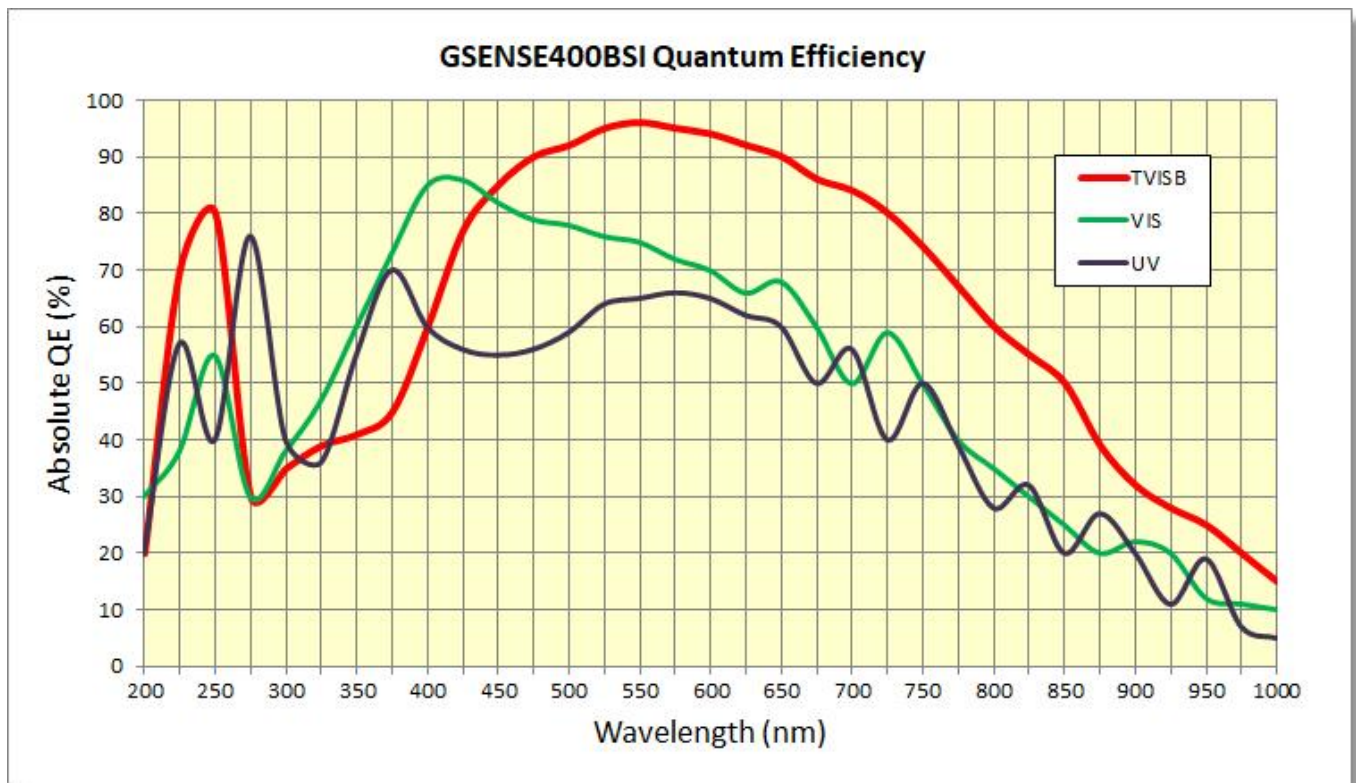


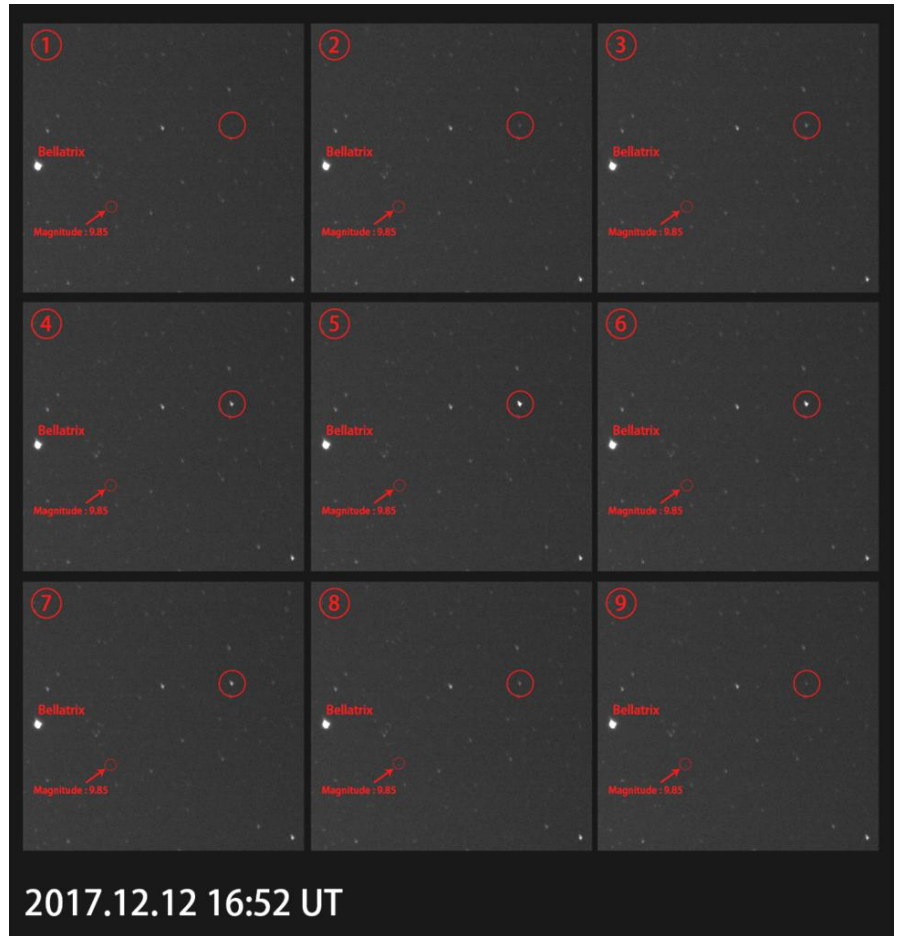
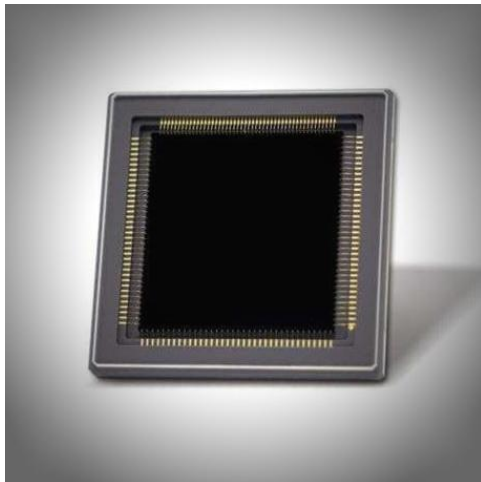
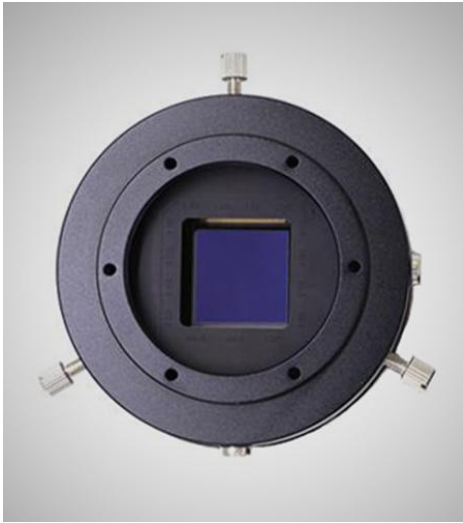


# QHYCCD

## QHY42-BSI High QE, Low Noise Back-Illuminated Scientific CMOS



The QHY42-BSI is a cooled scientific CMOS camera with extremely low ( $1.3e^{-}$ ) read noise and a back-side illuminated CMOS sensor with 95% peak QE. We also offer the QHY42-BSI in a UV enhanced version as well as a front illuminated version. The sensor array is 2048 x 2048 with relatively large 11um pixels and 89ke- full well capacity. The QHY42-BSI is capable of high frame rates up to 24FPS at full resolution. Two stage TE cooling lowers the sensor temperature to  $-40C$  below ambient. The QHY42-BSI is ideally suited to scientific research, astronomy, biology, UV and low light imaging, and security.



QHY42 capture of point source meteor or satellite glint in Orion at 24FPS during Geminid Meteor shower in December, 2017. Reference star is Mag. 9.5. Event lasted less than 0.4 seconds

Model	QHY42-BSITVISB	QHY42-BSIUUV
Sensor	GSENSE400BSI-TVISB	GSENSE400BSI-UV
Illumination	Back Illuminated	Back Illuminated
Total Pixels	4.2 Megapixels	4.2 Megapixels
Pixel Size	11um x 11um	11um x 11um
Pixel Array	2048 x 2048	2048 x 2048
Optical Format	2-inch	2-inch
Photosensitive Area	22.528 x 22.528mm	22.528 x 22.528mm
Exposure	50us – 300sec	50us – 300sec
FPS @ Full Resolution	24FPS	24FPS
Shutter	Electronic Rolling Shutter	Electronic Rolling Shutter
A/D Resolution	12-bit	12-bit
Read Noise	1.3e- to 1.7e-	1.3e- to 1.7e-
Full Well Capacity	89ke-	89ke-
Cooling Delta	-40C, Regulated	-40C, Regulated
Peak Quantum Efficiency	95% @ 540nm, 87% @ Ha, 79% @ 240nm	77% @ 275nm
Reference Price (Class 1 Sensor) *	\$12,300 Uncooled, \$13,850 Cooled	\$12,300 Uncooled, \$13,850 Cooled

\* For Class 2 pricing, please contact QHYCCD

For more information visit <http://www.qhyccd.com>