



STARLIGHT XPRESS

SCIENTIFIC IMAGING SYSTEMS



Oculus PRO All-Sky Camera Datasheet

The Oculus PRO All-Sky camera is designed to provide high quality sky images for weather and meteor observations. The core of this camera is based on the super-sensitive 1.4 megapixel 'Ultrastar PRO' and it comes with the choice of either a 2.5mm FL f1.2 'Fish-Eye' lens to achieve 150 degrees coverage, or a 1.55mm f2 180 degree 'Fish-Eye' lens giving you horizon to horizon coverage. The new PRO version has built in Dew Detection which only turns the internal dew heater on when necessary so the camera itself is not heated when the humidity is low, increasing your signal to noise. The Air Assist fan, in conjunction with the internal dew heaters, ensures the dome remains clear.



Specification

CCD type: ICX825AL Sony ExView II interline CCD with ultra low dark current and vertical anti-blooming.

CCD Full resolution pixel data: Pixel size: 6.45uM x 6.45uM, Image format: 1392 x 1040 pixels

CCD Image area: 8.98mm (Horizontal) x 6.71mm (Vertical).

CCD quality: Grade 1

Spectral Response: QE max at 580nm (~75%), 50% at 400nm and 770nm.

Readout Noise: Typically ONLY 3.5 electrons.

Full-well capacity: Greater than 23,000 e- (unbinned)

Anti-blooming: Overload margin greater than 1000x.

Dark current: Less than 0.1 electrons/second @ + 10C ambient.

Data format: 16 bits.

System gain: 0.3 electrons per ADU

Lens details: 1.55mm FL F/2 180 degree 'Fish Eye'

Computer Interface: Built-in USB 2.0 compatible interface.

Image download time: Typically 0.6 seconds at full resolution using USB 2.0.

Power requirements: Camera & Dew Heater requires 12v at 1.5 amp max.

Input connection: 'Mini B' USB socket for USB2.0 and a 2.1mm jack for +12v heater supply.

Cooling system: Ambient air cooling.

Viewing dome: High quality polycarbonate hemisphere (replaceable)

Overall size: 150mm tall x 95mm diameter

Lens Options



150° f1.2 Lens



180° f2 Lens