

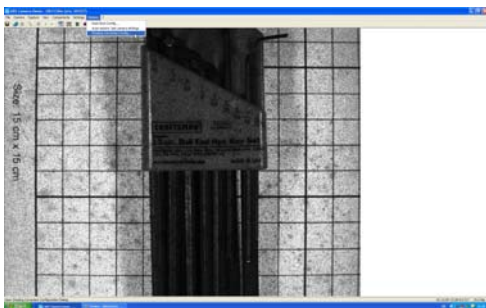
Shading Correction

To eliminate 'Lightgradients' or lens mistakes a shading correction has to be done before taking an image.

The UK1158-UV camera has a Lumogen coated sensor. Lumogen is a crystalline coating. These small crystals can be seen in the image and the growing of these crystals can not be calculated statistically.

Together with the microlenses of the sensor which can be deformed during the coating procedure, this results into a high PRNU (Photo Response Non Uniformity).

This PRNU can be reduced by a Shading Correction.



Shading Correction



Made in Germany



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2/3" CCD Camera UV- Sensitive USB2.0



- Sony 2/3" 1360 x 1024 Pixel Sensor
- UV Sensitivity down to 200nm
- Fused Silica window
- optional CAF_2 Window (< 200nm)
- USB Interface
- Appl. Software
- Windows Software SDK
- Trigger I/O's

UK-1158UV monochrome

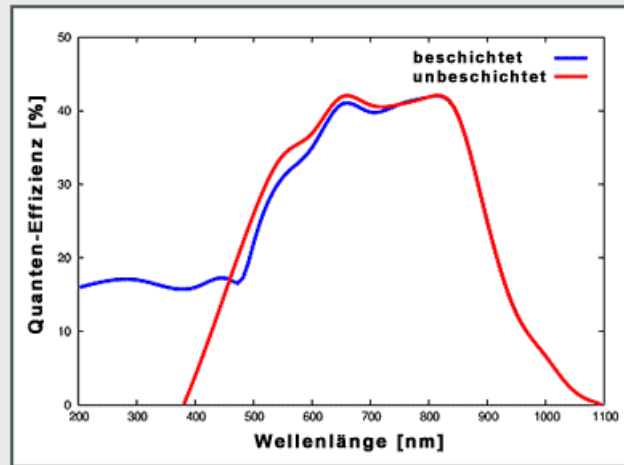
Specification:

Image Sensor	2/3" Sony ICX-285AL
Number of Pixel	1360(H) x 1024(V)
Pixel Size	6,45µm x 6,45µm
Max. Framerate	15 fps @ 1360 x 1024
Resolution	SXGA+
A/D	12-Bit
Internal Memory	32 MB
Electronic Shutter	Global Shutter
Exposure time	80µs to 270s
Video Out	Digital USB2.0
Operation Temp.	0°C to +55°C
Humidity	85% RH
Power Supply	Via USB Interface

Application Software ImageCapture



Typical Spectral Response Lumogen coated(blue) uncoated(red)



Lumogen (Lumigen) Coating

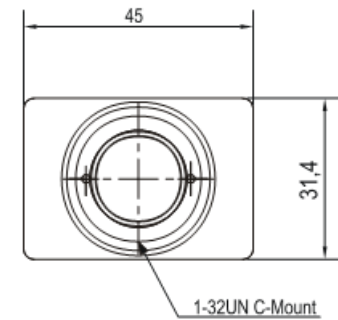
The absorbed UV radiation causes the phosphor to emit in the spectral band 500 to 650 nm, independent of the excitation wavelength through the range 200 to 460 nm. The efficiency of Lumogen is also temperature dependent and increases with decreasing temperature.

The efficiency of a CCD coated with Lumogen in converting the UV photons to useful signal electrons is determined by many factors: scattering and absorption in the Lumogen film, contaminants in the film, reflection at the air/film and other (e.g. polysilicon) interfaces etc. It is possible that approximately 50% of the light is scattered away from the CCD.

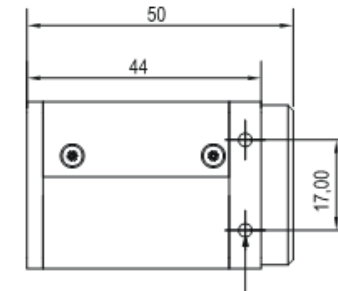
Thus the maximum QE of Lumogen coated devices is limited to half of the QE of the CCD in the blue-green region of the spectrum i.e. for a standard front illuminated device a maximum QE of about 10 to 20% may be attainable at room temperature.

UK-1158UV Dimensions

Front View



Side View



Rear View

