FL 26BW

FL 26BW is a cooled CMOS camera designed for long exposure imaging. It not only incorporates high sensitivity and low noise advantages from latest sensor technologies, but also leverages Tucsen's many years experiences on cooling chamber design and advanced image processing. FL 9BW is able to capture clean and even images for up to 60 minutes exposure time.

Key Features	Benefits
SONY BSI CMOS	92 % peak QE, 0.9 e- readout noise and no glow.
< 0.0005 e-/p/s Dark Current	Equivalent to the cooled CCD for long exposure imaging.
16000 : 1 Dynamic Range	More than 4 times that of the CCD, greatly expanding the signal detection range.
Pixel Correction Technology	High background quality ensures more accurate quantitative analysis. [1]
Flexible Binning Mode	Improving the sensitivity and dynamic range capability.
High Reliability Cooling Chamber	Cooled to -25 °C @ 22 °C, no condensation or other problems.
Compact Design	Conducive to instrument system integration.

Typical Applications

- Chemiluminescence
- Bioluminescence
- PCR
- Fluorescence imaging

Noted Examples

[1] The FL 26BW has excellent background uniformity, as it has basically eliminated the bad factors such as amplifier grow and bad pixels.

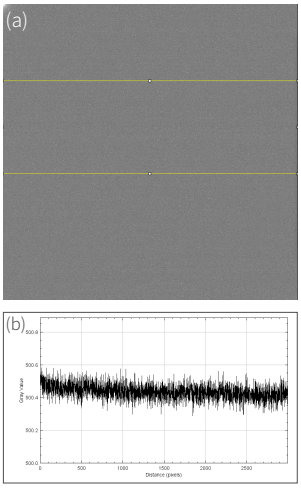
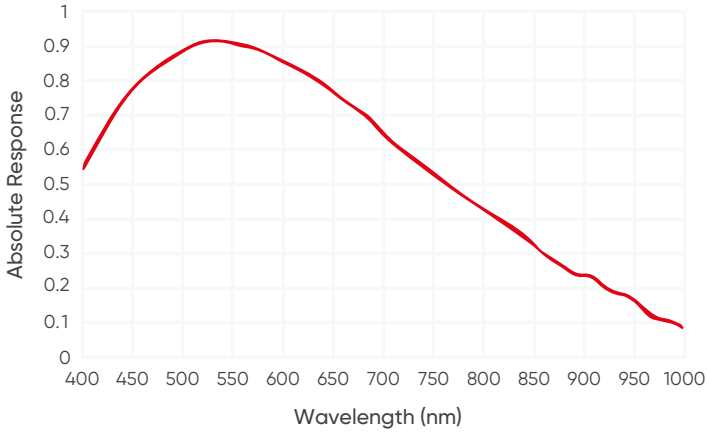
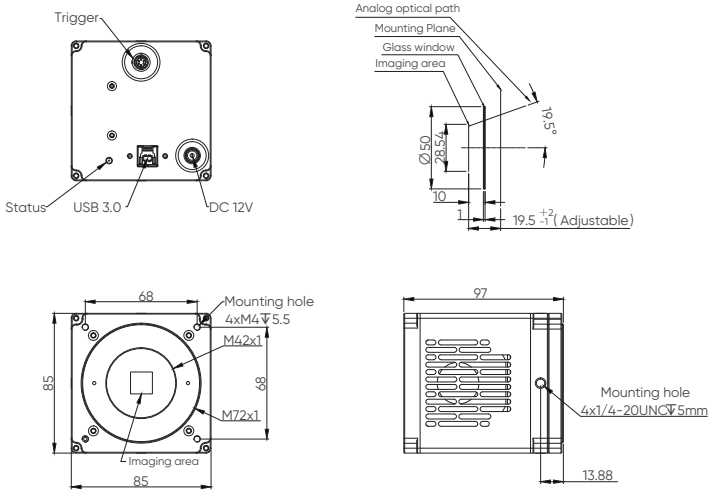


Figure (a) is the background image taken by FL 26BW with 600s exposure. Figure (b) is the grayscale intensity curve corresponding to the yellow region, showing excellent background uniformity.

Quantum Efficiency



Dimensions (Unit: mm)



Technical Specifications

Model	FL 26BW			
Sensor Type	BSI CMOS			
Sensor Model	SONY IMX571BLR-J			
Color/Mono	Mono			
Array Diagonal	28.3 mm（1.8"）			
Effective area	23.4 mm × 15.6 mm			
Pixel Size	3.76 μm × 3.76 μm			
Resolution	6244 × 4168			
Peak QE	92 % @ 530 nm			
Dark Current	< 0.0005 e-/p/s			
Bit Depth	16 bit			
Gain Mode	Gain 0	Gain 1	Gain 2	Gain 3
Full well capacity	50 ke- @ Gain 0	15 ke- @ Gain 1	7.8 ke- @ Gain 2	3 ke- @ Gain 3
Readout noise	2.7 @ Gain 0	1.0 @ Gain 1	0.95 @ Gain 2	0.85 @ Gain 3
Frame Rate	6.5 fps			
Shutter Mode	Rolling			
Exposure Time	34 μs ~ 60 min			
Image Correction	DPC			
ROI	Support			
Binning	2 x 2, 3 x 3, 4 x 4, 5 x 5, 6 x 6, 8 x 8, 16 x 16			
Cooling Method	Air			
Cooling Temperature	Cooled to -25 °C @ ambient temperature (22 °C)			
Trigger Mode	Hardware, Software			
Output Trigger Signals	Exposure start, Global, Readout end, High level, Low level			
Trigger Interface	Hirose			
SDK	C, C++, C#			
Data Interface	USB 3.0			
Optical Interface	M42, Customizable			
Power	12 V / 8 A			
Power Consumption	≤ 55 W			
Dimensions	85 mm x 85 mm x 97 mm			
Camera Weight	945 g			
Operating System	Windows / Linux			
Operating Environment	Working: Temperature 0~40 °C, Humidity 10~85 % Storage: Temperature -10~60 °C, Humidity 0~85 %			