

CMS : MUTLI-SPECTRAL CAMERA

CAMERA IDENTIFICATION

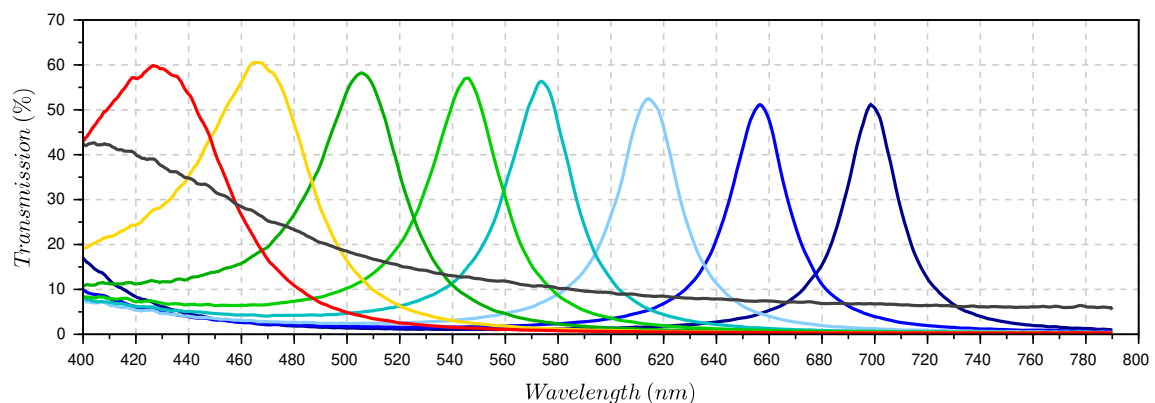
Designation	CMS-C1-C-EVR1M-USB3
Technology	COLOR-SHADES
S/N	CMS19100112

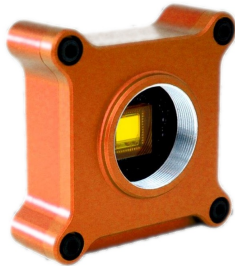
CMS SENSOR SPECIFICATIONS

Array type	CMOS (Si)
Spectral band	400 to 1000nm
Resolution	1280(H) x 1024(V)
Pixel pitch	5.3 μ m

FILTER SPECIFICATIONS

Macro-pixel size	3x3 bands		
Wavelength range	430 to 700 nm typical		
Type of pixel	8 colors (narrow bands) + 1 B&W		
Band 8	λ c : 425nm	FWHM : 74nm	Tmax : 60%
Band 7	λ c : 465nm	FWHM : 57nm	Tmax : 60%
Band 6	λ c : 505nm	FWHM : 41nm	Tmax : 58%
Band 5	λ c : 545nm	FWHM : 34nm	Tmax : 56%
Band 4	λ c : 573nm	FWHM : 31nm	Tmax : 56%
Band 3	λ c : 614nm	FWHM : 28nm	Tmax : 53%
Band 2	λ c : 656nm	FWHM : 26nm	Tmax : 51%
Band 1	λ c : 699nm	FWHM : 25nm	Tmax : 51%
Band 9	Neutral density : Tmean = 15% over [400-800]nm		



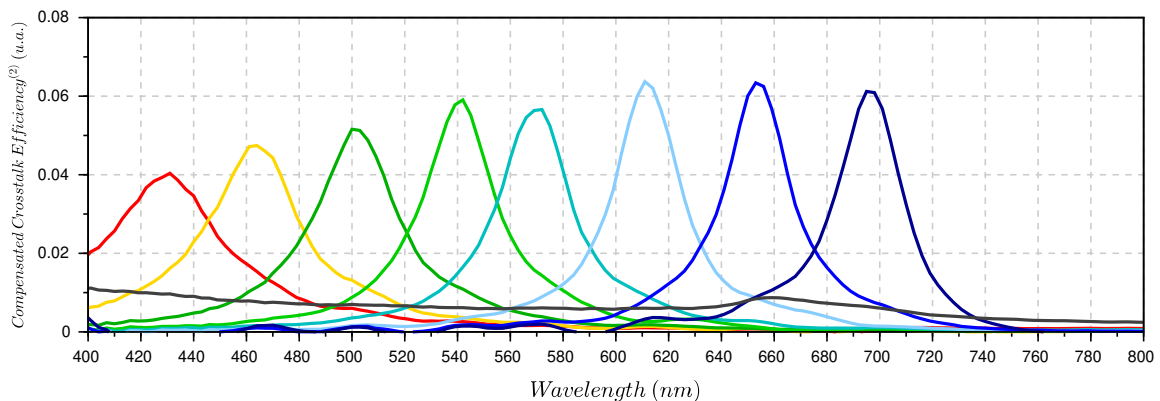
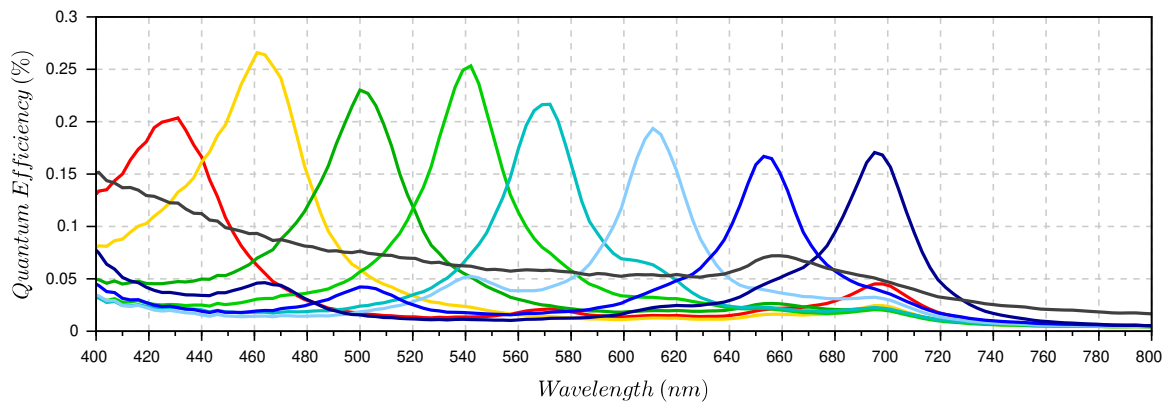


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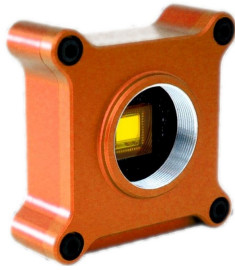
MULTISPECTRAL SENSOR SPECIFICATIONS

Macro-pixel size	3x3 bands		
Wavelength range	430 to 700 nm typical		
Type of pixel	8 colors (narrow bands) + 1 B&W		
Band 1	λ_c : 426nm	FWHM :61nm	QE max : 20%
Band 2	λ_c : 462nm	FWHM :51nm	QE max : 26%
Band 3	λ_c : 501nm	FWHM :41nm	QE max : 23%
Band 4	λ_c : 540nm	FWHM :35nm	QE max : 25%
Band 5	λ_c : 569nm	FWHM :35nm	QE max : 22%
Band 6	λ_c : 612nm	FWHM :32nm	QE max : 19%
Band 7	λ_c : 654nm	FWHM :32nm	QE max : 17%
Band 8	λ_c : 696nm	FWHM :33nm	QE max : 17%
Band 9	Neutral density : QE mean = 6% over [400-800]nm		
Pixel operability ⁽¹⁾	≥99.85%		

(1) Deads pixels : among which 0.10% used for alignment purpose in the 4 corners of the picture.



(2) The CCE is extracted from the SILIOS post processing method for crosstalk correction (see Post-processing method for crosstalk reduction in multispectral data and images).



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CAMERA SPECIFICATIONS

Optical interface	CS-mount (C-mount compatible with additionnal C-ring)
Resolution (raw picture)	1280 (H) x 1024 (V)
Resolution (spectral pictures)	426 (H) x 339 (V)
Maximum frame rate	60 Hz
Exposure time range	10 μ s to 2 s
ADC	10-bits
Camera control	USB 3.0
Digital output	10-bits USB 3.0
Power supply	USB 3.0
Dimension (W x H x L)	56 x 56 x 22 mm ³
Weight camera head	75 g