

TOUCAN MULTISPECTRAL CAMERA

CAMERA IDENTIFICATION

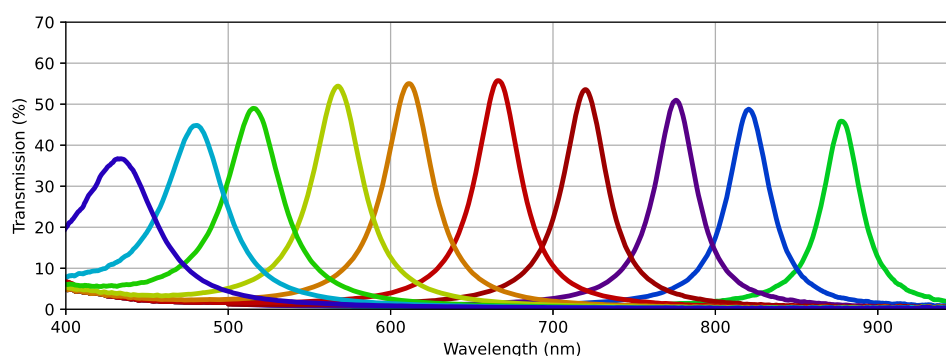
Reference	CMS-T4-C-CMO4M-USB3
Technology	COLOR-SHADES
S/N	CMS21070203

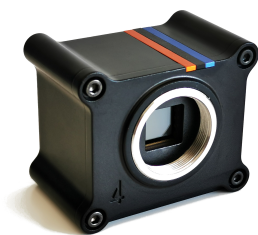
CMS SENSOR SPECIFICATIONS

Array type	CMOS (Si)
Spectral band	400 to 1000nm
Resolution	2048(H) x 2048(V)
Pixel pitch	5.5 μ m

FILTER SPECIFICATIONS

Macro-pixel size	4x4 bands		
Wavelength range	400 to 900 nm		
Type of pixel	10 colors (narrow bands)		
Band 1	λ_c : 431nm	FWHM : 65nm	Tmax : 36%
Band 2	λ_c : 479nm	FWHM : 47nm	Tmax : 45%
Band 3	λ_c : 515nm	FWHM : 42nm	Tmax : 49%
Band 4	λ_c : 567nm	FWHM : 37nm	Tmax : 54%
Band 5	λ_c : 611nm	FWHM : 36nm	Tmax : 55%
Band 6	λ_c : 666nm	FWHM : 34nm	Tmax : 56%
Band 7	λ_c : 719nm	FWHM : 33nm	Tmax : 53%
Band 8	λ_c : 775nm	FWHM : 31nm	Tmax : 51%
Band 9	λ_c : 820nm	FWHM : 31nm	Tmax : 49%
Band 10	λ_c : 877nm	FWHM : 28nm	Tmax : 46%



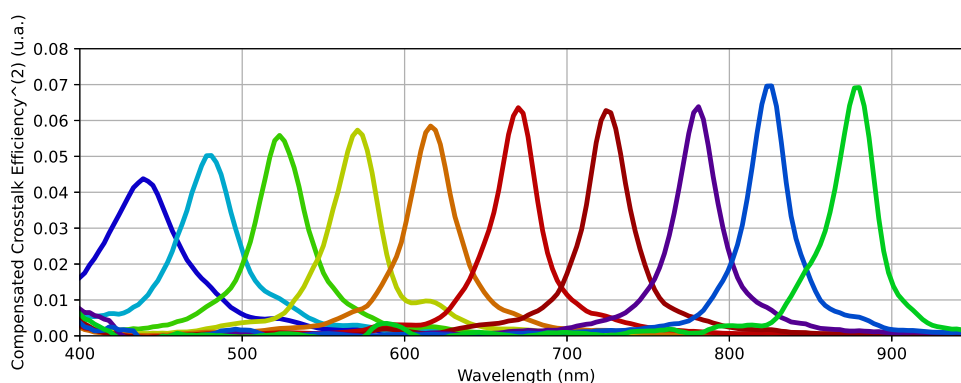
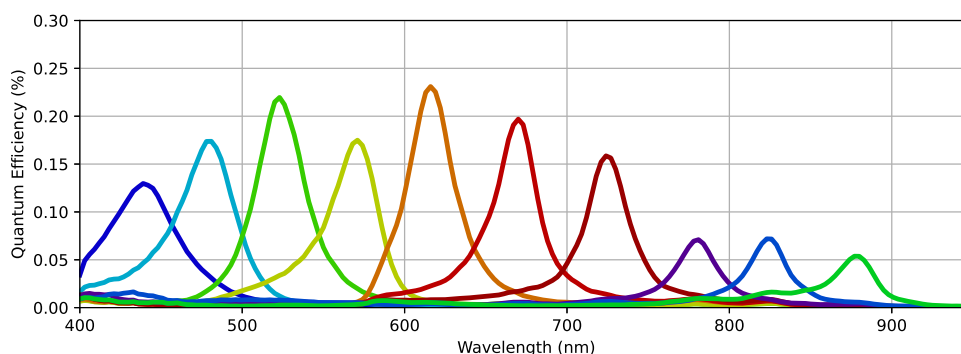


TOUCAN MULTISPECTRAL CAMERA

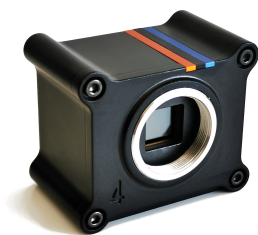
MULTISPECTRAL SENSOR SPECIFICATIONS

Macro-pixel size	4x4 bands		
Wavelength range	400 to 900 nm		
Type of pixel	10 colors (narrow bands)		
Band 1	λ_c : 439nm	FWHM : 54nm	QE max : 13%
Band 2	λ_c : 479nm	FWHM : 42nm	QE max : 17%
Band 3	λ_c : 523nm	FWHM : 35nm	QE max : 22%
Band 4	λ_c : 570nm	FWHM : 35nm	QE max : 17%
Band 5	λ_c : 616nm	FWHM : 33nm	QE max : 23%
Band 6	λ_c : 669nm	FWHM : 31nm	QE max : 20%
Band 7	λ_c : 724nm	FWHM : 31nm	QE max : 16%
Band 8	λ_c : 780nm	FWHM : 31nm	QE max : 7%
Band 9	λ_c : 824nm	FWHM : 28nm	QE max : 7%
Band 10	λ_c : 878nm	FWHM : 31nm	QE max : 5%
Pixel operability ⁽¹⁾	$\geq 99.98\%$		

(1) Dead pixels : the measurement is done by removing 30 pixels from each side.



(3) 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)	2048(H) x 2048(V)
Resolution (spectral pictures)	512(H) x 512(V)
Maximum frame rate	65 Hz (camera acquisition) / 20 Hz (COLOR SHADES Lab)
Exposure time range	100 μ s to 5s
ADC	10-bits
Camera control	USB 3.0
Digital output	12-bits USB 3.0
Power supply	USB 3.0
Dimension (W x H x L)	52 x 63 x 40 mm ³
Weight camera head	180 g