

OL 770VIS-DMS AND OL 770VIS / NIR-DMS DISPLAY MEASUREMENT SYSTEM SPECIFICATIONS

OL 770VIS-DMS SPECIFICATIONS	
WAVELENGTH RANGE	380 – 780 nm
OPTICAL BANDWIDTH	3 nm Standard (with 100 µm Input Slit; 50 µm and 200 µm Slits also Available)
SPECTRAL RESOLUTION	0.4 nm
WAVELENGTH ACCURACY	± 0.5 nm
LUMINANCE ACCURACY ¹	± 2%
CHROMATICITY ACCURACY ²	± 0.002 x,y
CHROMATICITY REPEATABILITY	± 0.00015 x, ± 0.0002 y
POLARIZATION ERROR	< 1%
STRAY LIGHT (TUNGSTEN SOURCE)	< 2.5E ⁻⁴
LINEARITY ERROR	< 0.5%
MEASUREMENT TIME	Auto or Manual Integration Times from 0.02 to 60 Seconds.
A/D RESOLUTION	16 Bit
A/D RATE	250 KHz
INTERFACE	USB, RS232 (OL 610 USB Only)
OPERATING HUMIDITY	0 – 90% Non-condensing
OPERATING TEMPERATURE	0 – 40° C
POWER INPUT	100/115/220/230 VAC, 50/60 Hz

LUMINOUS SENSITIVITY RANGE & MEASUREMENT SPOT SIZE										
IMAGING TELESCOPE	LENS MODEL #	APERTURE SIZE	LENS FOCAL LENGTH / APERTURE		FOV	MINIMUM WORKING DISTANCE	SPOT SIZE @ MIN. FOCUS	LUMINANCE SENSITIVITY ³		
								MIN. ⁴	MAX. ⁵	
OL 610-1.0	OL 610-L-100	1 mm φ	50 mm f/1.8		1°	33 cm	6.0 mm φ (0.236" φ)	0.001 fL (0.003 cd/m ²)	350 fL (1200 cd/m ²)	
OL 610-1.0	OL 610-L-110	1 mm φ	60 mm f/2.8 Macro		1°	7 cm	1.0 mm φ (0.039" φ)	0.001 fL (0.003 cd/m ²)	350 fL (1200 cd/m ²)	
OL 610-1.0	OL 610-L-110 / 210 Combination	1 mm φ	60 mm f/2.8 Macro w/ Close Up Lens Kit		+ 1	1°	6 cm	0.95 mm φ (0.037" φ)	0.001 fL ⁶ (0.003 cd/m ²)	350 fL ⁶ (1200 cd/m ²)
					+ 2	1°	5.7 cm	0.9 mm φ (0.035" φ)	0.001 fL ⁶ (0.003 cd/m ²)	350 fL ⁶ (1200 cd/m ²)
					+ 4	1°	5.5 cm	0.75 mm φ (0.030" φ)	0.001 fL ⁶ (0.003 cd/m ²)	350 fL ⁶ (1200 cd/m ²)
OL 610-0.5	OL 610-L-100	0.5 mm φ	50 mm f/1.8		½°	33 cm	3.0 mm φ (0.118" φ)	0.004 fL (0.014 cd/m ²)	1400 fL (4800 cd/m ²)	
OL 610-0.5	OL 610-L-110	0.5 mm φ	60 mm f/2.8 Macro		½°	7 cm	0.5 mm φ (0.020" φ)	0.004 fL (0.014 cd/m ²)	1400 fL (4800 cd/m ²)	
OL 610-0.5	OL 610-L-110 / 210 Combination	0.5 mm φ	60 mm f/2.8 Macro w/ Close Up Lens Kit		+ 1	½°	6 cm	0.48 mm φ (0.019" φ)	0.004 fL ⁶ (0.014 cd/m ²)	1400 fL ⁶ (4800 cd/m ²)
					+ 2	½°	5.7 cm	0.45 mm φ (0.018" φ)	0.004 fL ⁶ (0.014 cd/m ²)	1400 fL ⁶ (4800 cd/m ²)
					+ 4	½°	5.5 cm	0.38 mm φ (0.015" φ)	0.004 fL ⁶ (0.014 cd/m ²)	1400 fL ⁶ (4800 cd/m ²)

¹ The luminance accuracy for an illuminant A incandescent source with a CCT of 2856K.

² The chromaticity accuracy for an illuminant A source.

³ Sensitivity ranges when measuring an illuminant A source.

⁴ Minimum value with an integration time of 10 seconds and 10:1 signal to noise ratio.

⁵ The maximum luminance value can be increased by a factor of 30 when the lens aperture is closed to f/22.

⁶ The minimum and maximum sensitivity values increase by ~ 10% when a close up lens is fitted to the macro lens.

OL 770VIS/NIR-DMS SPECIFICATIONS	
WAVELENGTH RANGE	380 – 1100 nm
OPTICAL BANDWIDTH	5.0 nm Standard (with 100 μ m Input Slit; 50 μ m and 200 μ m Also Available)
SPECTRAL RESOLUTION	0.75 nm
WAVELENGTH ACCURACY	\pm 1.0 nm
LUMINANCE ACCURACY ⁷	\pm 2%
CHROMATICITY ACCURACY ⁸	\pm 0.002 x,y
CHROMATICITY REPEATABILITY ⁸	\pm 0.00015 x, \pm 0.0002 y
POLARIZATION ERROR	< 1%
STRAY LIGHT (TUNGSTEN SOURCE)	< 2.5E ⁻⁴
LINEARITY ERROR	< 0.5%
MEASUREMENT TIME	Auto or Manual Integration Times from 0.02 to 60 Seconds.
A/D RESOLUTION	16 Bit
A/D RATE	250 KHz
INTERFACE	USB, RS232 (OL 610 USB Only)
OPERATING HUMIDITY	0 – 90% Non-condensing
OPERATING TEMPERATURE	0 – 40° C
POWER INPUT	100/115/220/230 VAC, 50/60 Hz

LUMINOUS SENSITIVITY RANGE & MEASUREMENT SPOT SIZE									
IMAGING TELESCOPE	LENS MODEL #	APERTURE SIZE	LENS FOCAL LENGTH / APERTURE	FOV	MINIMUM WORKING DISTANCE	SPOT SIZE @ MIN. FOCUS	LUMINANCE SENSITIVITY ⁹		
							MIN. ¹⁰	MAX. ¹¹	
OL 610-1.0	OL 610-L-100	1 mm ϕ	50 mm f/1.8	1°	33 cm	6.0 mm ϕ (0.236" ϕ)	0.001 fL (0.003 cd/m ²)	350 fL (1200 cd/m ²)	
OL 610-1.0	OL 610-L-110	1 mm ϕ	60 mm f/2.8 Macro	1°	7 cm	1.0 mm ϕ (0.039" ϕ)	0.001 fL (0.003 cd/m ²)	350 fL (1200 cd/m ²)	
OL 610-1.0	OL 610-L-110 / 210 Combination	1 mm ϕ	60 mm f/2.8 Macro w/ Close Up Lens Kit	+ 1	1°	6 cm	0.95 mm ϕ (0.037" ϕ)	0.001 fL ¹² (0.003 cd/m ²)	350 fL ¹² (1200 cd/m ²)
				+ 2	1°	5.7 cm	0.9 mm ϕ (0.035" ϕ)	0.001 fL ¹² (0.003 cd/m ²)	350 fL ¹² (1200 cd/m ²)
				+ 4	1°	5.5 cm	0.75 mm ϕ (0.030" ϕ)	0.001 fL ¹² (0.003 cd/m ²)	350 fL ¹² (1200 cd/m ²)
OL 610-0.5	OL 610-L-100	0.5 mm ϕ	50 mm f/1.8	½°	33 cm	3.0 mm ϕ (0.118" ϕ)	0.004 fL (0.014 cd/m ²)	1400 fL (4800 cd/m ²)	
OL 610-0.5	OL 610-L-110	0.5 mm ϕ	60 mm f/2.8 Macro	½°	7 cm	0.5 mm ϕ (0.020" ϕ)	0.004 fL (0.014 cd/m ²)	1400 fL (4800 cd/m ²)	
OL 610-0.5	OL 610-L-110 / 210 Combination	0.5 mm ϕ	60 mm f/2.8 Macro w/ Close Up Lens Kit	+ 1	½°	6 cm	0.48 mm ϕ (0.019" ϕ)	0.004 fL ¹² (0.014 cd/m ²)	1400 fL ¹² (4800 cd/m ²)
				+ 2	½°	5.7 cm	0.45 mm ϕ (0.018" ϕ)	0.004 fL ¹² (0.014 cd/m ²)	1400 fL ¹² (4800 cd/m ²)
				+ 4	½°	5.5 cm	0.38 mm ϕ (0.015" ϕ)	0.004 fL ¹² (0.014 cd/m ²)	1400 fL ¹² (4800 cd/m ²)

⁷ The luminance accuracy for an illuminant A incandescent source with a CCT of 2856K.

⁸ The chromaticity accuracy for an illuminant A source.

⁹ Sensitivity ranges when measuring an illuminant A source.

¹⁰ Minimum value with an integration time of 10 seconds and 10:1 signal to noise ratio.

¹¹ The maximum luminance value can be increased by a factor of 30 when the lens aperture is closed to f/22.

¹² The minimum and maximum sensitivity values increase by ~ 10% when a close up lens is fitted to the macro lens.



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As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.