

## Specifications

Measurement area				CA-527	CA-510
Acceptance angle				Ø 27 mm	Ø 10 mm
Accuracy guaranteed measurement distance				± 8.5°	± 15°
Accuracy guaranteed measurement distance				30 ± 5 mm	30 ± 5 mm
Luminance	Accuracy guaranteed luminance range *7			0.0001 to 10,000 cd/m <sup>2</sup>	0.0002 to 20,000 cd/m <sup>2</sup>
	Accuracy (for white)*1, *3		> 0.0001 cd/m <sup>2</sup>	± 9 %	---
			> 0.0002 cd/m <sup>2</sup>		± 9 %
			> 0.0005 cd/m <sup>2</sup>	± 3 %	± 3.5 %
			> 0.001 cd/m <sup>2</sup>	± 2 %	± 3 %
			> 0.01 cd/m <sup>2</sup>	± 1.5 %	± 2 %
			> 0.1 cd/m <sup>2</sup>	± 1.5 %	± 1.5 %
	Repeatability (2σ)*1	AUTO	> 0.0001 cd/m <sup>2</sup>	10 %	---
			> 0.0002 cd/m <sup>2</sup>		10 %
			> 0.0005 cd/m <sup>2</sup>	2 %	3 %
			> 0.001 cd/m <sup>2</sup>	1 %	2 %
			> 0.01 cd/m <sup>2</sup>	0.30 %	0.35 %
			> 0.1 cd/m <sup>2</sup>	0.12 %	0.12 %
			> 1 cd/m <sup>2</sup>	0.10 %	0.10 %
	Chromaticity	Accuracy guaranteed luminance range *7			0.001 to 10,000 cd/m <sup>2</sup>
Accuracy (for white)*1, *3		> 0.001 cd/m <sup>2</sup>	± 0.003	---	
		> 0.002 cd/m <sup>2</sup>		± 0.003	
		> 0.01 cd/m <sup>2</sup>	± 0.002	± 0.002	
Repeatability (2σ)*1		AUTO	> 0.001 cd/m <sup>2</sup>	0.0030	---
			> 0.002 cd/m <sup>2</sup>		0.0030
			> 0.01 cd/m <sup>2</sup>	0.0009	0.0012
			> 0.1 cd/m <sup>2</sup>	0.0004	0.0005
			> 1 cd/m <sup>2</sup>	0.0002	0.0003
			> 10 cd/m <sup>2</sup>	0.0002	0.0002
Flicker (Contrast)	Flicker *6	Measurement luminance range*7		0.5 to 10,000 cd/m <sup>2</sup>	1 to 20,000 cd/m <sup>2</sup>
		Measurement target (Flicker frequency)		0.25 to 65 Hz	0.25 to 65 Hz
		Accuracy	30 Hz, AC/DC 10% sine wave	± 0.3 %	± 0.3 %
			60 Hz, AC/DC 10% sine wave	± 0.3 %	± 0.3 %
	Repeatability (2σ)	20 to 65 Hz, AC/DC 10% sine wave		0.3 %	0.3 %
		XYZ *6	Measurement luminance range*7		0.5 to 10,000 cd/m <sup>2</sup>
	Measurement target (Flicker frequency)		0.25 to 200 Hz	0.25 to 200 Hz	
	Accuracy		30 Hz, AC/DC 10% sine wave	± 1.5 %	± 1.5 %
			60 Hz, AC/DC 10% sine wave	± 2.2 %	± 2.2 %
	Repeatability (2σ)		20 to 65 Hz, AC/DC 10% sine wave		1.6 %
Flicker (JEITA)			Flicker *6	Measurement luminance range*7	
	Measurement target (Flicker frequency)			0.42 to 65 Hz	0.42 to 65 Hz
	Accuracy	30 Hz, AC/DC 4% sine wave		± 0.35 dB	± 0.35 dB
		30 Hz, AC/DC 1.2% sine wave		± 0.35 dB	± 0.35 dB
	Repeatability (2σ)	30 Hz, AC/DC 4% sine wave	0.1 dB	0.1 dB	
		30 Hz, AC/DC 1.2% sine wave	0.3 dB	0.3 dB	
	XYZ *6	Measurement luminance range*7		0.5 to 8,500 cd/m <sup>2</sup>	1 to 14,000 cd/m <sup>2</sup>
		Measurement target (Flicker frequency)*8		0.42 to 200 Hz	0.42 to 200 Hz
		Accuracy	30 Hz, AC/DC 4% sine wave	± 0.35 dB	± 0.35 dB
			30 Hz, AC/DC 1.2% sine wave	± 0.35 dB	± 0.35 dB
Repeatability (2σ)		30 Hz, AC/DC 4% sine wave	0.4 dB	0.4 dB	
		30 Hz, AC/DC 1.2% sine wave	1.4 dB	1.4 dB	
Waveform	Flicker *6	Measurement luminance range*7		0.1 to 10,000 cd/m <sup>2</sup>	0.2 to 20,000 cd/m <sup>2</sup>
		Sampling frequency		200 kHz Changeable	200 kHz Changeable
		Repeatability (2σ)	Lv: Measurement minimum luminance, fs: 3 kHz, fc: 1 kHz	1.8%	1.8%
	XYZ *6	Measurement luminance range*7		0.1 to 10,000 cd/m <sup>2</sup>	0.2 to 19,000 cd/m <sup>2</sup>
		Sampling frequency		3 kHz Changeable	3 kHz Changeable
		Repeatability (2σ)	Lv: Measurement minimum luminance Lv: 1 cd/m <sup>2</sup>	13% 1.4%	13% 2.8%
VRR-Flicker	Flicker	Measurement luminance range*7		0.5 to 10,000 cd/m <sup>2</sup>	1 to 20,000 cd/m <sup>2</sup>
		Sampling frequency*8		200 kHz Changeable	200 kHz Changeable
		Measurement target (Flicker frequency)*8		0.01 to 100 k [Hz]	0.01 to 100 k [Hz]
		Accuracy	1 to 120 Hz, AC/DC 10% sine wave	± 0.3 %	± 0.3 %
		Repeatability (2σ)	1 to 120 Hz, AC/DC 10% sine wave	0.3 %	0.3 %
Accuracy guaranteed measurement speed *4	Lvxy	AUTO		1 time/sec (> 0.0001 cd/m <sup>2</sup> )	1 time/sec (> 0.0002 cd/m <sup>2</sup> )
				5 times/sec (> 0.012 cd/m <sup>2</sup> )	5 times/sec (> 0.02 cd/m <sup>2</sup> )
				20 times/sec (> 0.15 cd/m <sup>2</sup> )	20 times/sec (> 0.25 cd/m <sup>2</sup> )
	Flicker (Contrast)			20 times /sec	20 times /sec
	Flicker (JEITA/VESA)			0.5 times/sec (at 1 HzPitch), 2.5 times/sec (at 10 HzPitch)	0.5 times/sec (at 1 HzPitch), 2.5 times/sec (at 10 HzPitch)
	VRR-Flicker	Sampling frequency: 3 kHz			0.7 times/sec (at 1s Obs.)
Measurement target (Vertical synchronization frequency)				0.5 to 240 Hz (luminance and chromaticity)	0.5 to 240 Hz (luminance and chromaticity)
Power supply				DC 5 V (input from USB bus power line or RS communication connector)	
Operating temperature/humidity range*5				10 to 35°C, relative humidity 85% or less with no condensation	
Storage temperature/humidity range				0 to 45°C, relative humidity 85% or less (at 35°C) with no condensation	

\*1: Measured under Konica Minolta's standard light source (6,500 K).

\*2: Luminance for monochrome is measured when reading of luminance for white is 100 cd/m<sup>2</sup>.

\*3: Temperature 23°C/±2°C, relative humidity 40 % ± 10 %

\*4: In NTSC [DOUBLE FRAME] synchronization mode using USB with one probe. Measured using a Konica Minolta-designated PC (with PC and probe directly connected, using the supplied measurement software).

\*5: Reading fluctuation (compared to reference reading at 23°C, 40 % RH): Luminance: ± 2% for white; Chromaticity (at 100 cd/m<sup>2</sup>): ± 0.002 for white, ± 0.003 for monochrome

\*6: "Flicker" and "XYZ" are mode names for PC Software CA-S40.

\*7: Measured under Konica Minolta's standard light source (constant light). If the luminance momentarily greatly exceeds the upper limit, such as with a PWM light source with a small duty cycle, luminances below the upper limit may be shown as too high.

\*8: The listed values are for use with CA-S40 or CA-SDK2.

\*\*The specifications and product appearance shown here may be changed without notice.