

Main Specifications of CA-527/CA-410 Probes

	CA-527	CA-VP427A	CA-P427	CA-P427H	CA-VP410A	CA-VP410H	CA-VP410T	CA-P410	CA-P410H						
	Display Color Analyzer	Advanced High Sensitivity Probe	Normal Probe	High Luminance Probe	Advanced High Sensitivity Probe	High Sensitivity Probe for high luminance	LWD Probe	Normal Probe	High Luminance Probe						
Measurement area	Ø 27 mm	Ø 27 mm	Ø 27 mm	Ø 27 mm	Ø 10 mm	Ø 10 mm	Approx. Ø 10 mm	Ø 10 mm	Ø 10 mm						
Acceptance angle	± 8.5°	± 2.5°	± 2.5°	± 2.5°	± 8.5°	± 8.5°	± 4°	± 5°	± 5°						
Accuracy guaranteed measurement distance	30 ± 5 mm	30 ± 10 mm	30 ± 10 mm	30 ± 10 mm	30 ± 5 mm	30 ± 5 mm	200 ± 2 mm	30 ± 5 mm	30 ± 5 mm						
Accuracy guaranteed range ^a	0.0001 to 10,000 cd/m ²	0.0003 to 5,000 cd/m ²	0.001 to 5,000 cd/m ²	0.01 to 30,000 cd/m ²	0.0003 to 3,000 cd/m ²	0.0006 ~ 6,000 cd/m ²	0.004 to 12,000 cd/m ²	0.002 to 10,000 cd/m ²	0.1 to 30,000 cd/m ²						
Luminance	Accuracy (for white) ^{1, 3}	> 0.0001 cd/m ²	± 9%	± 9%	± 9%	± 9%	± 9%	± 9%	± 9%						
		> 0.0003 cd/m ²	± 3%	± 3%	± 3%	± 3%	± 3%	± 3%	± 3%						
		> 0.0005 cd/m ²	± 2%	± 2%	± 2%	± 2%	± 2%	± 2%	± 2%						
		> 0.01 cd/m ²	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%						
		> 0.1 cd/m ²	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%						
		> 1 cd/m ²	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%						
		> 10 cd/m ²	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%						
		> 100 cd/m ²	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%						
		Repeatability (2σ) ¹	AUTO	> 0.0001 cd/m ²	10%	10%	10%	7%	7%	10%	10%				
				> 0.0003 cd/m ²	10%	10%	10%	7%	7%	10%	10%				
				> 0.0005 cd/m ²	2%	2%	2%	2%	2%	2%	2%				
				> 0.01 cd/m ²	1%	4%	10%	3%	3%	10%	10%				
				> 0.1 cd/m ²	0.30%	1%	1%	10%	1%	0.60%	2%				
				> 1 cd/m ²	0.12%	0.25%	0.40%	1%	0.25%	0.50%	2%				
> 10 cd/m ²	0.10%			0.10%	0.10%	0.10%	0.10%	0.10%	0.10%						
Chromaticity	Accuracy (for white) ^{1, 3}	> 0.001 cd/m ²	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003						
		> 0.003 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002						
		> 0.01 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002						
		> 0.1 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002						
		> 1 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002						
		> 10 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002						
		> 100 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002						
		Repeatability (2σ) ¹	AUTO	> 0.001 cd/m ²	0.0030	0.0030	0.0030	0.0020	0.0020	0.0030	0.0030				
				> 0.003 cd/m ²	0.0030	0.0030	0.0030	0.0020	0.0020	0.0030	0.0030				
				> 0.01 cd/m ²	0.0009	0.0030	0.0035	0.0008	0.0008	0.0008	0.0008				
				> 0.1 cd/m ²	0.0004	0.0008	0.0015	0.0008	0.0008	0.0015	0.0008				
				> 1 cd/m ²	0.0002	0.0003	0.0004	0.0003	0.0003	0.0005	0.0008				
				> 10 cd/m ²	0.0002	0.0002	0.0003	0.0004	0.0002	0.0003	0.0005				
				> 100 cd/m ²	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002	0.0003				
Flicker (Contrast)	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 9,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 18,000 cd/m ²				
		Measurement target (Flicker frequency)	0.25 to 65 Hz	0.25 to 65 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz				
		30 Hz, AC/DC 10% sine wave	± 0.3%	± 0.3%	± 0.4%	± 0.4%	± 0.4%	± 0.4%	± 0.4%	± 0.4%	± 0.4%				
		60 Hz, AC/DC 10% sine wave	± 0.3%	± 0.3%	± 0.7%	± 0.7%	± 0.7%	± 0.7%	± 0.7%	± 0.7%	± 0.7%				
		Repeatability (2σ)	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%				
		XYZ ⁶	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 9,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 18,000 cd/m ²		
				Measurement target (Flicker frequency)	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz		
				30 Hz, AC/DC 10% sine wave	± 1.5%	± 1.2%	± 1.2%	± 1.2%	± 1.2%	± 1.2%	± 1.2%	± 1.2%			
				60 Hz, AC/DC 10% sine wave	± 2.2%	± 1.7%	± 1.7%	± 1.7%	± 1.7%	± 1.7%	± 1.7%	± 1.7%			
				Repeatability (2σ)	1.6%	1.6%	1.7%	1.7%	0.3%	0.3%	0.16%	1.0%			
				Flicker (EITA)	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 9,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 18,000 cd/m ²
						Measurement target (Flicker frequency)	0.42 ~ 65 Hz	0.42 to 65 Hz	0.42 to 65 Hz	0.42 to 65 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	
		30 Hz, AC/DC 4% sine wave	± 0.35 dB			± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB			
		30 Hz, AC/DC 1.2% sine wave	± 0.35 dB			± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB			
30 Hz, AC/DC 4% sine wave	0.1 dB	0.1 dB	0.1 dB			0.1 dB	0.1 dB	0.1 dB	0.1 dB	0.1 dB					
30 Hz, AC/DC 1.2% sine wave	0.3 dB	0.3 dB	0.3 dB			0.3 dB	0.3 dB	0.3 dB	0.3 dB	0.3 dB					
XYZ ⁶	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²			5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 27,000 cd/m ²	15 to 2,000 cd/m ²	30 to 4,000 cd/m ²	20 to 12,000 cd/m ²	15 to 8,500 cd/m ²	90 to 30,000 cd/m ²		
		Measurement target (Flicker frequency) ¹⁰	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz					
		30 Hz, AC/DC 4% sine wave	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB					
		30 Hz, AC/DC 1.2% sine wave	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB					
		Repeatability (2σ)	0.4 dB	0.4 dB	0.4 dB	0.4 dB	0.1 dB	0.1 dB	0.4 dB	0.3 dB					
		30 Hz, AC/DC 4% sine wave	1.4 dB	1.4 dB	1.4 dB	1.4 dB	0.3 dB	0.3 dB	1.4 dB	0.9 dB					
		30 Hz, AC/DC 1.2% sine wave	0.3 dB	0.3 dB	0.3 dB	0.3 dB	0.3 dB	0.3 dB	0.3 dB	0.3 dB					
Waveform	Accuracy	Measurement luminance range ^a	0.1 to 10,000 cd/m ²	1 to 3,000 cd/m ²	1 to 5,000 cd/m ²	6 to 30,000 cd/m ²	1 to 2,500 cd/m ²	2 to 5,000 cd/m ²	4 to 12,000 cd/m ²	1 to 10,000 cd/m ²	6 to 30,000 cd/m ²				
		Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz					
		Repeatability (2σ)	Lv: 0.1 cd/m ² , fs: 3 kHz, fc: 1 kHz	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%					
		Measurement luminance range ^a	0.1 to 10,000 cd/m ²	1 to 3,000 cd/m ²	1 to 5,000 cd/m ²	6 to 30,000 cd/m ²	1 to 2,500 cd/m ²	2 to 5,000 cd/m ²	4 to 12,000 cd/m ²	1 to 10,000 cd/m ²	6 to 30,000 cd/m ²				
		Sampling frequency	3 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz					
		Repeatability (2σ)	Lv: 0.1 cd/m ²	13%	13%	13%	13%	13%	13%	13%					
		Lv: 1 cd/m ²	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%						
		VRR-Flicker ^{10, 11}	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 30,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 30,000 cd/m ²		
				Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz			
				Measurement Target (Flicker frequency)	0.01 to 100k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]			
				Accuracy	± 0.3%	± 0.22%	± 0.24%	± 0.24%	± 0.08%	± 0.08%	± 0.22%	± 0.14%			
				Repeatability (2σ)	0.3%	0.32%	0.34%	0.34%	0.06%	0.06%	0.32%	0.20%			
				XYZ ⁶	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 30,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 30,000 cd/m ²
						Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	
Measurement Target (Flicker frequency)	0.01 to 100k [Hz]					0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]			
Accuracy	± 0.3%					± 0.22%	± 0.24%	± 0.24%	± 0.08%	± 0.08%	± 0.22%	± 0.14%			
Repeatability (2σ)	0.3%					0.32%	0.34%	0.34%	0.06%	0.06%	0.32%	0.20%			
Lxyy	Accuracy					Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 30,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 30,000 cd/m ²
						Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	
				Measurement Target (Flicker frequency)	0.01 to 100k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]			
				Accuracy	± 0.3%	± 0.22%	± 0.24%	± 0.24%	± 0.08%	± 0.08%	± 0.22%	± 0.14%			
		Repeatability (2σ)	0.3%	0.32%	0.34%	0.34%	0.06%	0.06%	0.32%	0.20%					
		Flicker (Contrast)	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 30,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 30,000 cd/m ²		
				Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz			
Measurement Target (Flicker frequency)	0.01 to 100k [Hz]			0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]					
Accuracy	± 0.3%			± 0.22%	± 0.24%	± 0.24%	± 0.08%	± 0.08%	± 0.22%	± 0.14%					
Repeatability (2σ)	0.3%			0.32%	0.34%	0.34%	0.06%	0.06%	0.32%	0.20%					
Flicker (EITA)	Accuracy			Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 30,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 30,000 cd/m ²		
				Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz			
		Measurement Target (Flicker frequency)	0.01 to 100k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]					
		Accuracy	± 0.3%	± 0.22%	± 0.24%	± 0.24%	± 0.08%	± 0.08%	± 0.22%	± 0.14%					
		Repeatability (2σ)	0.3%	0.32%	0.34%	0.34%	0.06%	0.06%	0.32%	0.20%					
		VRR-Flicker	Accuracy	Measurement luminance range ^a	0.5 to 10,000 cd/m ²	5 to 3,000 cd/m ²	5 to 5,000 cd/m ²	30 to 30,000 cd/m ²	15 to 3,000 cd/m ²	30 to 6,000 cd/m ²	20 to 12,000 cd/m ²	15 to 10,000 cd/m ²	90 to 30,000 cd/m ²		
				Sampling frequency	200 kHz Changeable	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz			
Measurement Target (Flicker frequency)	0.01 to 100k [Hz]														

Main Specifications of CA-527/CA-410 Probes

		CA-VP404 Small Spot Probe	CA-VP402 Small Spot Probe	CA-P427C CIE 170-2: 2015 Supported Probe ²⁾	CA-MP410H Mini Probe			
Measurement area		Ø 4 mm	Ø 2.1 mm	Ø 27 mm	Ø 10 mm			
Acceptance angle		±8.5°	±10°	±2.5°	±5°			
Accuracy guaranteed measurement distance		30 ± 2 mm	28 ± 2 mm	30 ± 10 mm	10 ± 5 mm			
Accuracy guaranteed range ³⁾		0.004 to 12,000 cd/m ²	0.002 to 25,000 cd/m ²	0.001 to 5,000 cd/m ²	0.1 to 30,000 cd/m ²			
Luminance	Accuracy (for white) ^{1), 3)}	> 0.0001 cd/m ²	---	---	---			
		> 0.0003 cd/m ²	---	---	---			
		> 0.0005 cd/m ²	---	---	---			
		> 0.001 cd/m ²	± 9% (0.004 to cd/m ²)	± 9% (0.002 to cd/m ²)	± 9%	---		
		> 0.01 cd/m ²	± 9%	± 9%	± 2%	---		
		> 0.1 cd/m ²	± 3%	± 3%	± 1.5%	± 2.5%		
		> 1 cd/m ²	± 3%	± 3%	± 1.5%	± 2%		
		> 10 cd/m ²	± 2.5%	± 2.5%	± 1.5%	± 2%		
		> 100 cd/m ²	± 2%	± 2%	± 1.5%	± 1.5%		
		Repeatability (2σ) ¹⁾	AUTO	> 0.0001 cd/m ²	---	---	---	
> 0.0003 cd/m ²	---			---	---			
> 0.0005 cd/m ²	---			---	---			
> 0.001 cd/m ²	10% (0.004 to cd/m ²)			10% (0.002 to cd/m ²)	10%	---		
> 0.01 cd/m ²	5%			10%	1%	---		
> 0.1 cd/m ²	0.50%			1%	0.4%	2.40%		
> 1 cd/m ²	0.25%			0.25%	0.10%	0.70%		
> 10 cd/m ²	0.10%			0.10%	0.10%	0.25%		
> 100 cd/m ²	0.10%			0.10%	0.10%	0.12%		
Chromaticity	Accuracy (for white) ^{1), 3)}			> 0.001 cd/m ²	---	---	---	
		> 0.003 cd/m ²	---	---	---			
		> 0.01 cd/m ²	± 0.004 (0.04 to cd/m ²)	± 0.004 (0.02 to cd/m ²)	± 0.003	---		
		> 0.1 cd/m ²	± 0.004	± 0.004	± 0.002	± 0.006		
		> 1 cd/m ²	± 0.003	± 0.003	± 0.002	± 0.002		
		> 10 cd/m ²	± 0.003	± 0.003	± 0.002	± 0.002		
		> 100 cd/m ²	± 0.002	± 0.002	± 0.002	± 0.002		
		> 100 cd/m ² (for monochrome) ²⁾	± 0.003	± 0.003	± 0.003	± 0.003		
		Repeatability (2σ) ¹⁾	AUTO	> 0.001 cd/m ²	---	---	---	
				> 0.003 cd/m ²	---	---	---	
> 0.01 cd/m ²	0.0030 (0.04 to cd/m ²)			0.003 (0.02 to cd/m ²)	0.0035	---		
> 0.1 cd/m ²	0.0015			0.003	0.0015	0.0085		
> 1 cd/m ²	0.0005			0.0008	0.0004	0.0025		
> 10 cd/m ²	0.0003			0.0003	0.0003	0.0010		
> 100 cd/m ²	0.0002			0.0002	0.0002	0.0006		
Flicker (Contrast)	Flicker ⁵⁾			Measurement luminance range ⁸⁾	---	---	5 to 1,500 cd/m ²	90 to 18,000 cd/m ²
				Measurement target (Flicker frequency)	---	---	0.25 to 65 Hz	0.25 to 65 Hz
				Accuracy	---	---	± 0.4%	± 0.4%
	XYZ ⁶⁾	Measurement luminance range ⁸⁾	20 to 12,000 cd/m ²	35 to 25,000 cd/m ²	5 to 5,000 cd/m ²	90 to 30,000 cd/m ²		
		Measurement target (Flicker frequency)	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz	0.25 to 200 Hz		
		Accuracy	± 1.1%	± 1.2%	± 1.2%	± 0.9%		
	Flicker (JEITA)	Flicker ⁵⁾	Measurement luminance range ⁸⁾	---	---	5 to 1,500 cd/m ²	90 to 18,000 cd/m ²	
			Measurement target (Flicker frequency)	---	---	0.42 to 65 Hz	0.42 to 65 Hz	
			Accuracy	---	---	± 0.35 dB	± 0.35 dB	
		XYZ ⁶⁾	Measurement luminance range ⁸⁾	20 to 12,000 cd/m ²	35 to 22,000 cd/m ²	5 to 4,500 cd/m ²	90 to 30,000 cd/m ²	
Measurement target (Flicker frequency) ¹⁰⁾			0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz		
Accuracy			± 0.35 dB	± 0.35 dB	± 0.35 dB	± 0.35 dB		
Waveform		Flicker ⁵⁾	Measurement luminance range ⁸⁾	---	---	---	---	
			Sampling frequency	---	---	---	---	
			Repeatability (2σ)	Lv: 0.1 cd/m ² , fs: 3 kHz, fc: 1 kHz	---	---	---	
		XYZ ⁶⁾	Measurement luminance range ⁸⁾	4 to 12,000 cd/m ²	7 to 25,000 cd/m ²	1 to 5,000 cd/m ²	6 to 30,000 cd/m ²	
	Sampling frequency		3 kHz	3 kHz	3 kHz	3 kHz		
	Repeatability (2σ)		Lv: 0.1 cd/m ²	---	---	---		
	VRR-Flicker ^{10) 11)}	Flicker ⁵⁾	Measurement luminance range ⁸⁾	---	---	---	---	
			Measurement Target (Flicker frequency)	---	---	---	---	
			Accuracy	---	---	---	---	
		XYZ ⁶⁾	Measurement luminance range ⁸⁾	20 to 12,000 cd/m ²	35 to 25,000 cd/m ²	5 to 5,000 cd/m ²	90 to 30,000 cd/m ²	
Sampling frequency			3 kHz	3 kHz	3 kHz	3 kHz		
Measurement Target (Flicker frequency)			0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]	0.03 to 1.5k [Hz]		
Accuracy guaranteed measurement speed ⁴⁾		Lvxy	AUTO	1 times/sec (> 0.004 cd/m ²)	0.16 times/sec (> 0.002 cd/m ²)	1 times/sec (> 0.001 cd/m ²)	1 times/sec (> 0.1 cd/m ²)	
				5 times/sec (> 0.6 cd/m ²)	---	5 times/sec (> 1.5 cd/m ²)	5 times/sec (> 0.9 cd/m ²)	
				20 times/sec (> 8 cd/m ²)	---	20 times/sec (> 2 cd/m ²)	20 times/sec (> 12 cd/m ²)	
				20 times/sec	20 times/sec	20 times/sec	20 times/sec	
Measurement synchronization mode	Flicker (Contrast)	Flicker (JEITA)	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)	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)		
			0.7 times/sec (at 1s Obs.)	0.7 times/sec (at 1s Obs.)	0.7 times/sec (at 1s Obs.)	0.7 times/sec (at 1s Obs.)		
			NTSC, PAL, EXT, UNIV, INT, MANU (4 ms to 4 s)					
			AUTO, LTD, AUTO, SLOW, FAST					
Measurement speed mode		AUTO, LTD, AUTO, SLOW, FAST						
Measurement target (Vertical synchronization frequency)		0.5 to 240 Hz (luminance and chromaticity), 0.5 to 240 Hz (luminance and chromaticity), 0.5 to 130 Hz (flicker), 0.5 to 240 Hz (luminance and chromaticity), 0.5 to 130 Hz (flicker)						
User calibration memory channel		99 channels						
Interface	Communication		USB2.0, RS-232C					
	Trigger ³⁾		IN: 1.8 V / 3.3 to 5 V switching Out: 5 V					
Size (mm)		47 x 47 x 226.5	47 x 47 x 222.9	42 x 42 x 139.7	42 x 42 x 77			
Weight		570 g (including mount)	580 g (including mount)	270 g (including mount)	200 g (including mount)			
Power supply		DC 5 V (input from USB bus power line or RS communication connector)						
Operation 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/m².

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

*4: In NTSC (DOUBLE FLAME) synchronization mode using USB with one probe.

*5: Reading fluctuation (compared to reference reading at 23°C, 40% RH): Luminance: ±2% for white; Chromaticity (at 100 cd/m²): ±0.002 for white, ±0.003 for monochrome.

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

*7: "XYZ" can only be used when no CA-DP40 data processor is connected.

*8: The spectral sensitivities of probes conforming to CIE 170-2:2015 are different from those defined for the CIE 1931 color-matching functions; therefore, displayed values for luminance and chromaticity will be different from those calculated based on the CIE 1931 color-matching functions.

*8: 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.

*9: Supports 1.8V switching from products produced in March 2021.

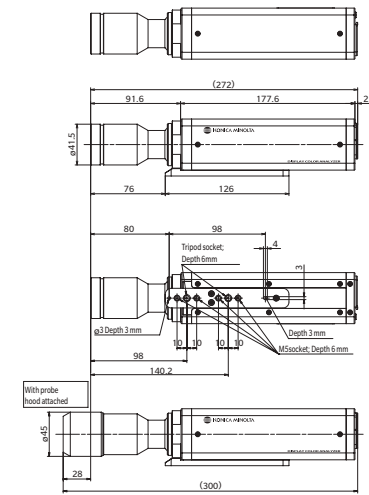
*10: The listed values are for use with CA-SDK2 or CA-S40.

*11: To measure VRR-Flicker with the CA-410 series, firmware must be Ver. 1.40 or later and CA-SDK2 or CA-S40 must be used.

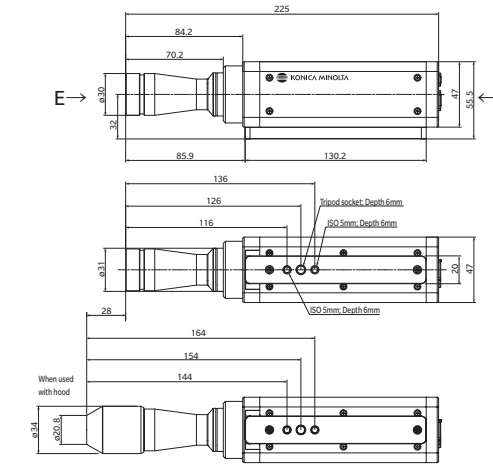
* Unless otherwise specified, specifications are given for conditions established by Konica Minolta.

Probe Dimensions (unit: mm)

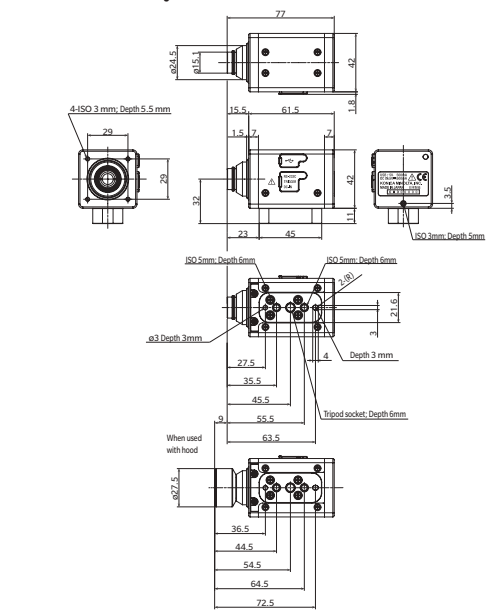
CA-527 Display Color Analyzer



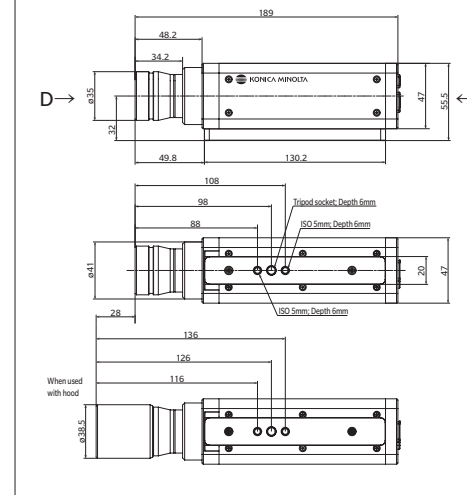
CA-VP410A Ø10 Advanced High Sensitivity Probe
CA-VP410H Ø10 High Sensitivity Probe for high luminance



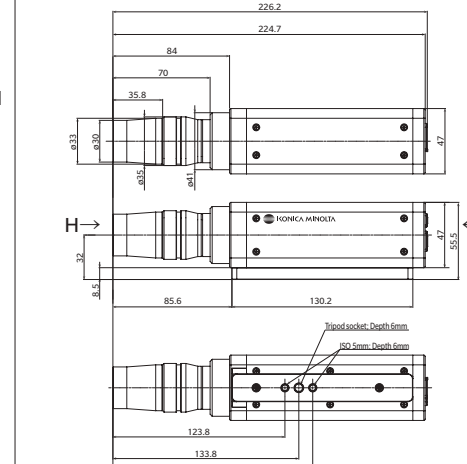
CA-MP410H Ø10 Mini High Luminance Probe



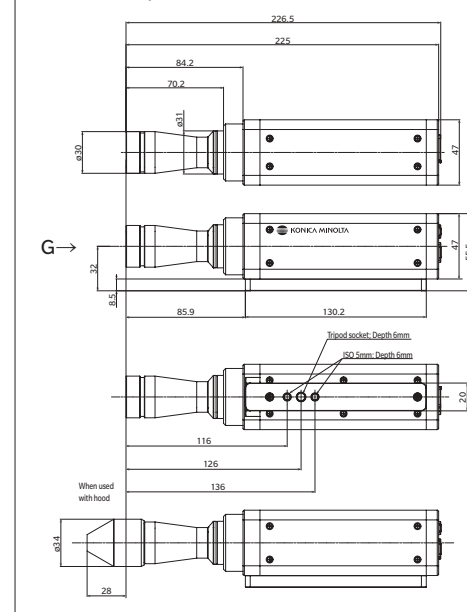
CA-VP427A Ø27 Advanced High Sensitivity Probe



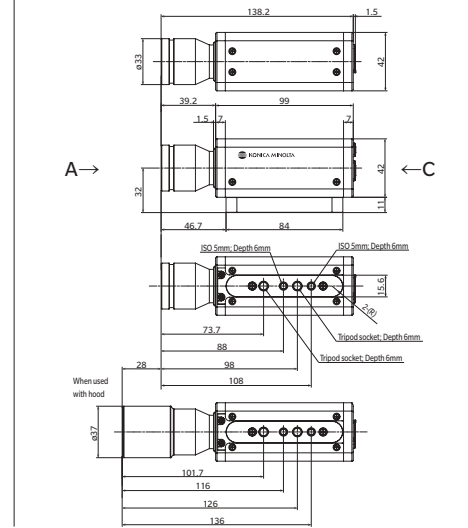
CA-VP410T Ø10LWD Probe (200 mm)



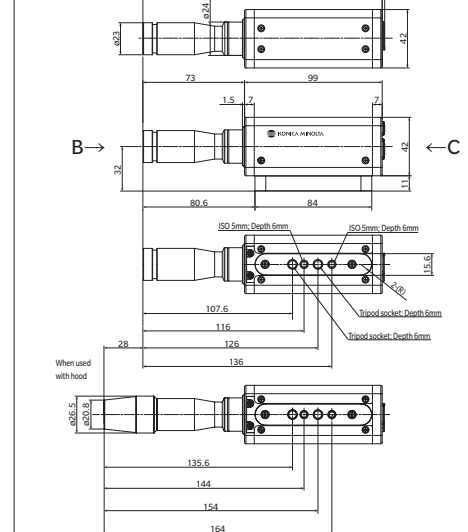
CA-VP404 Ø4 Small Spot Probe



CA-P427 Ø27 Normal Probe
CA-P427H Ø27 High Luminance Probe
CA-P427C Ø27 Normal Probe



CA-P410 Ø10 Normal Probe
CA-P410H Ø10 High Luminance Probe



View A

View B

View C

View D

View E

View F

View G

View H

View I