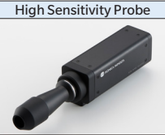
KONICA MINOLTA

Main Specifications of CA-410 Probes

				CA-VP427A	CA-VP427	CA-P427	CA-P427H	CA-VP410A	CA-VP410	CA-VP410T	CA-P410	CA-P410H	CA-VP404	CA-VP402
				Advanced High Sensitivity Probe	High Sensitivity Probe	Normal Probe	High Luminance Probe	Advanced High Sensitivity Probe	High Sensitivity Probe	LWD Probe	Normal Probe	High Luminance Probe	Small Spot Probe	Small Spot 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	Ø 4 mm	Ø 2.1 mm
Acceptance angle				± 2.5°	± 2.5°	± 2.5°	± 2.5°	± 8.5°	± 8.5°	± 4°	± 5°	± 5°	±8.5°	±10°
Accuracy guaranteed measurement distance				30 ± 10 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	30 ± 2 mm	28 ± 2 mm
Display range	Luminance[*8]			0.0001 to 5,000 cd/m²	0.0001 to 3,000 cd/m²	0.0001 to 5,000 cd/m²	0.0001 to 30,000 cd/m²	0.0001 to 3,000 cd/m²	0.0001 to 3,000 cd/m²	0.0001 to 12,000 cd/m²	0.0001 to 5,000 cd/m²	0.0001 to 30,000 cd/m²	0.0001 to 12,000 cd/m²	0.0001 to 6,000 cd/m²
	Chromaticity			Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits
Luminance	Accuracy guaranteed range[*8]			0.0003 to 5,000 cd/m²	0.001 to 3,000 cd/m²	0.001 to 5,000 cd/m²	0.01 to 30,000 cd/m²	0.0003 to 3,000 cd/m²	0.001 to 3,000 cd/m²	0.004 to 12,000 cd/m²	0.01 to 5,000 cd/m²	0.1 to 30,000 cd/m²	0.004 to 12,000 cd/m²	0.002 to 6,000 cd/m²
	Accuracy (for white)[*1, *3]		> 0.0003 cd/m²	± 9 %	---	---	---	± 9 %	---	---	---	---	---	---
			> 0.001 cd/m²	± 4 %	± 9 %	± 9 %	---	± 4 %	± 9 %	± 9 % (0.004 to cd/m²)	---	---	± 9 % (0.004 to cd/m²)	± 9 % (0.002 to cd/m²)
			> 0.01 cd/m²	± 2 %	± 2 %	± 2 %	± 9 %	± 2.5 %	± 2.5 %	± 9 %	± 2.5 %	---	± 9 %	± 9 %
			> 0.1 cd/m²	± 1.5 %	± 1.5 %	± 1.5 %	± 2 %	± 2 %	± 2 %	± 3 %	± 2 %	± 2.5 %	± 3 %	± 3 %
			> 1 cd/m²	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 2 %	± 2 %	± 3 %	± 2 %	± 2 %	± 3 %	± 3 %
			> 10 cd/m²	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 2.5 %	± 1.5 %	± 2 %	± 2.5 %	± 2.5 %
			> 100 cd/m²	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %	± 2 %	± 1.5 %	± 1.5 %	± 2 %	± 2 %
	Repeatability (2σ)[*1]	AUTO	> 0.0003 cd/m²	10 %	---	---	---	7 %	---	---	---	---	---	---
			> 0.001 cd/m²	4 %	10 %	10 %	---	3 %	7 %	10 % (0.004 to cd/m²)	---	---	10 % (0.004 to cd/m²)	10 % (0.002 to cd/m²)
			> 0.01 cd/m²	1 %	1 %	1 %	10 %	1 %	1 %	5 %	2 %	---	5 %	10 %
			> 0.1 cd/m²	0.25 %	0.25 %	0.40 %	1 %	0.25 %	0.25 %	0.50 %	0.60 %	2 %	0.50 %	1 %
			> 1 cd/m²	0.10 %	0.10 %	0.10 %	0.40 %	0.10 %	0.10 %	0.20 %	0.20 %	0.60 %	0.20 %	0.25 %
			> 10 cd/m²	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.20 %	0.10 %	0.10 %
			> 100 cd/m²	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %	0.10 %
Chromaticity	Accuracy guaranteed luminance range[*8]			0.003 to 5,000 cd/m²	0.01 to 3,000 cd/m²	0.01 to 5,000 cd/m²	0.1 to 30,000 cd/m²	0.003 to 3,000 cd/m²	0.01 to 3,000 cd/m²	0.04 to 12,000 cd/m²	0.01 to 5,000 cd/m²	0.1 to 30,000 cd/m²	0.04 to 12,000 cd/m²	0.02 to 6,000 cd/m²
	Accuracy (for white)[*1, *3]		> 0.003 cd/m²	± 0.003	---	---	---	± 0.003	---	---	---	---	---	---
			> 0.01 cd/m²	± 0.002	± 0.003	± 0.003	---	± 0.002	± 0.003	± 0.004 (0.04 to cd/m²)	± 0.006	---	± 0.004 (0.04 to cd/m²)	± 0.004 (0.02 to cd/m²)
			> 0.1 cd/m²	± 0.002	± 0.002	± 0.002	± 0.003	± 0.002	± 0.002	± 0.004	± 0.002	± 0.006	± 0.004	± 0.004
			> 1 cd/m²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.003	± 0.002	± 0.002	± 0.003	± 0.003
			> 10 cd/m²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.003	± 0.002	± 0.002	± 0.003	± 0.003
			> 100 cd/m²	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002	± 0.002
	At 100 cd/m² (for monochrome)[*2]		100 cd/m²	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003	± 0.003
	Repeatability (2σ)[*1]	AUTO	> 0.003 cd/m²	0.0030	---	---	---	0.0020	---	---	---	---	---	---
			> 0.01 cd/m²	0.0030	0.0030	0.0035	---	0.0020	0.0020	0.0030 (0.04 to cd/m²)	0.0070	---	0.0030 (0.04 to cd/m²)	0.003 (0.02 to cd/m²)
			> 0.1 cd/m²	0.0008	0.0008	0.0015	0.0035	0.0008	0.0008	0.0015	0.0020	0.0070	0.0015	0.003
			> 1 cd/m²	0.0003	0.0003	0.0004	0.0015	0.0003	0.0003	0.0005	0.0008	0.0020	0.0005	0.0008
			> 10 cd/m²	0.0002	0.0002	0.0003	0.0004	0.0002	0.0002	0.0003	0.0005	0.0008	0.0003	0.0003
			> 100 cd/m²	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002	0.0003	0.0005	0.0002	0.0002
Flicker (CA-310 Mode)[*6]	Flicker (Contrast)	Measurement luminance range[*8]		---	---	5 to 1,500 cd/m²	30 to 9,000 cd/m²	---	---	---	15 to 3,000 cd/m²	90 to 18,000 cd/m²	---	---
		Measurement target (Flicker frequency)		---	---	0.25 to 65 Hz	0.25 to 65 Hz	---	---	---	0.25 to 65 Hz	0.25 to 65 Hz	---	---
		Accuracy	30 Hz, AC/DC 10% sine wave	---	---	± 0.4 %	± 0.4 %	---	---	---	± 0.4 %	± 0.4 %	---	---
			60 Hz, AC/DC 10% sine wave	---	---	± 0.7 %	± 0.7 %	---	---	---	± 0.7 %	± 0.7 %	---	---
		Repeatability (2σ)	20-65 Hz, AC/DC 10% sine wave	---	---	0.3 %	0.3 %	---	---	---	0.3 %	0.3 %	---	---
	Flicker (JEITA)	Measurement luminance range[*8]		---	---	5 to 1,500 cd/m²	30 to 9,000 cd/m²	---	---	---	15 to 3,000 cd/m²	90 to 18,000 cd/m²	---	---
		Measurement target (Flicker frequency)		---	---	0.42 to 65 Hz	0.42 to 65 Hz	---	---	---	0.42 to 65 Hz	0.42 to 65 Hz	---	---
		Accuracy	30 Hz, AC/DC 4% sine wave	---	---	± 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	---	---	---
		Repeatability (2σ)	30 Hz, AC/DC 4% sine wave	---	---	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	---	---	---
XYZ (Wide Frequency Mode)[*6]	Flicker (Contrast)	Measurement luminance range[*8]		5 to 3,000 cd/m²	5 to 3,000 cd/m²	5 to 5,000 cd/m²	30 to 30,000 cd/m²	15 to 3,000 cd/m²	15 to 3,000 cd/m²	20 to 12,000 cd/m²	15 to 5,000 cd/m²	90 to 30,000 cd/m²	20 to 12,000 cd/m²	35 to 6,000 cd/m²
		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	0.25 to 200 Hz	0.25 to 200 Hz
		Accuracy	30 Hz, AC/DC 10% sine wave	± 1.1 %	± 1.1 %	± 1.2 %	± 1.2 %	± 0.4 %	± 0.4 %	± 1.1 %	± 0.7 %	± 0.7 %	± 1.1 %	± 1.1 %
			60 Hz, AC/DC 10% sine wave	± 1.7 %	± 1.7 %	± 1.7 %	± 1.7 %	± 0.7 %	± 0.7 %	± 1.7 %	± 1.1 %	± 1.1 %	± 1.7 %	± 1.7 %
		Repeatability (2σ)	20-65 Hz, AC/DC 10% sine wave	1.6 %	1.6 %	1.7 %	1.7 %	0.3 %	0.3 %	0.016	1.0 %	1.0 %	1.6 %	1.6 %
	Flicker (JEITA)	Measurement luminance range[*8]		5 to 3,000 cd/m²	5 to 3,000 cd/m²	5 to 4,500 cd/m²	30 to 27,000 cd/m²	15 to 2,000 cd/m²	15 to 2,000 cd/m²	20 to 12,000 cd/m²	15 to 5,000 cd/m²	90 to 30,000 cd/m²	20 to 12,000 cd/m²	35 to 6,000 cd/m²
		Measurement target (Flicker frequency)		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	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz
		Accuracy	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	± 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	± 0.35 dB
		Repeatability (2σ)	30 Hz, AC/DC 4% sine wave	0.4 dB	0.4 dB	0.4 dB	0.4 dB	0.1 dB	0.1 dB	0.4 dB	0.3 dB	0.3 dB	0.4 dB	0.4 dB
			30 Hz, AC/DC 1.2% sine wave	1.4 dB	1.4 dB	1.5 dB	---	0.3 dB	0.3 dB	1.4 dB	0.9 dB	---	1.4 dB	1.4 dB
	Waveform	Measurement luminance range[*8]		1 to 3,000 cd/m²	1 to 3,000 cd/m²	1 to 5,000 cd/m²	6 to 30,000 cd/m²	1 to 2,500 cd/m²	1 to 2,500 cd/m²	4 to 12,000 cd/m²	1 to 5,000 cd/m²	6 to 30,000 cd/m²	4 to 12,000 cd/m²	7 to 6,000 cd/m²
		Sampling frequency		3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3kHz
Accuracy guaranteed measurement speed[*4]	Lvxy	AUTO		0.16 times/sec (> 0.0003 cd/m²)	---	---	---	0.16 times/sec(> 0.0003 cd/m²)	---	---	---	---	---	0.16 times/sec(> 0.002 cd/m²)
				1 times/sec (> 0.01 cd/m²)	1 times/sec (> 0.001 cd/m²)	1 times/sec (> 0.001 cd/m²)	1 times/sec (> 0.01 cd/m²)	1 times/sec (> 0.01 cd/m²)	1 times/sec (> 0.001 cd/m²)	1 times/sec(> 0.004 cd/m²)	1 times/sec (> 0.01 cd/m²)	1 times/sec (> 0.1 cd/m²)	1 times/sec(> 0.004 cd/m²)	1 times/sec(> 0.05 cd/m²)
				5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.9 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec(> 0.6 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.9 cd/m²)	5 times/sec(> 0.6 cd/m²)	5 times/sec(> 1.5 cd/m²)
				20 times/sec (> 2 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec (> 12 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec(> 8 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec (> 12 cd/m²)	20 times/sec(> 8 cd/m²)	20 times/sec(> 25 cd/m²)
	Flicker (Contrast)			20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec	20 times/sec
	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)	0.5 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)	0.5 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)
Measurement synchronization mode				NTSC, PAL, EXT, UNIV, INT, MANU(4 ms to 4 s)										
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 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)	0.5 to 240 Hz (luminance and chromaticity)	0.5 to 240 Hz (luminance and chromaticity)	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)	0.5 to 240 Hz (luminance and chromaticity)	0.5 to 240 Hz (luminance and chromaticity)
User calibration memory channel				99 channels										
Interface	Communication			USB2.0, RS-232C										
	Trigger[*9]			IN: 1.8 V /3.3 to 5 V switching Out: 5 V										
Size (mm)				47 x 47 x 190.5	47 x 47 x 190.5	42 x 42 x 139.7	42 x 42 x 139.7	47 x 47 x 226.5	47 x 47 x 226.5	47 x 47 x 226.2	42 x 42 x 173.5	42 x 42 x 173.5	47 x 47 x 226.5	47 x 47 x 222.9
Weight				510 g (including mount)	510 g (including mount)	270 g (including mount)	270 g (including mount)	570 g (including mount)	570 g (including mount)	550 g (including mount)	280 g (including mount)	280 g (including mount)	570 g (including mount)	580 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 (6,500K).
*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 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 (CA-310 Mode)" and "XYZ (Wide Frequency Mode)" are mode names for PC Software CA-S40. "XYZ (Wide Frequency Mode)" can only be used when no CA-DP40 data processor is connected.
*7: 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 fuctions.
*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.

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

ISO Certifications of KONICA MINOLTA, Inc., Sakai Site

JQA-QMA15888
Design, development, manufacture/ manufacturing management, calibration, and service of measuring instruments
ISO 9001

JQA-E-80027
Design, development, manufacture, service and sales of measuring instruments
ISO 14001

9242-AA1J-43 CCDDK7

Main Specifications of CA-410 Probes

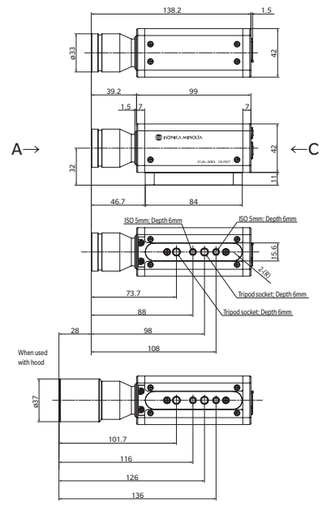
				CA-P427C	CA-P410C	CA-MP410	CA-MP410H
				CIE 170-2: 2015 Supported Probe*7		Mini Probe	
							
Measurement area				Ø 27 mm	Ø 10 mm	Ø 10 mm	Ø 10 mm
Acceptance angle				± 2.5°	± 5°	± 5°	± 5°
Accuracy guaranteed measurement distance				30 ± 10 mm	30 ± 5 mm	10 ± 5 mm	10 ± 5 mm
Display range	Luminance*8			0.0001 to 5,000 cd/m²	0.0001 to 5,000 cd/m²	0.0001 to 5,000 cd/m²	0.0001 to 30,000 cd/m²
	Chromaticity			Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits	Displayed in 4 digits
Luminance	Accuracy guaranteed range*8			0.001 to 5,000 cd/m²	0.01 to 5,000 cd/m²	0.01 to 5,000 cd/m²	0.1 to 30,000 cd/m²
	Accuracy (for white)*1, *3		> 0.0003 cd/m²	---	---	---	---
			> 0.001 cd/m²	± 9 %	---	---	---
			> 0.01 cd/m²	± 2 %	± 2.5 %	± 2.5 %	---
			> 0.1 cd/m²	± 1.5 %	± 2 %	± 2 %	± 2.5 %
			> 1 cd/m²	± 1.5 %	± 2 %	± 2 %	± 2 %
			> 10 cd/m²	± 1.5 %	± 1.5 %	± 1.5 %	± 2 %
			> 100 cd/m²	± 1.5 %	± 1.5 %	± 1.5 %	± 1.5 %
	Repeatability (2σ)*1	AUTO	> 0.0003 cd/m²	---	---	---	---
			> 0.001 cd/m²	10 %	---	---	---
			> 0.01 cd/m²	1 %	2 %	2.40 %	---
			> 0.1 cd/m²	0.4 %	0.6 %	0.70 %	2.40 %
			> 1 cd/m²	0.10 %	0.20 %	0.25 %	0.70 %
			> 10 cd/m²	0.10 %	0.10 %	0.12 %	0.25 %
			> 100 cd/m²	0.10 %	0.10 %	0.10 %	0.12 %
Chromaticity	Accuracy guaranteed luminance range*8			0.01 to 5,000 cd/m²	0.01 to 5,000 cd/m²	0.01 to 5,000 cd/m²	0.1 to 30,000 cd/m²
	Accuracy (for white)*1, *3		> 0.003 cd/m²	---	---	---	---
			> 0.01 cd/m²	± 0.003	± 0.006	± 0.006	---
			> 0.1 cd/m²	± 0.002	± 0.002	± 0.002	± 0.006
			> 1 cd/m²	± 0.002	± 0.002	± 0.002	± 0.002
			> 10 cd/m²	± 0.002	± 0.002	± 0.002	± 0.002
			> 100 cd/m²	± 0.002	± 0.002	± 0.002	± 0.002
	At 100 cd/m² (for monochrome)*2		100 cd/m²	± 0.003	± 0.003	± 0.003	± 0.003
	Repeatability (2σ)*1	AUTO	> 0.003 cd/m²	---	---	---	---
			> 0.01 cd/m²	0.0035	0.007	0.0085	---
			> 0.1 cd/m²	0.0015	0.0020	0.0025	0.0085
			> 1 cd/m²	0.0004	0.0008	0.0010	0.0025
			> 10 cd/m²	0.0003	0.0005	0.0006	0.0010
			> 100 cd/m²	0.0002	0.0003	0.0004	0.0006
Flicker (CA-310 Mode)*6	Flicker (Contrast)	Measurement luminance range*8		5 to 1,500 cd/m²	15 to 3,000 cd/m²	15 to 3,000 cd/m²	90 to 18,000 cd/m²
		Measurement target (Flicker frequency)		0.25 to 65 Hz	0.25 to 65 Hz	0.25 to 65 Hz	0.25 to 65 Hz
		Accuracy	30 Hz, AC/DC 10% sine wave	± 0.4 %	± 0.4 %	± 0.4 %	± 0.4 %
			60 Hz, AC/DC 10% sine wave	± 0.7 %	± 0.7 %	± 0.7 %	± 0.7 %
		Repeatability (2σ)	20-65 Hz, AC/DC 10% sine wave	0.3 %	0.3 %	0.3 %	0.3 %
	Flicker (JEITA)	Measurement luminance range*8		5 to 1,500 cd/m²	15 to 3,000 cd/m²	15 to 3,000 cd/m²	90 to 18,000 cd/m²
		Measurement target (Flicker frequency)		0.42 to 65 Hz	0.42 to 65 Hz	0.42 to 65 Hz	0.42 to 65 Hz
		Accuracy	30 Hz, AC/DC 4% sine wave	± 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	---
		Repeatability (2σ)	30 Hz, AC/DC 4% sine wave	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	---
XYZ (Wide Frequency Mode)*6	Flicker (Contrast)	Measurement luminance range*8		5 to 5,000 cd/m²	15 to 5,000 cd/m²	15 to 5,000 cd/m²	90 to 30,000 cd/m²
		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	30 Hz, AC/DC 10% sine wave	± 1.2 %	± 0.7 %	± 0.9 %	± 0.9 %
			60 Hz, AC/DC 10% sine wave	± 1.7 %	± 1.1 %	± 1.3 %	± 1.3 %
		Repeatability (2σ)	20-65 Hz, AC/DC 10% sine wave	1.7 %	1.0 %	1.3 %	1.3 %
	Flicker (JEITA)	Measurement luminance range*8		5 to 4,500 cd/m²	15 to 5,000 cd/m²	15 to 5,000 cd/m²	90 to 30,000 cd/m²
		Measurement target (Flicker frequency)		0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz	0.42 to 200 Hz
		Accuracy	30 Hz, AC/DC 4% sine wave	± 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	---
		Repeatability (2σ)	30 Hz, AC/DC 4% sine wave	0.4 dB	0.3 dB	0.3 dB	0.3 dB
			30 Hz, AC/DC 1.2% sine wave	1.5 dB	0.9 dB	1.2 dB	---
	Waveform	Measurement luminance range*8		1 to 5,000 cd/m²	1 to 5,000 cd/m²	1 to 5,000 cd/m²	6 to 30,000 cd/m²
		Sampling frequency		3 kHz	3 kHz	3 kHz	3 kHz
Accuracy guaranteed measurement speed*4	Lvxy	AUTO		---	---	---	---
				1 times/sec (> 0.001 cd/m²)	1 times/sec (> 0.01 cd/m²)	1 times/sec (> 0.01 cd/m²)	1 times/sec (> 0.1 cd/m²)
				5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.15 cd/m²)	5 times/sec (> 0.9 cd/m²)
				20 times/sec (> 2 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec (> 2 cd/m²)	20 times/sec (> 12 cd/m²)
	Flicker (Contrast)			20 times/sec	20 times/sec	20 times/sec	20 times/sec
	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)
Measurement synchronization mode				NTSC, PAL, EXT, UNIV, INT, MANU(4 ms to 4 s)			
Measurement speed mode				AUTO, LTD. AUTO, SLOW, FAST			
Measurement target (Vertical synchronization frequency)				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)	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*9			IN: 1.8 V /3.3 to 5 V switching Out: 5 V			
Size (mm)				42 x 42 x 139.7	42 x 42 x 173.5	42 x 42 x 77	42 x 42 x 77
Weight				270 g (including mount)	280 g (including mount)	200 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 (6,500K).
*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 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 (CA-310 Mode)" and "XYZ (Wide Frequency Mode)" are mode names for PC Software CA-S40. "XYZ (Wide Frequency Mode)" can only be used when no CA-DP40 data processor is connected.
*7: 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 fuctions.
*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.

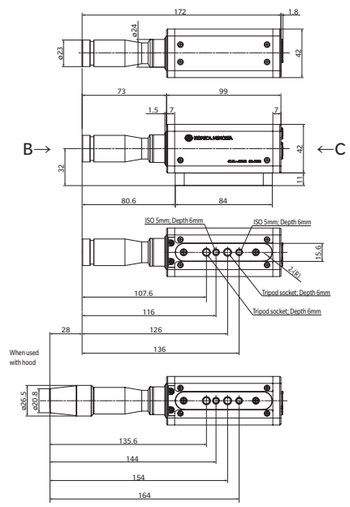
* Unless otherwise specified, specifications are given for conditions established by Konica Minolta.

Probe Dimensions (unit: mm)

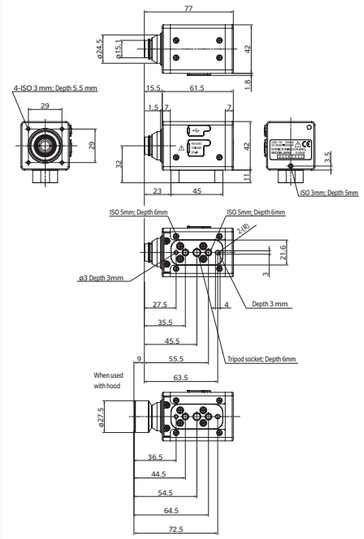
CA-P427 Ø27 Normal Probe
CA-P427H Ø27 High Luminance Probe
CA-P427C Ø27 Normal Probe



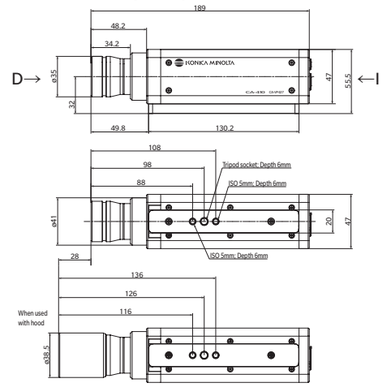
CA-P410 Ø10 Normal Probe
CA-P410H Ø10 High Luminance Probe
CA-P410C Ø10 Normal Probe



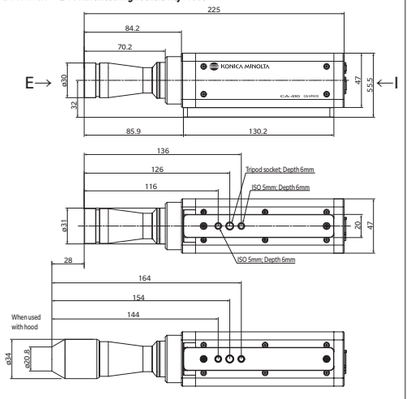
CA-MP410 Ø10 Mini Probe
CA-MP410H Ø10 Mini High Luminance Probe

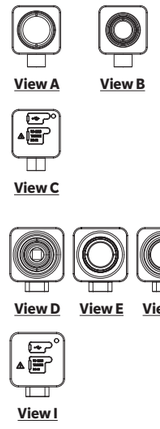


CA-VP427 Ø27 High Sensitivity Probe
CA-VP427A Ø27 Advanced High Sensitivity Probe

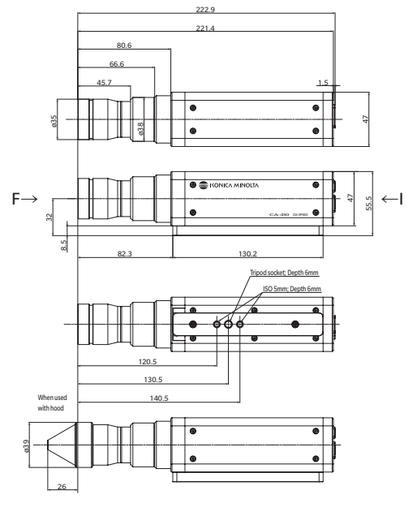


CA-VP410 Ø10 High Sensitivity Probe
CA-VP410A Ø10 Advanced High Sensitivity Probe

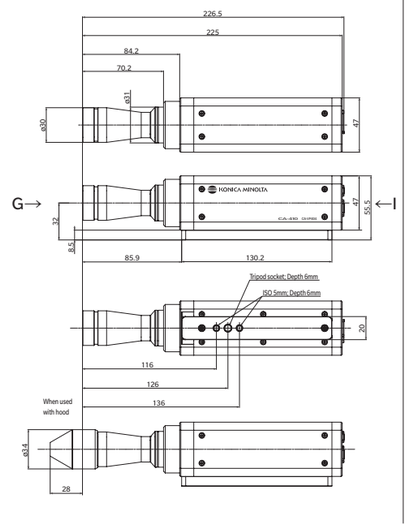




CA-VP402 Ø2 Small Spot Probe



CA-VP404 Ø4 Small Spot Probe



CA-VP410T Ø10 LWD Probe (200 mm)