



KONICA MINOLTA

NEW

Display Color Analyzer

CA-410

1

**Broad measurement support for today's ever-evolving displays**  
**CA-310 successor with major improvements**



# 4 improvements for display

## 1 Accuracy guaranteed from ultra-low to high brightness

With more and more displays becoming HDR (High Dynamic Range), the pressure is mounting for color analyzers to improve their measurement performance at both high and low brightnesses.

By using new sensors and circuitry, the CA-410 realizes an accuracy-guaranteed brightness range 25x wider than its predecessor (compared to the CA-310 when using Normal Probe CA-P427).

This gives users the means to accurately measure and adjust the chromaticity and gamma characteristics of HDR displays across a wide brightness range from ultra-low to high.



Earlier model display: 0.01 to 500 cd/m<sup>2</sup>



HDR display: 0.001 to more than 1,000 cd/m<sup>2</sup>

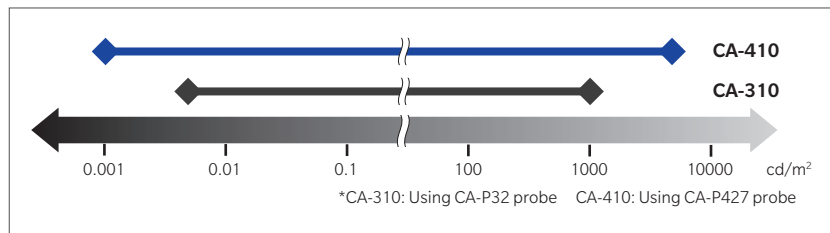
Display brightness measurement example



CA-310 (Using CA-P32 probe)  
Accuracy guaranteed range for luminance:  
0.005 to 1,000 cd/m<sup>2</sup>



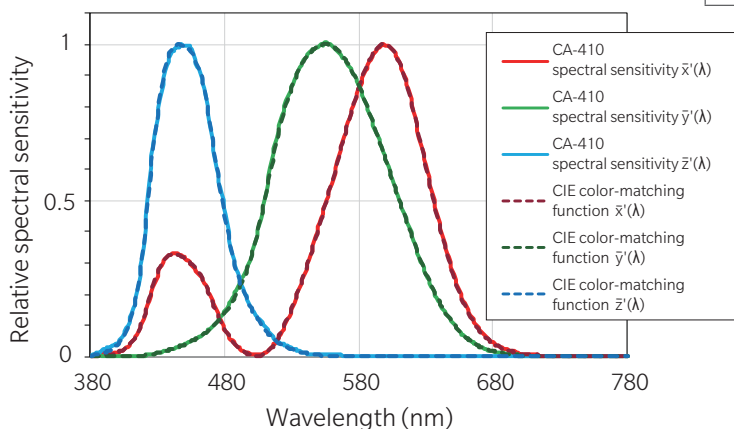
CA-410 (Using CA-P427 probe)  
Accuracy guaranteed range for luminance:  
0.001 to 5,000 cd/m<sup>2</sup>



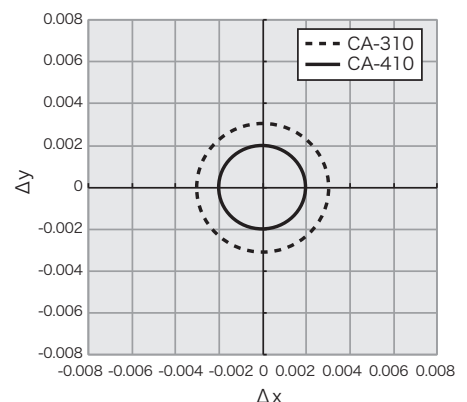
## 2 Improved chromaticity measurement accuracy

The greater intensity and wider color gamut of newer displays require color analyzers that can measure chromaticity to a higher degree of precision. Thanks to the enhanced accuracy of the XYZ filters, the CA-410 pushes its spectral sensitivity even closer to the color-matching functions of CIE 1931 (compared to the CA-310). Moreover, the accuracy of chromaticity measurements has been further improved by calibrating the analyzer with reference that replicates the optical spectrum of an LED light source for displays. As such, users can more accurately measure and adjust the chromaticity and white balance of displays that have a wide color gamut.

CA-410 spectral sensitivity vs. CIE 1931 color-matching functions



|        | Guaranteed accuracy (xy; when measuring standard light source) |
|--------|--|
| CA-310 | White: ±0.003 RGB: ±0.004                                      |
| CA-410 | White: ±0.002 RGB: ±0.003                                      |



• High Sensitivity Probe CA-VP410's spectral sensitivities are shown above as typical.

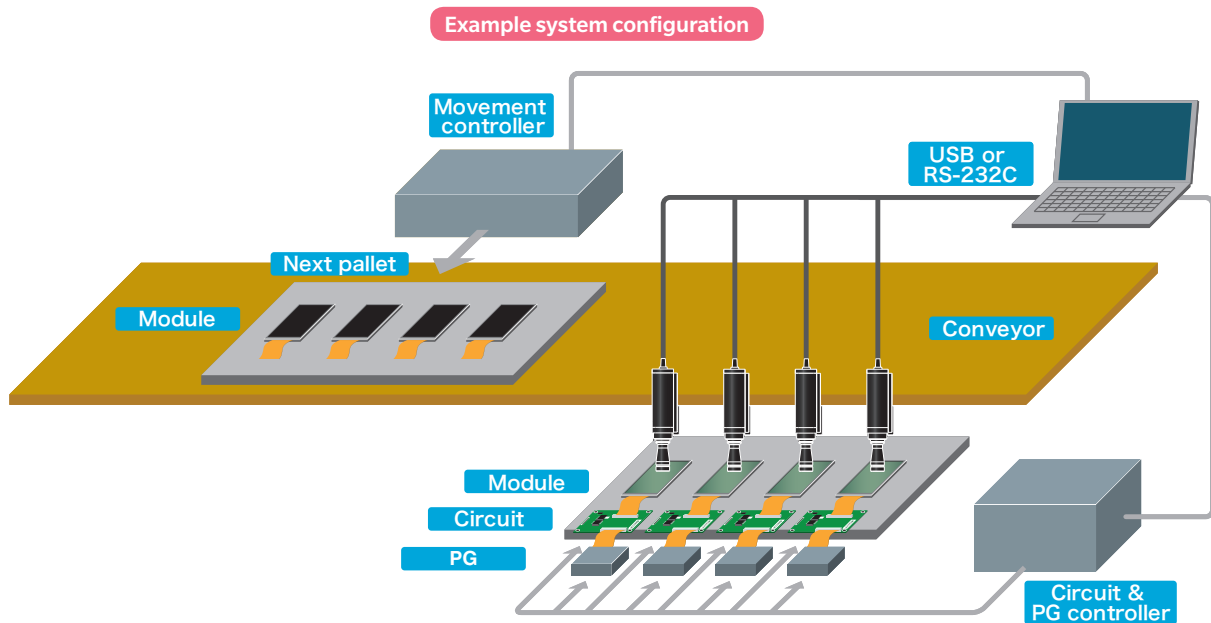
CA-310: Based on Konica Minolta's reference LCD  
CA-410: Based on Konica Minolta's reference light source

# measurement support

## 3 Optimized specifications for integration as a sensor

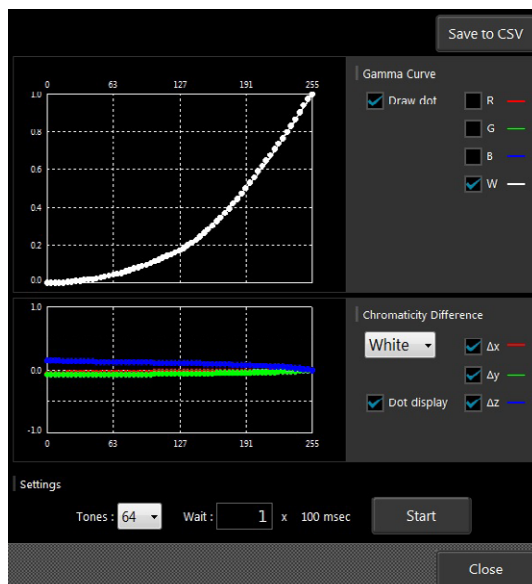
Since the launch of the first model, Konica Minolta's CA series display color analyzers have been incorporated by many customers into automatic measurement systems as color sensors due to their high accuracy.

The CA-410 is optimized for even better integration as a sensor with a motorized zero-point calibration shutter for automatic unmanned support and direct connection between probes and a computer for a more compact installation. At the same time, it maintains compatibility with its predecessor model by including the same basic commands in the CA-SDK2 as were available in the software development kit (SDK) of the previous model and locating the threaded probe installation holes in the same positions as on the predecessor model (excluding Mini Probe CA-MP410).

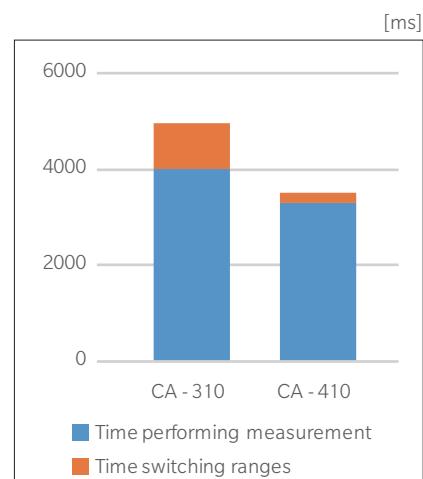


## 4 Wider measurement application support

Continuing to work with long-standing CA-series customers and respond to their needs, we developed the CA-410 to deliver higher reliability for a wider range of measurement targets and applications; when measuring gamma, for example, the CA-410 provides reduced between-range errors, shorter range switching time, and support for low-frequency-drive displays.



Measurement time simulation for gamma measurement



\* Probe used: CA-310: CA-P32; CA-410: CA-P427  
Measurement sync mode: NTSC  
Measurement speed mode: CA-310: AUTO; CA-410: LTD. AUTO  
For 64-step gamma measurement at 0.01 - 500 cd/m<sup>2</sup>  
Not including wait time or display drive time.

# Lineup of probes for diverse measurement needs



## High Sensitivity Probes

- ① CA-VP410 (Measurement area:  $\varnothing 10$  mm)
- ② CA-VP427 (Measurement area:  $\varnothing 27$  mm)
- This model is suited for measuring high-end OLED displays across a wide brightness range from ultra-low to high at high speed.
- Use for: Measuring, inspecting and adjusting chromaticity and gamma characteristics of OLED displays for TVs and smartphones across a wide brightness range from ultra-low to high

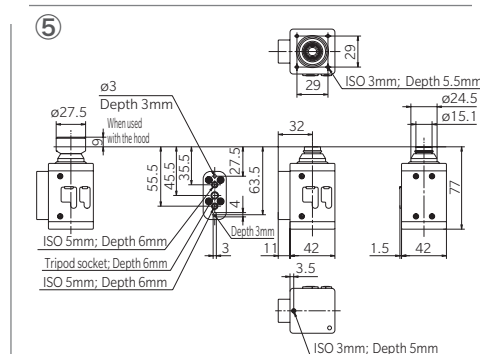
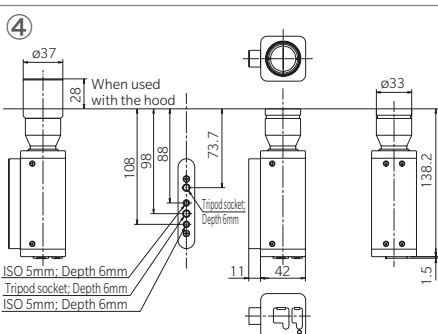
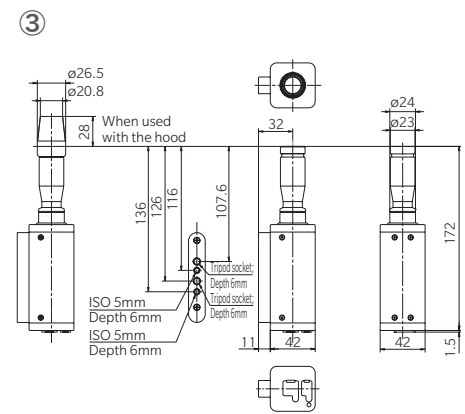
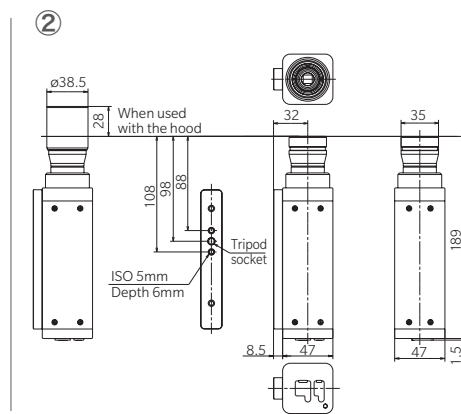
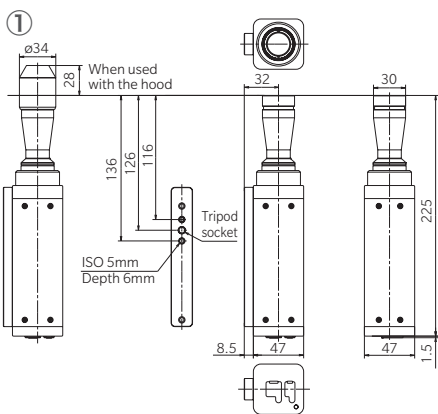
## Normal Probes

- ③ CA-P410 (Measurement area:  $\varnothing 10$  mm)
- ④ CA-P427 (Measurement area:  $\varnothing 27$  mm)
- This model is suited for measuring a wide range of displays, and is also compatible with the CA-310.
- \* Available also in high-brightness models capable of measurements up to 30,000 cd/m<sup>2</sup> (CA-P410H:  $\varnothing 10$  mm measurement area; CA-P427H:  $\varnothing 27$  mm measurement area)

## Mini Probe

- ⑤ CA-MP410 (Measurement area:  $\varnothing 10$  mm)
- This model is designed to render the same level of performance as the CA-310 but in an even smaller package.
- Use for: Applications that require small-sized probes or portability, i.e., color sensor for automatic measurement systems used in small display production processes, calibration of professional monitors and other applications that require space-saving design
- \* Available also in a high-brightness model capable of measurements up to 30,000 cd/m<sup>2</sup> (CA-MP410H:  $\varnothing 10$  mm measurement area)

## Probe dimensions (Units : mm)



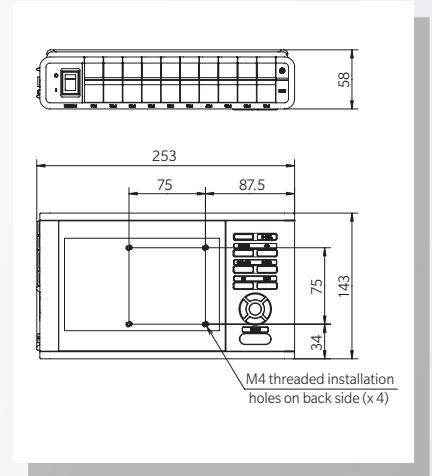


# Easy-to-operate CA-DP40 data processor



CA-DP40

## Data processor dimensions (Units : mm)



## Data processor

Because of the fast pace at which products and technologies evolve, speed is of the essence when it comes to R & D activities in the display industry.

That is why the CA-DP40 data processor takes the "easy-to-operate" feature of the CA-310 to new heights.

With automatic zero-point calibration that allows measurement to start immediately after the power is turned ON, an easy-to-view 7-inch color display multilingual support and a lithium ion battery (sold separately) that makes the unit portable, the CA-DP40 obtains measurement data quickly and reliably, making it convenient for on-the-spot for R & D applications.

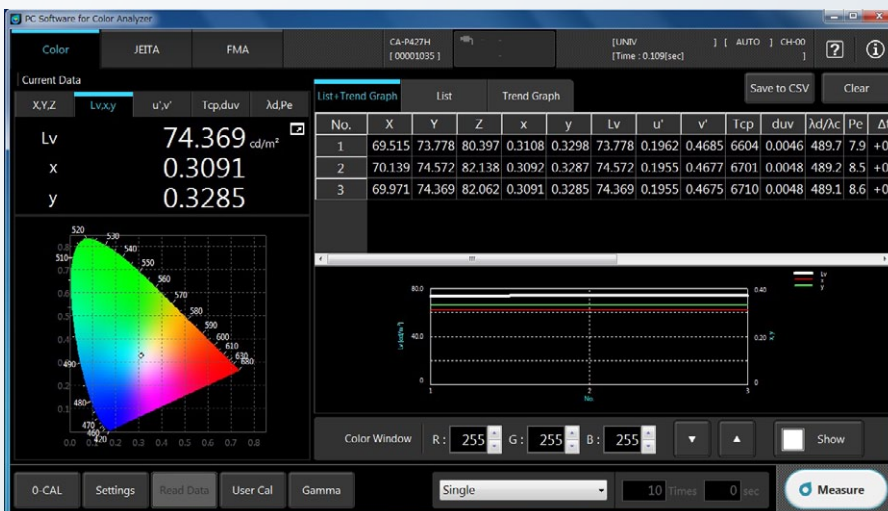
Moreover, the CA-DP40 can connect to a maximum of 10 probes, which gives users the support they need for multipoint measurements.



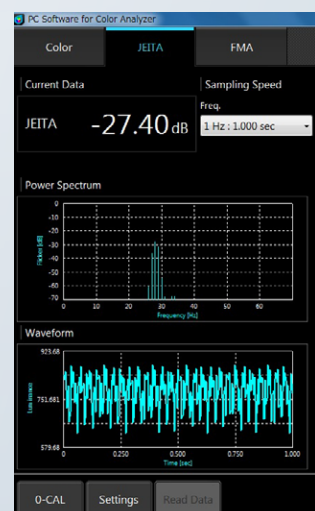
Carrying Case CA-A01 (Sold separately)

## Software for Color Analyzer included

PC Software for Color Analyzer CA-S40 and Software Development Kit CA-SDK2 give users even wider versatility in terms of applications and set up, by making it possible for probes to be directly connected to the computer measurements. Both CA-S40 and CA-SDK2 come standard with all CA-410 probes and support Windows® 7/10 as well as macOS®.






Chromaticity measurement



JEITA flicker measurement

# Main Specifications of CA-410 Probes

\* Regarding specifications of CA-P410H and CA-P427H Probes for high luminance, please contact the nearest Konica Minolta's sales representative.

|   |                                       | High Sensitivity Probe   | Normal Probe  |   |   |              |
|---|---------------------------------------|--|---|---|---|--------------|
|   |                                       | CA-VP410   | CA-VP427  |   |   |              |
|   |                                       |   |  |   |   |              |
|   |                                       | CA-P410  |  |   |   |              |
| Measurement area                                    |                                       | ø10 mm   | ø27 mm  | ø10 mm  |   |              |
| Acceptance angle                                    |                                       | ±8.5°  | ±2.5°   | ±5°   |   |              |
| Accuracy guaranteed measurement distance            |                                       | 30±5 mm  | 30±10 mm  | 30±5 mm   |   |              |
| Display range                                       | Luminance                             | 0.0001 to 3,000 cd/m <sup>2</sup>  | 0.0001 to 3,000 cd/m <sup>2</sup>   | 0.0001 to 5,000 cd/m <sup>2</sup>                                     |   |              |
|   | Chromaticity                          | Displayed in 4 digits  | Displayed in 4 digits   | Displayed in 4 digits   |   |              |
| Luminance   | Accuracy guaranteed range             |  | 0.001 to 3,000 cd/m <sup>2</sup>  | 0.001 to 3,000 cd/m <sup>2</sup>                                      | 0.01 to 5,000 cd/m <sup>2</sup>                                 |              |
|   | Accuracy (for white) <sup>*1,*3</sup> | > 0.001 cd/m <sup>2</sup>  | ±9%   | ±9%   | ---   |              |
|   |                                       | > 0.01 cd/m <sup>2</sup>   | ±2.5%   | ±2%   | ±2.5%   |              |
|   |                                       | > 0.1 cd/m <sup>2</sup>  | ±2%   | ±1.5%   | ±2%   |              |
|   |                                       | > 1 cd/m <sup>2</sup>  | ±2%   | ±1.5%   | ±2%   |              |
|   |                                       | > 10 cd/m <sup>2</sup>   | ±1.5%   | ±1.5%   | ±1.5%   |              |
|   | Repeatability (2σ) <sup>*1</sup>      | > 0.001 cd/m <sup>2</sup>  | 7%  | 10%   | ---   |              |
|   |                                       | > 0.01 cd/m <sup>2</sup>   | 1%  | 1%  | 2%  |              |
|   |                                       | > 0.1 cd/m <sup>2</sup>  | 0.25%   | 0.25%   | 0.60%   |              |
|   |                                       | > 1 cd/m <sup>2</sup>  | 0.10%   | 0.10%   | 0.20%   |              |
| > 10 cd/m <sup>2</sup>                              |                                       | 0.10%  | 0.10%   | 0.10%   |   |              |
| Chromaticity  | Accuracy guaranteed luminance range   |  | 0.01 to 3,000 cd/m <sup>2</sup>   | 0.01 to 3,000 cd/m <sup>2</sup>                                       | 0.01 to 5,000 cd/m <sup>2</sup>                                 |              |
|   | Accuracy (for white) <sup>*1,*3</sup> | > 0.01 cd/m <sup>2</sup>   | ±0.003  | ±0.003  | ±0.006  |              |
|   |                                       | > 0.1 cd/m <sup>2</sup>  | ±0.002  | ±0.002  | ±0.002  |              |
|   |                                       | > 1 cd/m <sup>2</sup>  | ±0.002  | ±0.002  | ±0.002  |              |
|   |                                       | > 10 cd/m <sup>2</sup>   | ±0.002  | ±0.002  | ±0.002  |              |
|   |                                       | > 100 cd/m <sup>2</sup>  | ±0.002  | ±0.002  | ±0.002  |              |
|   | Repeatability (2σ) <sup>*1</sup>      | At 100 cd/m <sup>2</sup> (for monochrome) <sup>*2</sup>  | 100 cd/m <sup>2</sup>   | ±0.003  | ±0.003  | ±0.003       |
|   |                                       | > 0.01 cd/m <sup>2</sup>   | 0.0020  | 0.0030  | 0.0070  |              |
|   |                                       | > 0.1 cd/m <sup>2</sup>  | 0.0008  | 0.0008  | 0.0020  |              |
|   |                                       | > 1 cd/m <sup>2</sup>  | 0.0003  | 0.0003  | 0.0008  |              |
| > 10 cd/m <sup>2</sup>                              |                                       | 0.0002   | 0.0002  | 0.0005  |   |              |
| Flicker (Contrast)                                  | Measurement luminance range           |  | ---   | ---   | 15 cd/m <sup>2</sup> or higher                                  |              |
|   | Accuracy                              | 30 Hz, AC/DC 10% sine wave   | ---   | ---   | ±0.4%   |              |
|   |                                       | 60 Hz, AC/DC 10% sine wave   | ---   | ---   | ±0.7%   |              |
| Repeatability (2σ)                                  | 20-65 Hz, AC/DC 10% sine wave         | ---  | ---   | 0.3%  |   |              |
| Flicker (JEITA)                                     | Measurement luminance range           |  | ---   | ---   | 15 cd/m <sup>2</sup> or higher                                  |              |
|   | Accuracy                              | 30 Hz, AC/DC 4% sine wave  | ---   | ---   | ±0.35dB   |              |
|   |                                       | 30 Hz, AC/DC 1.2% sine wave  | ---   | ---   | ±0.35dB   |              |
|   | Repeatability (2σ)                    | 30 Hz, AC/DC 4% sine wave  | ---   | ---   | 0.1dB   |              |
| 30 Hz, AC/DC 1.2% sine wave                         |                                       | ---  | ---   | 0.3dB   |   |              |
| Accuracy guaranteed measurement speed <sup>*4</sup> | L <sub>x,y</sub>                      | AUTO   | > From minimum luminance cd/m <sup>2</sup>  | 1 time/sec  | 1 time/sec  | 1 time/sec   |
|   |                                       | > 0.15 cd/m <sup>2</sup>   | 5 times/sec   | 5 times/sec   | 5 times/sec   |              |
|   |                                       | > 2 cd/m <sup>2</sup>  | 20 times/sec  | 20 times/sec  | 20 times/sec  |              |
|   | Flicker (Contrast)                    |  | ---   | ---   | ---   | 20 times/sec |
| Flicker (JEITA)                                     |                                       | ---  | ---   | ---   | 0.5 times/sec (at 1 Hz pitch)<br>2.5 times/sec (at 10 Hz pitch) |              |
| Measurement synchronization mode                    |                                       | NTSC, PAL, EXT, UNIV, INT, MANU (4 ms to 4 s)  | NTSC, PAL, EXT, UNIV, INT, MANU (4 ms to 4 s)                                       | NTSC, PAL, EXT, UNIV, INT, MANU (4 ms to 4 s)                         |   |              |
| Measurement speed mode                              |                                       | AUTO, LTD.AUTO, SLOW, FAST   | AUTO, LTD.AUTO, SLOW, FAST  | AUTO, LTD.AUTO, SLOW, FAST  |   |              |
| Supported range to be measured (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)<br>0.5 to 130 Hz (flicker) |   |              |
| User calibration memory channel                     |                                       | 99 channels  | 99 channels   | 99 channels   |   |              |
| Interface   | Communication                         | USB 2.0, RS-232C   | USB 2.0, RS-232C  | USB 2.0, RS-232C  |   |              |
|   | Trigger                               | In and Out [5 V]   | In and Out [5 V]  | In and Out [5 V]  |   |              |
| Size (mm)   |                                       | 47 x 47 x 226.5  | 47 x 47 x 190.5   | 42 x 42 x 173.5   |   |              |
| Weight  |                                       | 570 g (including mount)  | 510 g (including mount)   | 280 g (including mount)   |   |              |
| Power supply  |                                       | DC 5 V (input from USB bus power line or RS communication connector)   | DC 5 V (input from USB bus power line or RS communication connector)                | DC 5 V (input from USB bus power line or RS communication connector)  |   |              |
| Operation temperature/humidity range <sup>*5</sup>  |                                       | 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  |   |   |   |              |
| Accessories   | Standard                              | PC Software for Color Analyzer Ver. 1.0 CA-S40, SDK for Color Analyzer CA-SDK2, USB Cable for Probe-PC(2 m) IF-A28, Hood |   |   |   |              |
|   | Optional                              | Conversion Cable IF-A29, BNC Conversion Cable IF-A35   |   |   |   |              |

• Measured with Konica Minolta's specified PC and probe connected directly, using the supplied measurement software.



\*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/m<sup>2</sup>.


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

\*4: In NTSC synchronization mode using USB with one probe

\*5: Reading variation within range (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

| CA-P427  | Mini Probe<br>CA-MP410  |
|--|---|
|  |  |
| ø27 mm   | ø10 mm  |
| ±2.5°  | ±5°   |
| 30±10 mm   | 10±5 mm   |
| 0.0001 to 5,000 cd/m <sup>2</sup>  | 0.0001 to 5,000 cd/m <sup>2</sup>   |
| Displayed in 4 digits  | Displayed in 4 digits   |
| 0.001 to 5,000 cd/m <sup>2</sup>   | 0.01 to 5,000 cd/m <sup>2</sup>   |
| ±9%  | ---   |
| ±2%  | ±2.5%   |
| ±1.5%  | ±2%   |
| ±1.5%  | ±2%   |
| ±1.5%  | ±1.5%   |
| ±1.5%  | ±1.5%   |
| 10%  | ---   |
| 1%   | 2.40%   |
| 0.40%  | 0.70%   |
| 0.10%  | 0.25%   |
| 0.10%  | 0.12%   |
| 0.10%  | 0.10%   |
| 0.01 to 5,000 cd/m <sup>2</sup>  | 0.01 to 5,000 cd/m <sup>2</sup>   |
| ±0.003   | ±0.006  |
| ±0.002   | ±0.002  |
| ±0.002   | ±0.002  |
| ±0.002   | ±0.002  |
| ±0.002   | ±0.002  |
| ±0.003   | ±0.003  |
| 0.0035   | 0.0085  |
| 0.0015   | 0.0025  |
| 0.0004   | 0.0010  |
| 0.0003   | 0.0006  |
| 0.0002   | 0.0004  |
| 5 cd/m <sup>2</sup> or higher  | 15 cd/m <sup>2</sup> or higher  |
| ±0.4%  | ±0.4%   |
| ±0.7%  | ±0.7%   |
| 0.3%   | 0.3%  |
| 5 cd/m <sup>2</sup> or higher  | 15 cd/m <sup>2</sup> or higher  |
| ±0.35dB  | ±0.35dB   |
| ±0.35dB  | ±0.35dB   |
| 0.1dB  | 0.1dB   |
| 0.3dB  | 0.3dB   |
| 1 time/sec   | 1 time/sec  |
| 5 times/sec  | 5 times/sec   |
| 20 times/sec   | 20 times/sec  |
| 20 times/sec   | 20 times/sec  |
| 0.5 times/sec (at 1 Hz pitch)  | 0.5 times/sec (at 1 Hz pitch)   |
| 2.5 times/sec (at 10 Hz pitch)   | 2.5 times/sec (at 10 Hz pitch)  |
| NTSC, PAL, EXT, UNIV, INT, MANU (4 ms to 4 s)                                    | NTSC, PAL, EXT, UNIV, INT, MANU (4 ms to 4 s)                                     |
| AUTO, LTD.AUTO, SLOW, FAST   | AUTO, LTD.AUTO, SLOW, FAST  |
| 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 130 Hz (flicker)   |
| 99 channels  | 99 channels   |
| USB 2.0, RS-232C   | USB 2.0, RS-232C  |
| In and Out [5 V]   | In and Out [5 V]  |
| 42 x 42 x 139.7  | 42 x 42 x 77  |
| 270 g (including mount)  | 200 g (including mount)   |
| DC 5 V (input from USB bus power line or RS communication connector)             | DC 5 V (input from USB bus power line or RS communication connector)              |
| for Probe, Lens Cap for Probe  |   |

## Main Specifications of Data Processor CA-DP40

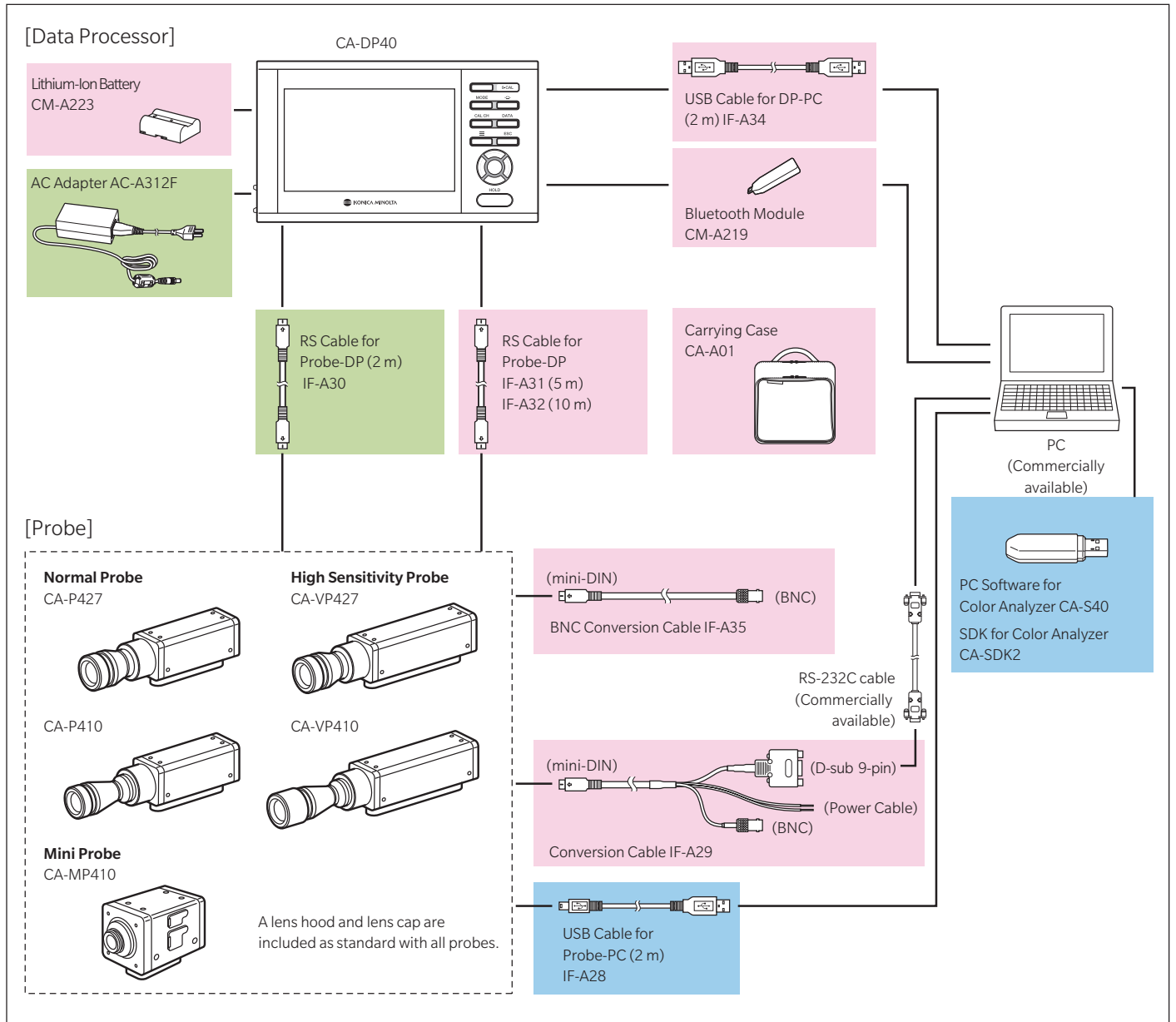
|  |   |  |
|--|---|--|
| Display range  | Luminance   | 0.0001 to 30,000 cd/m <sup>2</sup>   |
|  | Chromaticity  | Displayed in 4 digits  |
|  | Flicker (Contrast) (JEITA)  | 0.00 to 999.99 %<br>To 2 decimal places  |
| Display  | 7-inch color LCD WVGA   |  |
| Display items  | $L_v \times Y (\Delta L_v \Delta X \Delta Y)$<br>$L_v u' v' (\Delta L_v \Delta u' \Delta v')$<br>$L_v T_{cp} duv (\Delta L_v \Delta T_{cp} duv)$<br>$X Y Z (\Delta X \Delta Y \Delta Z)$<br>$L_v \lambda d Pe (\Delta L_v \Delta \lambda d \Delta Pe)$<br>Flicker (Contrast)<br>Flicker (JEITA) |  |
| Measurement data storage channels  | 100 CH  |  |
| Data logging function  | Available   |  |
| Display languages  | English, Simplified Chinese, Traditional Chinese, Korean, Japanese  |  |
| Interface  | For computer, etc.  | USB 2.0<br>RS-232C<br>Ethernet<br>*[Optional] Bluetooth® (module required)   |
|  | For probes  | Mini-DIN 8-pin cable (for RS communication)<br>USB (for USB communication)   |
|  | Sync signal input   | BNC connector (with trigger input)   |
| Multi probe connection   | 10 probes (maximum)   |  |
| Operation temperature/ humidity range  | 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   |  |
| Power  | AC Adapter<br>*[Optional] Lithium-Ion Battery (removable)   |  |
| Battery life   | 3 hours (when one probe is connected)   |  |
| Size   | 253 (W) x 58 (H) x 143 (D) mm   |  |
| Weight   | 1.6 kg  |  |
| Accessories  | Standard  | AC Cable<br>RS Cable for Probe-DP (2 m) IF-A30<br>AC Adapter AC-A312F  |
|  | Optional  | USB Cable for DP-PC (2 m) IF-A34<br>RS Cable for Probe-DP IF-A31 (5 m), IF-A32 (10 m)<br>Lithium-Ion Battery CM-A223<br>Bluetooth Module CM-A219<br>Carrying Case CA-A01 |

## Main Specifications of PC Software CA-S40

| <System requirements>      |   |
|----------------------------|---|
| OS                         | Windows® 7 Professional 32-bit<br>Windows® 7 Professional 64-bit<br>Windows® 10 Pro 32-bit<br>Windows® 10 Pro 64-bit<br>macOS® Sierra<br>•The hardware of the computer system to be used must meet or exceed the greater of the recommended system requirements for the compatible OS being used or the following specifications. |
| CPU                        | Intel® Core™ i series or equivalent   |
| Memory                     | 4 GB or more  |
| Hard disk drive            | Needs free space of at least 100 MB, and at least 50 MB on system drive where OS is installed   |
| Display                    | Capable of at least 1,280 × 768 dots/ High color, 16-bit  |
| Others                     | USB port for installing from flash drive<br>USB port (2.0 or higher) for connecting measuring instruments   |
| <Controllable instruments> |   |
| CA-410 Data Processor      | CA-DP40   |
| CA-410 Probes              | CA-P427 / P427H / P410 / P410H / MP410 / MP410H / VP427 / VP410   |
| <Languages>                |   |
| Display language           | English   |

# System Diagram

Data Processor standard accessory
  Probe standard accessory
  Optional accessory



- Windows® is a trademark or registered trademark of Microsoft Corporation in the USA and other countries.
- macOS® Sierra is a registered trademark of Apple Inc. in the USA and other countries.
- Intel® Core is a trademark or registered trademark of Intel Corporation in the USA and other countries.
- Other company names and product names used herein are trademarks or registered trademarks of their respective companies.
- Bluetooth® is a registered trademark of Bluetooth SIG, Inc. and is used under license agreement.
- Screens shown are for illustration purposes only.
- The specifications and appearance shown herein are subject to change without notice.



## SAFETY PRECAUTIONS

For correct use and for your safety, be sure to read the instruction manual before using the instrument.

- Always connect the instrument to the specified power supply voltage. Improper connection may cause a fire or electric shock.



Certificate No : LRO 0960094/A  
Registration Date : March 3, 1995



Certificate No : JQA-E-80027  
Registration Date : March 12, 1997

**KONICA MINOLTA, INC.**  
Konica Minolta Sensing Americas, Inc.  
Konica Minolta Sensing Europe B.V.

Osaka, Japan  
New Jersey, U.S.A.  
European Headquarter /BENELUX  
German Office  
French Office  
UK Office  
Italian Office  
Swiss Office  
Nordic Office  
Polish Office  
Turkish Office  
SE Sales Division  
Beijing Office  
Guangzhou Office  
Chongqing Office  
Qingdao Office  
Wuhan Office

**Konica Minolta (CHINA) Investment Ltd.**

**Konica Minolta Sensing Singapore Pte Ltd.**  
**Konica Minolta Sensing Korea Co., Ltd.**

Addresses and telephone/fax numbers are subject to change without notice. For the latest contact information, please refer to the KONICA MINOLTA Worldwide Offices web page :

**Phone** : 888-473-2656 (in USA), 201-236-4300 (outside USA)  
Nieuwegein, Netherlands **Phone** : +31 (0) 30 248-1193  
München, Germany **Phone** : +49 (0) 89 4357 156 0  
Roissy CDG, France **Phone** : +33 (0) 1 80 11 10 70  
Warrington, United Kingdom **Phone** : +44 (0) 1925 467300  
Cinisello Balsamo, Italy **Phone** : +39 02849488.00  
Dietikon, Switzerland **Phone** : +41 (0) 43 322-9800  
Västra Frölunda, Sweden **Phone** : +46 (0) 31 7099464  
Wrocław, Poland **Phone** : +48 (0) 71 73452-11  
Istanbul, Turkey **Phone** : +90 (0) 216-528 56 56  
Shanghai, China **Phone** : +86- (0)21-5489 0202  
Beijing, China **Phone** : +86- (0)10-8522 1551  
Guangdong, China **Phone** : +86- (0)20-3826 4220  
Chongqing, China **Phone** : +86- (0)23-6773 4988  
Shandong, China **Phone** : +86- (0)532-8079 1871  
Hubei, China **Phone** : +86- (0)27-8544 9942  
Singapore **Phone** : +65 6563-5533  
Goyang-si, Korea **Phone** : +82 (0) 2-523-9726

**Fax** : 201-785-2482  
**Fax** : +31 (0) 30 24 81 211  
**Fax** : +49 (0) 89 4357 156 99  
**Fax** : +33 (0) 1 80 11 10 82  
**Fax** : +44 (0) 1925 711143  
**Fax** : +39 02849488.30  
**Fax** : +41 (0) 43 322-9809  
**Fax** : +48 (0) 71 734 52 10  
**Fax** : +90 (0) 212-253 49 69  
**Fax** : +86- (0)21-5489 0005  
**Fax** : +86- (0)10-8522 1241  
**Fax** : +86- (0)20-3826 4223  
**Fax** : +86- (0)23-6773 4799  
**Fax** : +86- (0)532-8079 1873  
**Fax** : +86- (0)27-8544 9991  
**Fax** : +65 6560-9721  
**Fax** : +82 (0) 31-995-6511

<https://konicaminolta.com/instruments/network>