KONICA MINOLTA

NEW

COLOR READER
CR-20

Simple operation shows colorimetric values for samples in various forms, from solids to powders, pastes, etc. in a instant.

Simple basic operation. Just three steps:
Switch on → Do white calibration → Measure samples

Lightweight and compact!

Can display results in any of eight color spaces and colorimetric indexes!

Konica Minolta's
new Color Reader Series
has arrived !

Giving Shape to Ideas

Main features

1 **Display data in a variety of color spaces and colorimetric indexes**

You can select one color space or color index for the measurement data among the eight color spaces and colorimetric indexes available: L*a*b*, L*C*h, Yxy, Munsell, WI (CIE/ASTM E 313-96), Tint (CIE/ASTM E 313-96), YI (ASTM E 313-96)

2 **Averaging function**

If sample color is uneven, you can measure several points and then obtain the average result by pressing the Average button.

3 **Data Memory**

Using the PC application stored in the CR-20, you can set the instrument to store data internally.(Memory capacity: 1,000 data)
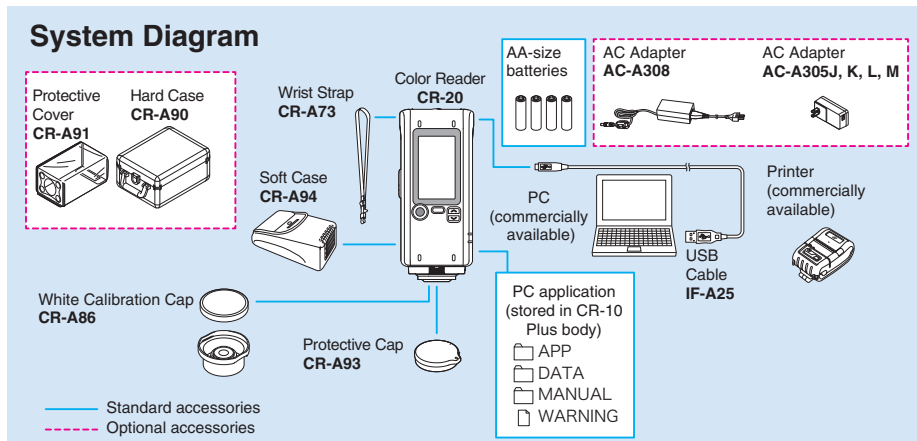
Other features
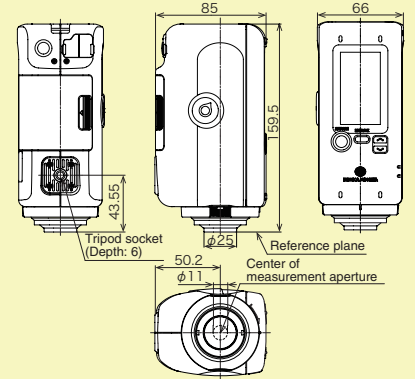
1 A protective glass

The CR-20's tip has a protective glass plate, so you can measure all kinds of samples such as powders, pastes, and wet objects, directly.

2 Printer

By connecting a printer to the CR-20, you can print out measured data.

System Diagram

Protective Cover **CR-A91**
Hard Case **CR-A90**
Wrist Strap **CR-A73**
Color Reader **CR-20**
Soft Case **CR-A94**
White Calibration Cap **CR-A86**
Protective Cap **CR-A93**
AA-size batteries
AC Adapter **AC-A308**
AC Adapter **AC-A305J, K, L, M**
PC (commercially available)
Printer (commercially available)
USB Cable **IF-A25**
PC application (stored in CR-10 Plus body)
　APP
　DATA
　MANUAL
　WARNING

—— Standard accessories
----- Optional accessories

Dimensions（Units: mm）

85　　66
159.5
43.55
Tripod socket (Depth: 6)
φ25
Reference plane
50.2
φ11
Center of measurement aperture

Main Specifications

Model	Color Reader CR-20
Illumination/viewing system	8° : de (8°illumination angle/diffuse viewing: specular component excluded) (conforms to DIN 5033 Teil 7, JIS Z 8722 condition d, ISO 7724/1, CIE No. 15, ASTM E 1164)
Detector	Silicon photocells (6 pcs.)
Light source	Pulsed xenon lamps
Measurement time	Approx. 1 sec.
Battery performance	Approx. 2,000 measurement at 10-sec. intervals when using alkaline-manganese batteries
Measurement area	Approx. : ø8 mm
Repeatability	Standard deviation within ΔE*ab 0.1 (when a white calibration plate is measured 30 times at 10-second intervals)
Display languages	English, Japanese
Interface	USB2.0
Observer	10° Standard Observer
Illuminant	D65
Display data	Colorimetric data, average (up to 999 times)
Color spaces	L*a*b*, L*C*h, Yxy, XYZ, Munsell (D65)
Colorimetric Indexes	WI (CIE/ASTM E 313-96), Tint (CIE/ASTM E 313-96), YI (ASTM E 313-96)
Data memory	Sample data (up to 1,000)
Operation temperature/ humidity range	0 to 40°C, relative humidity 85% or less (at 35°C) with no condensation
Storage temperature/ humidity range	-20 to 40°C, relative humidity 85% or less (at 35°C) with no condensation
Power	4 AA-size alkaline dry batteries or nickel-metal-hydride rechargeable batteries, USB bus power or special AC Adapter
Size (W x H x D)	66 x 159.5 x 85 mm
Weight	420 g (without batteries)

PC system requirement

OS Windows® 7 Professional 32bit, 64bit
Windows® 8 Pro 32bit, 64bit
Windows® 8 .1 Pro 32bit, 64bit
(English, Japanese)

- The hardware of the computer system to be used must meet or exceed the recommended system requirements for compatible OS being used.
- One USB2.0 port is necessary.

- The specifications and appearance shown herein are subject to change without notice.
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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.
● Be sure to use the specified batteries. Using improper batteries may cause a fire or electric shock.

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

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

ISO 14001

http://konicaminolta.com/instruments/network

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