Spectrophotometer
CM–26dG
CM–26d
CM–25d

En **Basic Operating Instructions**

⚠ Please read before using the instrument.

This manual explains the basic procedures for measuring color and/or gloss with the CM-26dG / 26d / 25d spectrophotometers. Use this 2D code to download this manual in pdf form.

Note)
For setting and operation details,
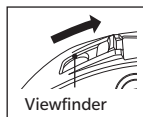see the instruction manual of the
CM-26dG / 26d / 25d.

KONICA MINOLTA

Table of Contents

Names of Parts

■ Instrument

Viewfinder (Specimen confirmation window)

Viewfinder lever

LCD screen

Control panel

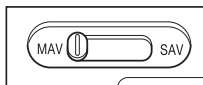**Charging lamp**

Power switch

Viewfinder

Measurement button (It is on the left and right)

USB connection terminal (Mini-B type)

Wrist strap attachment hole

Measurement area switch

MAV | SAV

(CM-26dG/26d only)

Sample surface aperture

Battery cover

Screw holes for securing

■ **Display (LCD Screen)** P.22, Instruction Manual

Status bar

Target/Sample

Data number and name

Target to be used for association with the next measurement or filter (target)

I+E ⚡100 M❖ ♻   13:09

Sample ⊕ 0004

0020   ❌ **Pass/fail result**

	SCI	
	❶10°/D65	❷10°/F11
ΔL*	−0.01	−0.03
Δa*	−0.16	−0.16
Δb*	−0.14	−0.17
ΔE*ab	0.21	0.23
ΔGU	−1.27	−1.27
MI	0.03	0.03

Observer/Illuminant 1

Observer/Illuminant 2

2018/08/06 13:40:28 ⚡100 M❖
0001   ◀ 3/16 ▶

Measurement date/time

Target reference (sample) / Affiliated group (target)

UV setting

Measurement area

2

■ Operation Keys

[⊕/✦] (Target/Sample) key
Switches between **<Target> screen** and **<Sample> screen.**

[MENU] key
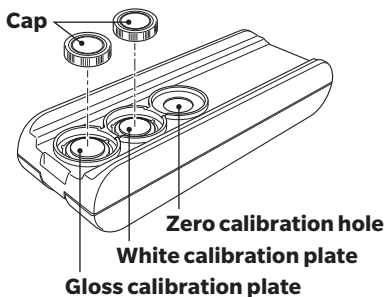Displays the **<Settings> screen.**
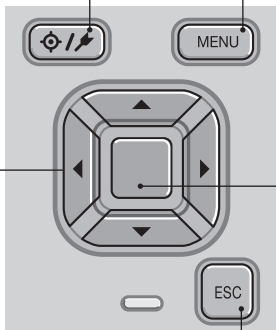
[Confirmation] key
Sets the item or setting indicated by the cursor on the various setting screens. This key also switches to detail screens for data selected in the list displayed on the **<Results Display> screen.**

[◀ , ▶ , ▲ , ▼] keys
Switches screen tabs from the **<Results Display> screen,** moves the cursor on the **<Settings> screen**, or changes the selected value.
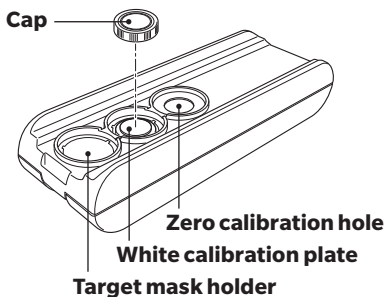
[ESC] key
Returns to the previous screen without configuring the settings when pressed on the **<Settings> screen**, and returns to list screen when pressed on the sample details screen.
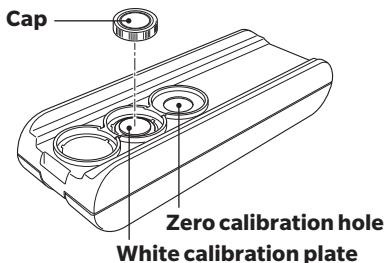
■ Calibration Stage

Cap

CM-26dG

Zero calibration hole
White calibration plate
Gloss calibration plate

Cap

CM-26d

Zero calibration hole
White calibration plate
Target mask holder

Cap

CM-25d

Zero calibration hole
White calibration plate

4

Measurement

1 Turning the Power ON (P.6)

⬇

Language selection
P.110, Instruction Manual   * As necessary (after initialization, etc.)

⬇

Measurement cond. setting **P.99, Instruction Manual**

⬇

Measurement area selection   * When required depending on the
P.33, Instruction Manual   measurement conditions

**Note: Make sure the measurement area set on the instrument
is the same as the area of the target mask to be used.**

⬇

Zero calibration   * Only when required (when changing
P.35, Instruction Manual   the measurement conditions, etc.)

⬇

2 White calibration (P.6, P.7)

White calibration

Gloss calibration (* CM-26dG only)

⬇

3 Measurement (P.8)

1

Turning the Power ON

**P.32,
Instruction Manual**

① **Press and hold the power switch for about 1 second.**

· When first turning the instrument ON after purchasing, the language setting screen will be displayed, followed by the date and time setting screen. Configure the settings according to P.103 and P.104.
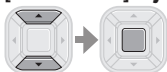
2

White calibration

**P.37,
Instruction Manual**

To perform white calibration

Note: **Zero calibration must be performed before white calibration if there have been significant changes in the measurement environment, if the instrument has not been used for a long period of time or if using the MAV target mask (with glass).**

① **Select "Calibration (Excluding Zero Cal.)" and press the [Confirmation] key.**
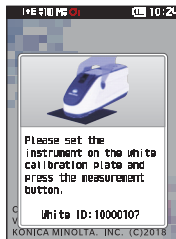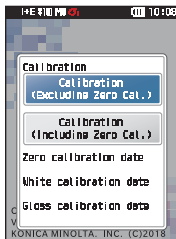

Calibration

Calibration
(Excluding Zero Cal.)

Calibration
(Including Zero Cal.)

Zero calibration date

White calibration date

Gloss calibration date

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② **Place the instrument on the calibration stage.**

Place the instrument on the calibration stage according to the marks.

Calibration stage

③ **Press the measurement button.**
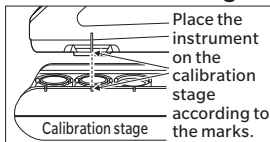
Please set the instrument on the white calibration plate and press the measurement button.

White ID:10000107

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· White calibration will be performed.
· Do not move the instrument until white calibration is complete.

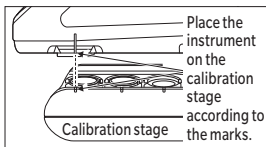## Gloss calibration
only with the 26dG

If using the CM-26dG, perform gloss calibration next.

④ **Place the instrument in the gloss calibration position.**

Place the instrument on the calibration stage according to the marks.

Calibration stage

Please set the instrument on the gloss calibration plate and press the measurement button.

Gloss ID: 1000010?

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⑤ **Press the measurement button.**

· Gloss calibration will be performed.
· Do not move the instrument until gloss calibration is complete.
· When gloss calibration is completed, the screen returns to the <Sample> screen.
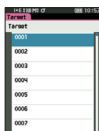
CALIBRATION

KONICA MINOLTA, INC. (C)2018
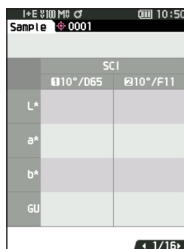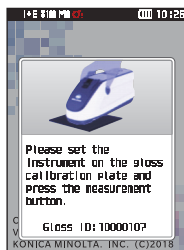
3

Measurement

P.41,
Instruction Manual

① Check the Sample screen.

- If not displayed, switch to the Sample screen.

⊕/🔧

⟷

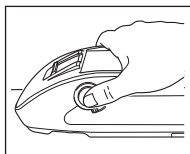<Reference color screen>   <measurement screen>

② Set the specimen measuring port on the sample to measure.

· Take care to prevent floating or tilting from occurring.

③ Press the measurement button.

· The results are displayed on the screen. The sample was saved as "0001".

	SCI	
	☐10°/D65	☐10°/F11
L*	47.62	52.40
a*	52.42	52.37
b*	27.59	35.57
GU	12.72	12.72

2019/02/20 10:56:19
0001

When color difference is measured

\<Measuring color difference in the normal mode\>

1 Color difference target settings (P.10)

⬇

2 Pass/fail judgment criteria settings (P.11)

⬇

3 Measurement (P.13)

\<Measuring color difference in the simple mode\>

1 Set to "Simple mode". (P.14)

⬇

2 Measuring a target (P.15)

⬇

3 Measuring a sample (P.15)

\<Measuring color difference in the normal mode\>
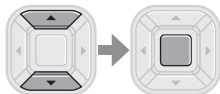
1

Color difference target settings

Setting color difference by measuring a target

① Display the target or target list screen.

$\boxed{\odot / \neq}$

· Set the target number with the [▲] and [▼] keys before imparting measurement.

② Set the specimen measuring port on the sample to measure.

· Take care to prevent floating or tilting from occurring.
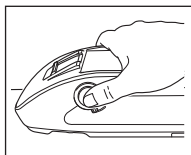
③ Press the measurement button.

· The results are displayed on the screen.
· The selected number is used as the target data number. If data already exists under that number, the instrument asks whether to overwrite that data or not, therefore enter the target by pressing the [Confirmation] key.

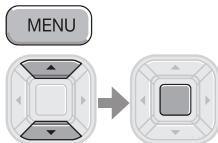|	SCI	
	①10°/D65	②10°/F11
L*	47.60	52.37
a*	52.52	52.40
b*	26.88	34.79
GU	15.78	15.78
2019/02/20 10:57:39		

The target is set.
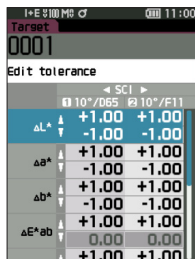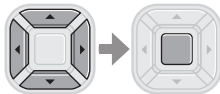
2
Pass/fail judgment criteria settings

P.60-61,
Instruction Manual
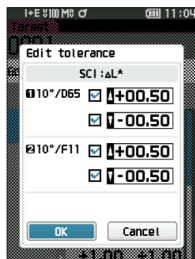
① **Select <Target Menu> - <Pass/Fail> - "Edit tolerance".**

MENU

I+E ☼ 100 M0 ♂   10:58
Target
◆ ✦ ♂ ✿ ⌨ ☰
◀   Target menu[0001]   ▶

Pass/Fail
Edit tolerance
Tolerance list
Warning level   80%
Parametric coef.

② **Input settings.**

I+E ☼ 100 M0 ♂   11:00
Target
0001
Edit tolerance
◀ SCI ▶
❶10°/D65 ❷10°/F11
ΔL* ▲ +1.00   +1.00
     ▼ -1.00   -1.00
Δa* ▲ +1.00   +1.00
     ▼ -1.00   -1.00
Δb* ▲ +1.00   +1.00
     ▼ -1.00   -1.00
ΔE*ab ▲ +1.00   +1.00
       0.00   0.00
     ▲ +1.00   +1.00

Settings
○ x / y : -0.2000 to 0.2000
○ Equation / MI : 0.00 to 20.00
○ Other than the above : -20.00 to 20.00

I+E ☼ 100 M0 ♂   11:04
Target
0001
Edit tolerance
SCI :ΔL*
❶10°/D65 ☑ ▲+00.50
          ☑ ▼-00.50
❷10°/F11 ☑ ▲+00.50
          ☑ ▼-00.50

OK   Cancel
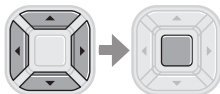
③ **Once settings have been completed, select "OK" to establish them.**

④ **Close the "Edit tolerance" screen.**

ESC

3

Measurement

① **Display the Sample screen.**

$\boxed{\odot/\not\kern-1pt\ell}$ $\boxed{\odot/\not\kern-1pt\ell}$

· Select a target number before imparting measurement.

	SCI	
	①10°/D65	**②10°/F11**
L*	47.62	52.40
a*	52.42	52.37
b*	27.59	35.57
GU	12.72	12.72

Sample ⊕ 0001 — 0001
2019/02/20 10:56:19 0001 ◄ 1/16►

② **Set the specimen measuring port on the sample to measure.**

· Take care to prevent floating or tilting from occurring.
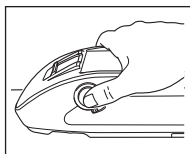
③ **Press the measurement button.**

· The results are displayed on the screen.
· A sample number is automatically assigned in the order of measurement.

	SCI	
	①10°/D65	**②10°/F11**
L*	47.69	52.47
a*	52.44	52.40
b*	27.67	35.62
GU	12.93	12.93

Sample ⊕ 0001 — 0002
2019/02/20 11:08:17 0001 ◄ 1/16►

⊘ Mark signifying a "Pass" judgment

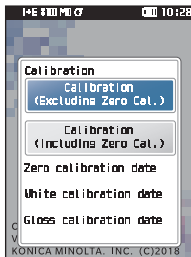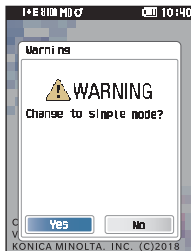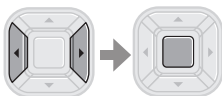# <Measuring color difference in the simple mode>

1
Set to "Simple mode".
P.48, Instruction Manual

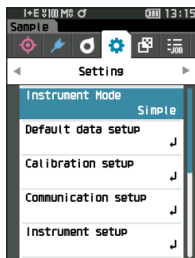① **Press the [ESC] button to skip the calibration prompt displayed immediately after turning the power ON.**

ESC

> Calibration
> **Calibration (Excluding Zero Cal.)**
> Calibration (Including Zero Cal.)
> Zero calibration date
> White calibration date
> Gloss calibration date
> KONICA MINOLTA. INC. (C)2018

② **Select "Yes" when "Change to the simple mode?" appears on the display.**

> Warning
> ⚠ WARNING
> Change to simple mode?
> **Yes**   No
> KONICA MINOLTA. INC. (C)2018

. . . .

Or,

① **Select <Settings> - <Instrument Mode> - "Simple".**

> Sample
> ◉ 🔧 ⚙ 🔩 ☰
> ◄   Setting   ►
> Instrument Mode   Simple
> Default data setup   ↵
> Calibration setup   ↵
> Communication setup   ↵
> Instrument setup   ↵
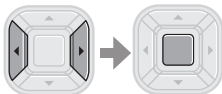
② **Press the [Target/Sample] button or [ESC] button to switch to the simple measurement screen.**

$\boxed{\oplus / \mathcal{F}}$ or $\boxed{ESC}$

2

Measuring a target:

Absolute value measurement

P.48,
Instruction Manual

① **Press the measurement button.**

	SCI	
	10°/D65	10°/F11
L*	47.60	52.37
a*	52.52	52.40
b*	26.88	34.79
GU	15.78	15.78

Target
2019/02/20 13:20:39
1/ 2

3

Measuring a sample:

Difference measurement

P.48,
Instruction Manual

① **Press the measurement button.**

Notes
- Measurement data is not saved in the simple mode.
- The opacity mode cannot be selected while the instrument is in the simple mode. Moreover, the simple mode cannot be engaged while the opacity mode is active.

	SCI	
	10°/D65	10°/F11
ΔL*	0.17	0.16
Δa*	-0.13	-0.05
Δb*	0.43	0.45
ΔE*ab	0.48	0.48
ΔGU	-0.14	-0.14
MI	0.08	0.08

Sample
2019/02/20 13:20:59
3/ 5

Setting measurement conditions

Measurement conditions (Measurement mode, SMT Times, Observer/Illuminant, Display) must be set before imparting measurement.

The menu items that can be set are as follows.
P.87 - 107, Instruction Manual

Measurement cond.

Measurement mode

Color & Gloss / Color only / Gloss only / Opacity

Measurement setup

Specular component

UV

Auto average

Manual average

Manual average option (SMC average option)

SMC

SMC Threshold

SMC Times

Observer/Illuminant

Observer/Illuminant 1

Observer/Illuminant 2

Display cond.

Display type

Color space

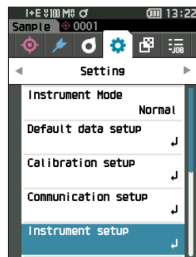Color difference equation

Custom 01 to 14

How to set the measuring instrument

To set measurement instrument options, select "Instrument setup" from the <Setting> screen.

The menu items that can be set are as follows.
P.108 - 117, Instruction Manual

Instrument setup

    User type

    Language

    Date format

    Date & time

    Brightness

    Direction

    Beep

    Auto power off

    Password setting

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