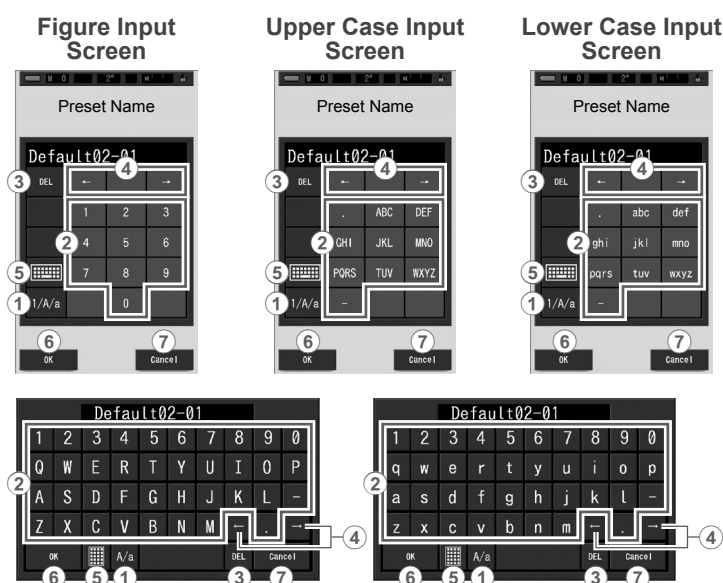


Thank you for purchasing a CRI Illuminance Meter CL-70F
This Quick Guide introduces the basic operation for this instrument.
Please refer to "Operating Manual" on the CD-ROM (included
product) for usage details.

4. Input of Figures/Characters


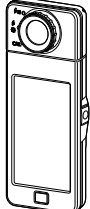



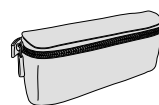

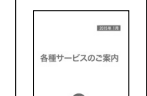



Input Method of Characters and Figures
(Character Setting Screen, Figure Setting Screen)

No.	Key	Description
①	1/A/a	Shifts between figures/upper case letters/lower case letters.
②	0-9, ABC, abc, hyphen, period	Touching it displays an input value in the upper section. By touching the same button multiple times, you can change the character input to the English alphabet (ABC).
③	Delete	Deletes the character at the cursored position.
④	← →	Moves input position.
⑤	Keypad	Shifts between Standard Keypad and Qwerty Keypad.
⑥	OK	Confirms the input value and returns to the original screen.
⑦	Cancel	Cancels the input and returns to the original screen.

1. Confirming the Bundled Items

This instrument and the following accessories are included. Confirm if any accessories are missing after unpacking.

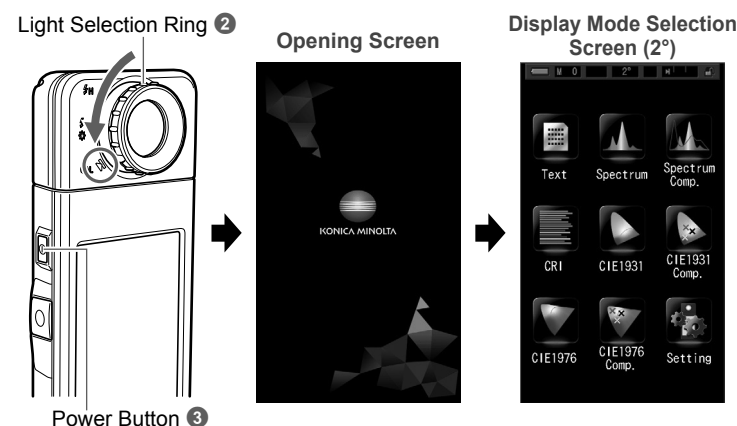
<h2>Quick Guide</h2>	<h2>Main Body</h2>	<h2>CD-ROM</h2>
		 <p>- Operating Manual - CRI Illuminance Meter CL-70F Utility</p>
<h2>Safety Precaution</h2>	<h2>Neck Strap</h2>	<h2>Soft Case</h2>
		 <div data-bbox="1096 670 1190 810"> <h3>Authorized Service Facility</h3>  </div> <div data-bbox="1190 670 1328 810"> <h3>各都府県支店の案内</h3>  </div> <div data-bbox="1328 670 1417 810"> <h3>Inspection Certificate</h3>  </div>

- * If something is missing, contact the sales agent.
- * Batteries (size AA) and a USB cable are not included. Please prepare them in advance yourself.
- * The "CRI Illuminance Meter CL-70F", included as an accessory of this product, can be used to save data, display memorized values and graphs, and perform settings when the meter is connected by USB to computers or tablets.

5. Turning the Power ON

After installing the batteries, turn the Light Selection Ring ② to the dark calibration position () and turn ON this instrument by pressing the Power Button ③. After the Opening screen displays (for 2 seconds) in the Display Panel, dark calibration starts. After dark calibration properly ends, the Display Mode Selection screen displays.

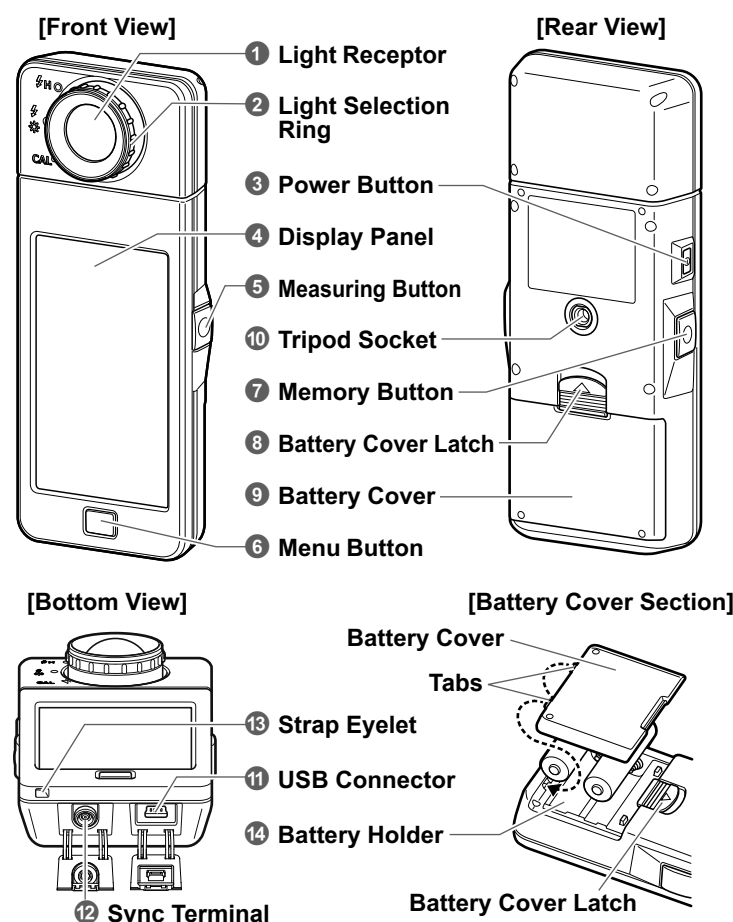
Set to the dark calibration position. Press Power Button ③.



- * If Dark Calibration Position Confirmation screen appears, set the Light Selection Ring ② to Dark Calibration position and perform calibration again.
- * To turn OFF the power, press and hold the Power Button for more than one second.
- * Please wait 3 or more seconds between turning the power ON/OFF.

2. Part Designations

The part designations are as follows.



3. Operation Method

The operation method of this instrument's Display Panel is described.

By touching an icon with your finger, you can select your intended setting or item.

(Ex.) Shutter Speed Selection Screen

Scroll Selection
Slide a finger up or down on the setting value areas to change setting values.

Top Icon
Touch to advance
to the lowest
value.

← **Scroll Bar**
Touch and slide
up or down to
scroll settings.

One Step Icon
Touch Up or Down
Icon to advance one
position

Bottom Icon
Touch to advance
to the highest
value

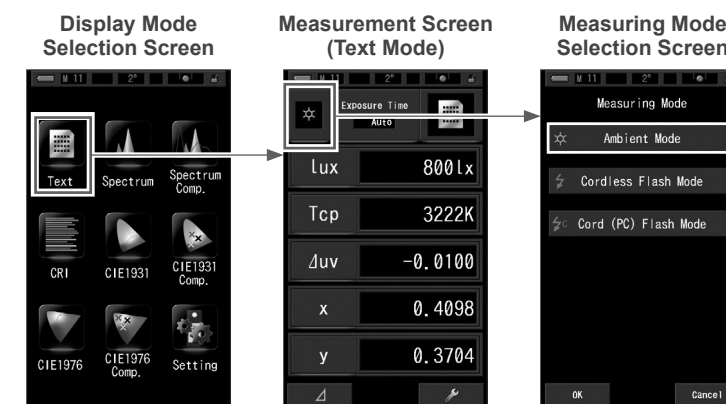
* A blue illumination under icons indicates which icons are operational.




* Blue bar indicates value selected.

6-1. Measurement Preparation (Measuring Mode, Display Mode)

**You can change screens after turning the power on as follows.
Changes from the Display Mode Selection Screen to the
Measurement Screen.**

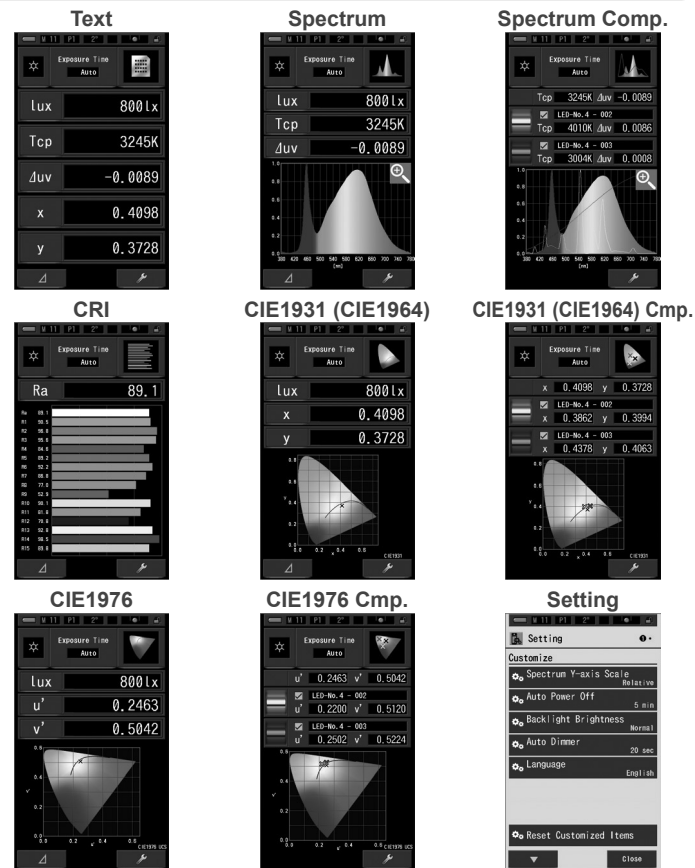
* Pressing Menu Button **6** shifts to the Display Mode Selection screen.



Measuring Mode	Icon	Description
Ambient Light Mode		Measures continuous light such as sunlight, tungsten, fluorescent, LED lights.
Flash Light Cordless Mode		Detects flash brightness without meter-flash connection after Measuring Button pressed to arm meter for 90 seconds and flash fired separately. Measure by triggering a flash during the wait time.
Flash Light Cord (PC) Mode		Detects flash brightness with PC (synchro) cord meter-flash connection.

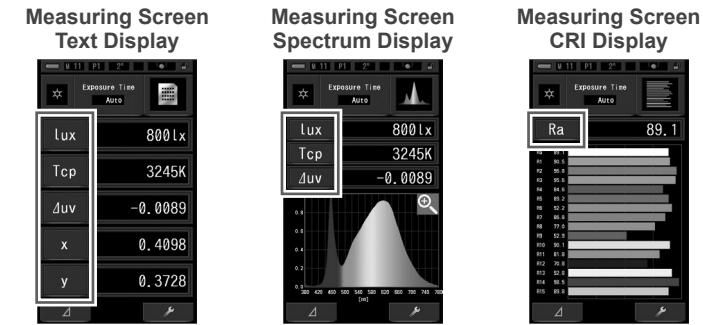
6-2. Display Mode

Press Measuring Button **5** to take a measurement in each Display Mode.
Press Memory Button **7** to memorize measured value.



7. Customizing Measuring Displays


You can customize displayed information to see exactly what you need in single view. A blue illumination under icons indicates which icons are operational.

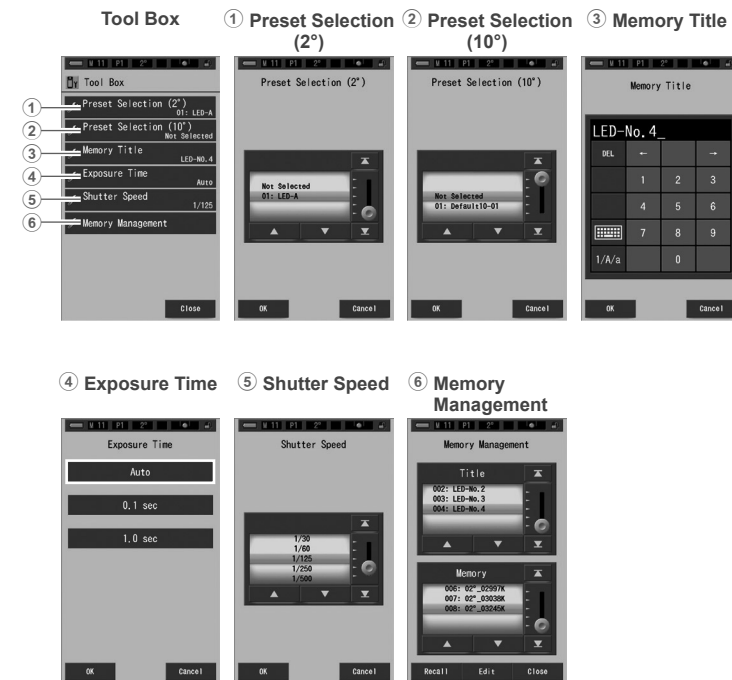


Display Item List

Field of View No.	2° Icon	10° Icon	Name
1	Tcp		Correlated Color temperature
2	Δuv		Deviation
3	X	X ₁₀	Tristimulus value
4	Y	Y ₁₀	
5	Z	Z ₁₀	Chromaticity coordinates
6	x	x ₁₀	
7	y	y ₁₀	
8	z	z ₁₀	
9	u'	u' ₁₀	
10	v'	v' ₁₀	
Field of View No.	2° Icon	10° Icon	Name
11	λd	λd ₁₀	Dominant wavelength
12	Pe	Pe ₁₀	Excitation purity
13	λp		Peak wavelength
14	Lux	Hlx	Illuminance / luminous exposure
15	Ra		Average Color Rendering Index
16	R1 to R15		Color Rendering Index

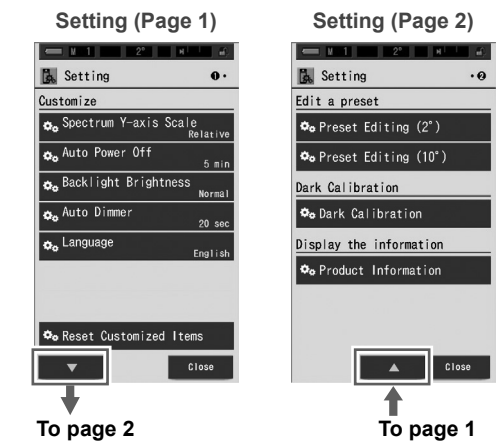
8. Functions

Touching the "Tool Box ()" icon in any measurement screen shifts the display to the Tool Box screen where frequently used functions can be accessed. Preset Selection will be grayed out and cannot be selected if no preset has been created in the Setting Mode.



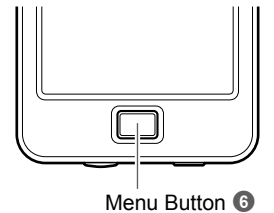
9. Setting

Touching the "Setting" icon in the Display Mode Selection screen shifts the display to the Setting screen. Here you can set functions and display methods required for measurement in advance. Settings displayed are as follows.



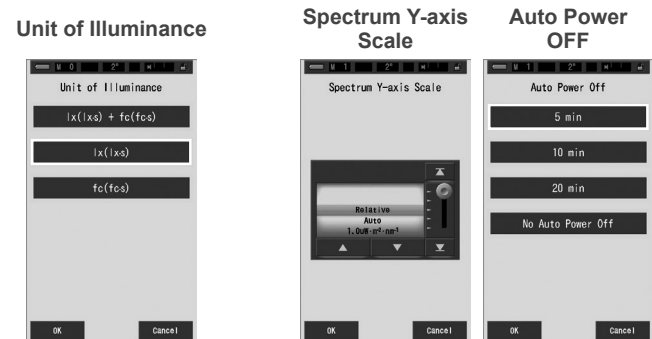
NOTE

Pressing the Menu Button **6** will abort any setting operation and return the screen to Display Mode Selection.

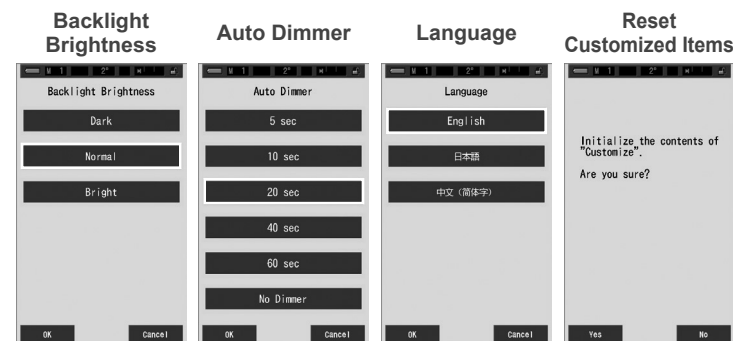


10-1. Contents of Setting

Customize

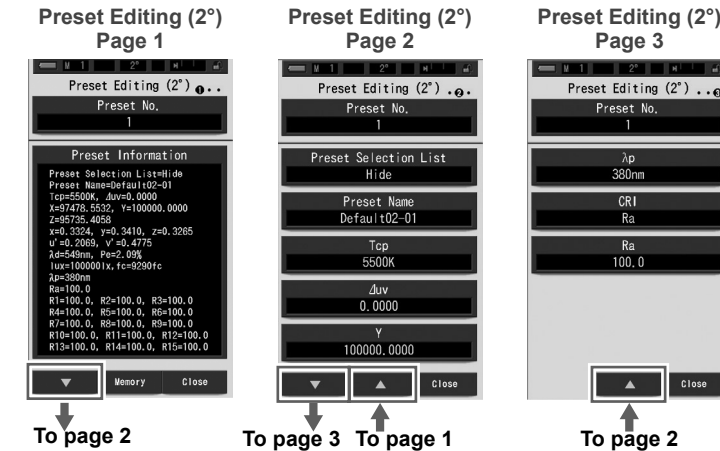


* Models sold in some countries do not display "Unit of Illuminance" item due to "fc (fc-s)" legal restrictions.

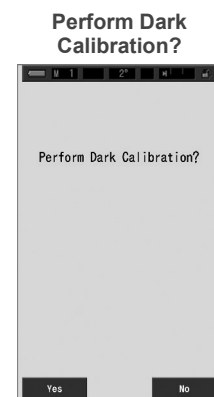


10-2. Contents of Setting

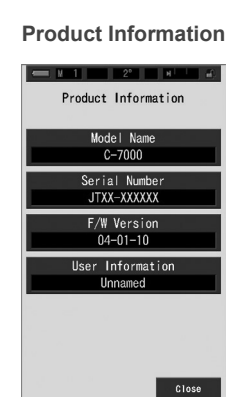
Edit a Preset



Dark Calibration



Display information



* The on-screen display may differ from the display on this spectrometer model.

Intended Usage

The meter is designed for: Measuring correlated color temperature, deviation, color rendering index (CRI), illuminance, tristimulus value, chromaticity coordinates, dominant wavelength and excitation purity of various lighting sources such as LEDs, organic EL's and projectors.

Power Supply

- AA batteries : 1.5V × 2 (alkaline, manganese)
- USB bus-power : 5V/500mA or less via USB cable when connected to computer (Limited Power Source or Class 2 Power Source)

Environmental Condition

- Indoor use
- Altitude of operation (m) : Max 2000 m
- Pollution degree (PD) : PD2
- Operating temperature : -10°C ~ 40°C (without condensation)
- Operating humidity : 85%RH or less (at 35°C) (without condensation)

SAFETY PRECAUTIONS

WARNING

- Infants or toddlers may accidentally wrap the strap around their necks, so please place it in a location out of their reach. There is a danger of suffocation.
- Do not place batteries in open flames, attempt to short, disassemble or apply heat to them, use unspecified batteries, or recharge them (except rechargeable batteries). They may burst and cause fires, serious injury, or damage the environment.
- Do not use the spectrometer in a place containing flammable or combustible vapors. Otherwise, it may cause a fire.
- Exercise care not to drop fluids on the spectrometer. Also, do not attempt to insert metals into it. Doing so may cause a fire or an electric shock. If any fluid drops on or a metal is inserted into the spectrometer, turn the power switch OFF immediately, and remove the battery (or unplug the USB power cable). Then, consult our Support Center for assistance.
- Do not disassemble or modify this spectrometer. Doing so may cause a fire or an electric shock.

CAUTION

- Do not handle this product with wet hands, or leave it in the rain or in a location where water may splash on it, where the product may be submerged in water, or it may come in contact with moisture. There is a danger of electric shock if the "Flash Light Cord (PC) Mode" is used. This may also result in damage to the product.
- Do not attempt to disassemble the product for modification or parts replacement. It may affect measurement results or damage the meter.
- Do not attempt to play the included CD-ROM using an audio CD player. It may impair hearing or damage speakers and earphones.
- When controlling the meter with the LCD, gently touch with your finger. Using pointed pens or pencils may scratch the LCD screen or damage the product.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Be careful that the neck strap does not come loose when carrying the product, as the meter may be damaged when dropped.
- Do not use or store the product in a place where it may be dropped and damaged by impacts or where it will be affected by constant vibration. This product contains precision optical components, and it may be damaged by these mechanical shocks. Also, exercise care not to subject the product to vibrations or impact when handling.
- Keep this product away from excessive dust, high humidity, and corrosive gases. Otherwise a product failure may occur.
- Do not measure a bright object that emits light exceeding the measuring range (wavelength and illuminance). They may damage the optical components and result in inaccurate measurement.
- Before removing or replacing the battery or USB cable, always turn the power switch OFF. Otherwise, the product may fail.
- Do not place the product on an unstable or tilted bench. Otherwise, it may drop and you may be injured.

KONICA MINOLTA, INC.

JT7297620
JULY 2015
Printed in Japan