

Data Management Software CL-S10w

Ver.1.3

Instruction Manual



KONICA MINOLTA



Safety Warning

Please read this manual and the instrument and computer manual carefully beforehand and use the software properly and safely.

Official name of the applications used in this manual

(Notation in the main text)	(Official name)
Windows, Windows XP	Microsoft® Windows® XP Professional Operating System
Windows, Windows 7	Microsoft® Windows® 7 Professional Operating System
Windows, Windows 8	Microsoft® Windows® 8 Pro Operating System
Excel	Microsoft® Excel®

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- No responsibility shall be bore in the event of accidents related to the use of this product not in accordance with the instructions, notwithstanding the above mentioned.

Firstly

CL-S10w is a utility software that allows the CL-500A spectroradiometer or CL-200/CL-200A chromameter to be connected to a PC and provides graphic representation of the measurements on the PC.

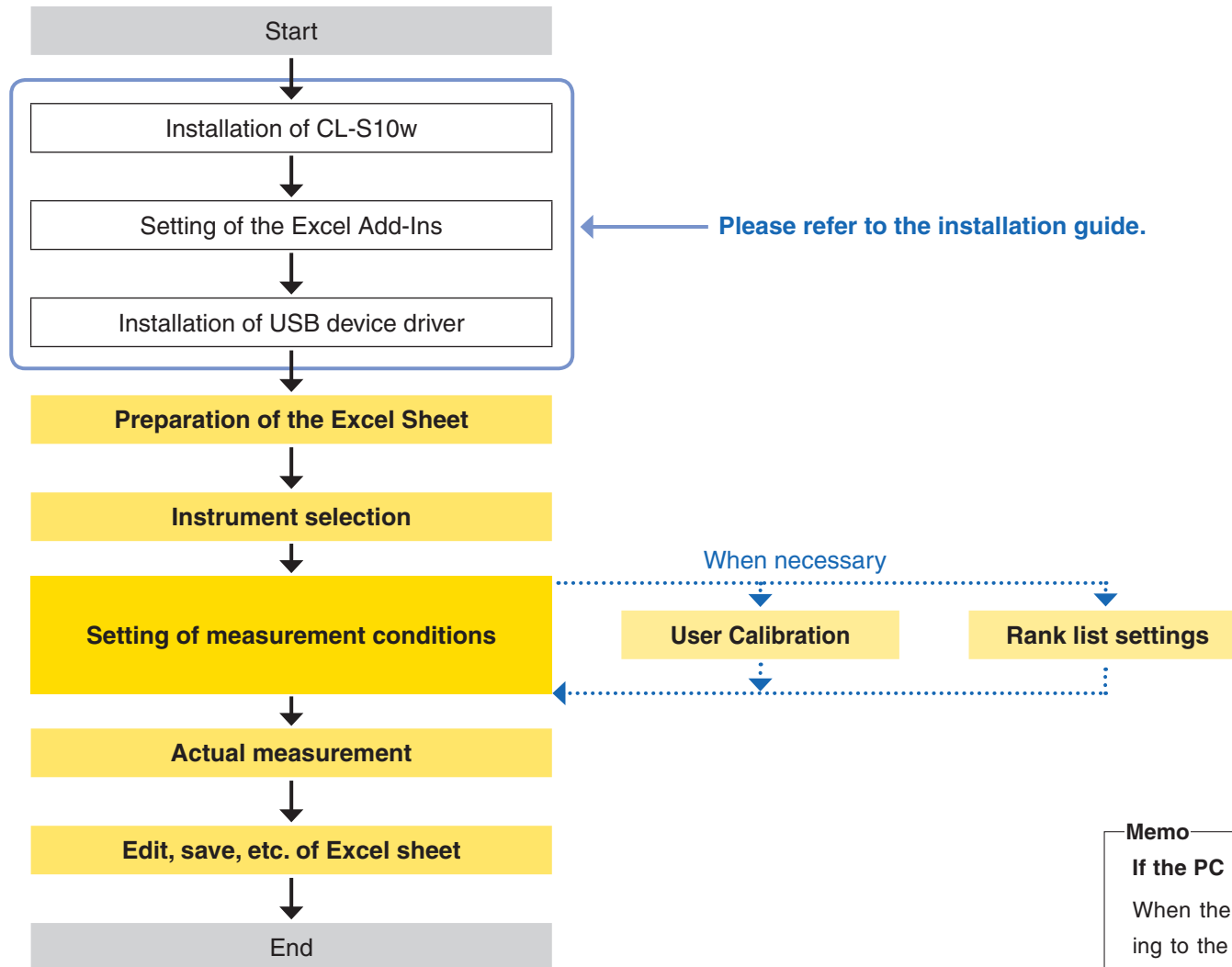
The data could be loaded into Excel via initiating the Excel Add-Ins.

This document is aimed at those who have already mastered basic Excel operations.

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Operation flow



Memo

If the PC has power management capabilities:

When the PC enters a power saving mode while it is connecting to the instrument, communications may fail. In such a case, unplug the connection cable once and plug it again; then perform "Model selection" via CL-S10w.

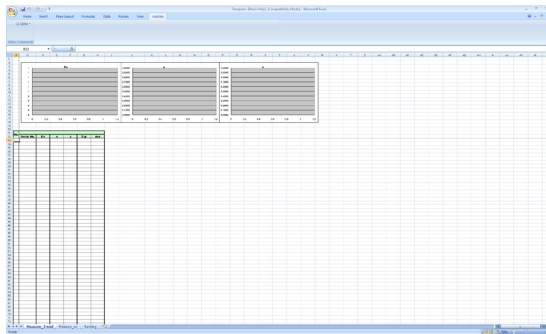
Measurement Example

Explanation of method of measurement using a template.

1. Preparation of Excel sheet

Select Start Menu - All programs - KONICAMINOLTA - CL-S10w - Template to open the template.

Select "Measure_Trend" Sheet.



2. Instrument selection

(1) Select "CL-S10w" on the menu bar (if you are using Excel 2007 or later, select "Add-in" on the menu bar and select "CL-S10w" in the pulldown menu) and click on "Model selection". The model selection screen will open.

(2) Selecting the model you are about to connect to the PC

<When connected to CL-200A>

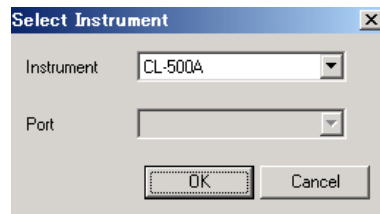
Set the COM port assigned to the "USB Serial Port" of the Device Manager which the device driver has been installed.

Please refer to the installation guide for further details.

<When connected to CL-200>

Set the COM port which has been assigned to the computer's serial port (usually COM1) or the RS-USB adapter.

(3) Click when the settings are done.



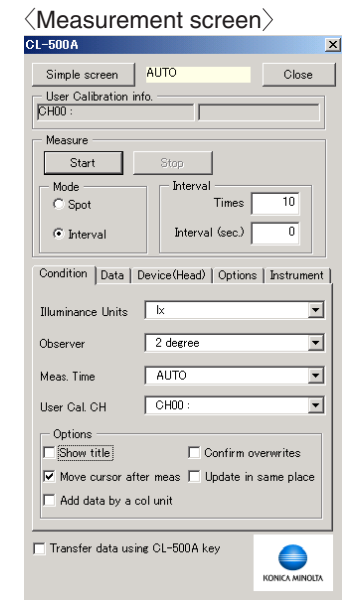
3. Setting of the measurement conditions

(1) Select the "CL-S10w" on the menu bar, (if you are using Excel 2007 or later, select "Add-in" on the menu bar and select "CL-S10w" in the pulldown menu), click on "Measure..." and the measurement screen will open.

When CL-S10w starts Excel and opens the measurement screen for the first time, it checks the instrument model connected to the PC (and heads and CF settings when the connected model is CL-200/CL-200A) for consistency. The more the number of connected heads is, the longer the time required for the check is.

(2) Open the "Condition" tab of the measurement screen and uncheck the "Show title" of "Options" tab.

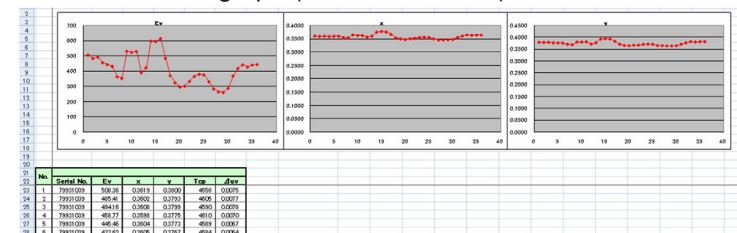
(3) Select cell B23 in Excel.



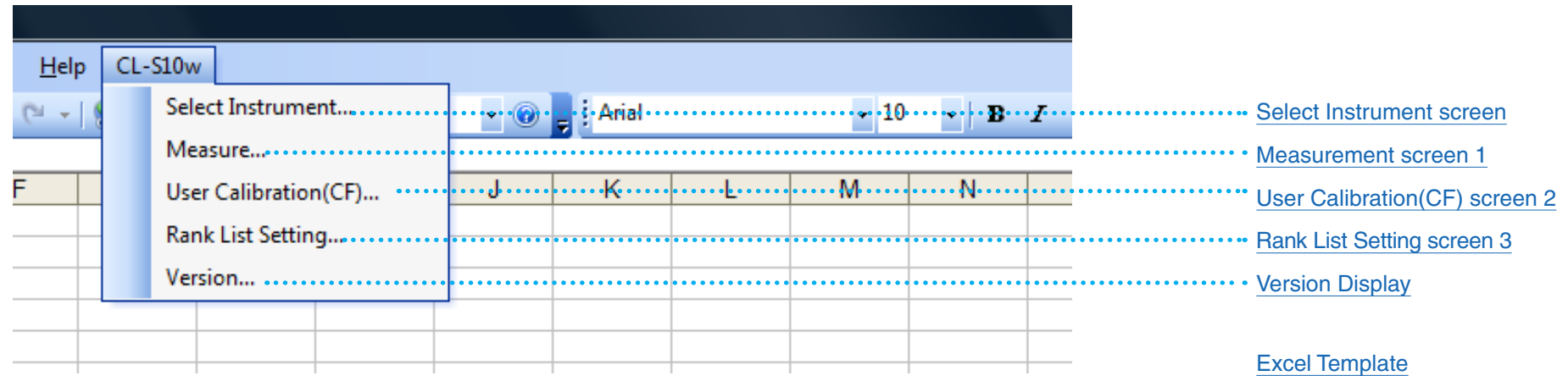
4. Start Measurement

Click on the Measurement button.

The measurement will begin and the measured data will be added to the cell. The linked trend graph (time series chart) will be shown.



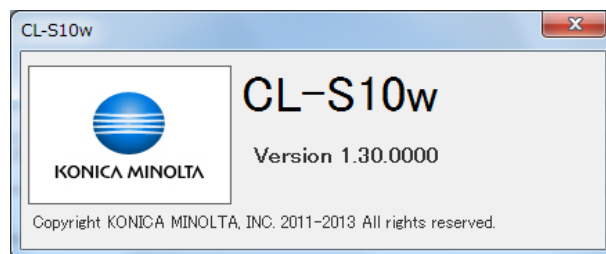
CL-S10w Menu



The above figure shows an example of the screen layout for Excel 2003.

If you are using Excel 2007 or later, select “Add-In” on the menu bar and select “CL-S10w” in the pulldown menu.

Version Display



Measurement Screen

1-1. Setting of Measurement Condition ① CL-500A

These settings are reflected on the instrument.

The screenshot shows the CL-500A Measurement Screen interface. At the top, there are buttons for 'Simple screen', 'AUTO', and 'Close'. Below this is a 'User Calibration info.' section with a 'CH00' field. The 'Measure' section contains 'Start' and 'Stop' buttons, and a 'Mode' section with 'Spot' and 'Interval' radio buttons. The 'Interval' section has 'Times' (set to 10) and 'Interval (sec.)' (set to 0) fields. Below the 'Measure' section are tabs for 'Condition', 'Data', 'Device(Head)', 'Options', and 'Instrument'. The 'Condition' tab is active, showing 'Illuminance Units' (lx), 'Observer' (2 degree), 'Meas. Time' (AUTO), and 'User Cal. CH' (CH00). The 'Options' section has checkboxes for 'Show title', 'Confirm overwrites', 'Move cursor after meas' (checked), 'Update in same place', and 'Add data by a col unit'. At the bottom, there is a checkbox for 'Transfer data using CL-500A key' and the Konica Minolta logo.

- User Calibration info -

These fields show custom calibration information.

“User calibration channel”: “ID” and time stamp

- Illuminance Units -

Selection of lx or fcd is possible.

- Observer -

2° viewing angle (CIE 1931)

10° viewing angle (CIE 1964)

- Meas. Time -

FAST : The exposure time is 0.5 sec.

SLOW : The exposure time is 2 sec.

AUTO : The exposure time is automatically adjusted (between 0.5 to 27 sec) depending on the illuminance of the light source.

S-FAST : The exposure time is 0.2 sec.

- User Cal. CH -

This field lists the available user calibration channels (“User calibration channel”: “ID”)

- Options -

☒ When checked

Show title : Title is attached to the heading of the measured data.

Confirm overwrites : The measurement will not start if there is already data in the cell to be written in. (A message will be displayed.)

Move cursor after meas. : The cursor will move when data is added.

Update in same place : The data in the same position will be updated without adding a row.

Add data by a col unit : The data is added so that the number of columns increases. (If this is unchecked, the data is added so that the number of rows increases.)

Measurement Screen

1-1. Setting of Measurement Condition ① (CL-S10w) CL-200/CL-200A

Settings stored in the instrument remain unchanged. Settings made on a setting screen have effect only on CL-S10w. When using the instrument solo, change the settings directly on the instrument.

CL-200A/CL-200

Simple screen - (Normal) Close

User Calibration info.

Measure

Start Stop

Mode

☐ Spot ☒ Interval

Interval

Times 10

Interval (sec.) 0

Condition Data Device(Head) Options Instrument

Illuminance Units lx

Observer 2 degree

CF mode - (Normal)

Options

☐ Show title ☐ Confirm overwrites

☒ Move cursor after meas ☐ Update in same place

☐ Add data by a col unit

☐ Transfer data using CL-200A key

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- Illuminance Units -

Selection of lx or fcd is possible.

- Observer -

The viewing angle of CL-200/CL-200A is fixed at 2°. This is not adjustable.

- CF mode -

This field is active when the instrument is CL-200/CL-200A.

- (Normal) : Factory calibrated with standard illuminant A used as the light source
- S (Multi) : Factory calibrated with standard illuminant A used as the light source
- CF (CF Normal) : Custom calibrated with CL-200/CL-200A
- CF S (CF Multi) : Custom calibrated with CL-S10w (RGB calibration/WRGB calibration/one-point calibration)

- Options -

☒ When checked

- Show title : Title is attached to the heading of the measured data.
- Confirm overwrites : The measurement will not start if there is already data in the cell to be written in. (A message will be displayed.)
- Move cursor after meas. : The cursor will move when data is added.
- Update in same place : The data in the same position will be updated without adding a row.
- Add data by a col unit : The data is added so that the number of columns increases. (If this is unchecked, the data is added so that the number of rows increases.)

<About use of CF (Correction) Value> **CL-200/CL-200A**

- The settings on CL-S10w, CL-200/CL-200A body are as listed in the table below.

There are 2 regions below where the CF value is written in the CL-200/CL-200A.

A: The region where the correction factor from CL-200/CL-200A is written

B: The region where the correction factor from CL-S10w is written

The correction factor in CL-S10w is written in region B in both single-color calibration and RGB calibration.

	CL-200A	CL-200	
CF Mode	Appearance on the top of the display (Switch with CF key)	Appearance on the top of the display (Switch with CF key)	Calibration Mode (Switch using CAL Mode switch)
- (Normal)	- (Blank cell)	- (Blank cell)	NORM.
S (Multi)	S	- (Blank cell)	MULTI
CF (CF Normal)	CF	CF	NORM. → Region A
CF S (CF Multi)	CF S	CF	MULTI → Region B

- To use multiple factors separately, please follow the steps below.

Only one region is written with the factor to CL-200/CL-200A from CL-S10w. (Region B mentioned above)

- During custom calibration, check the ☒ Save File check box and save the file.

By saving the file, overwriting will occur during setting conditions, and the correction factors could be used. The need for correction every time will be unnecessary.

- Press **Select and write cal. file to CL-200A/CL-200...** when setting measurement conditions to commence overwrite.

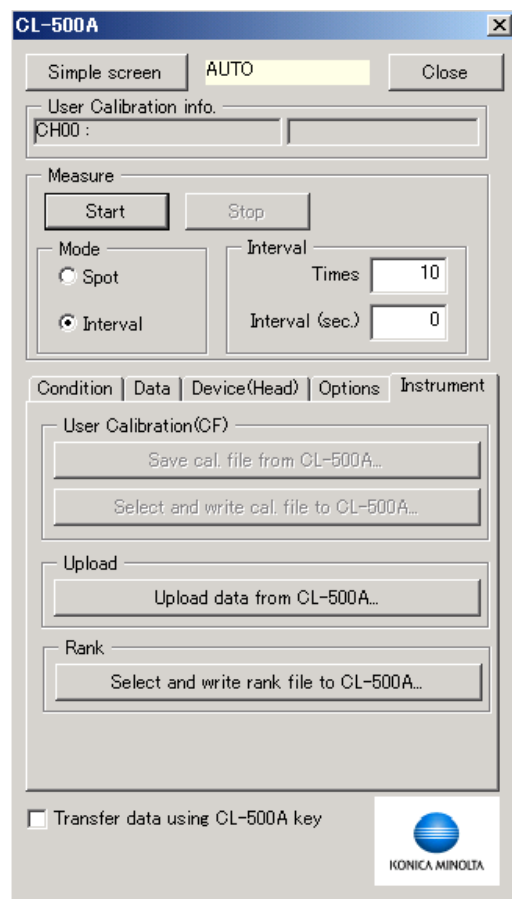
The factor written into the CL-200/CL-200A cannot be confirmed, so it is advisable to commence overwrite every time.

By using the factor calibrated to the object to be measured, a more precise measurement could be obtained.

Measurement Screen

1-2. Setting of Measurement Condition ② (Device) CL-500A

The instrument tab allows you to upload data from the instrument to the PC and save it as a file, or to download the filed data to the instrument.



- User Calibration (CF) -

Enabled when the instrument is CL-200/CL-200A

- Upload -

Upload data from CL-500A... button

Pressing this button uploads the data stored in the instrument and displays it in Excel format.

The "Date & Time" column shows time stamps generated by the instrument.

- Rank -

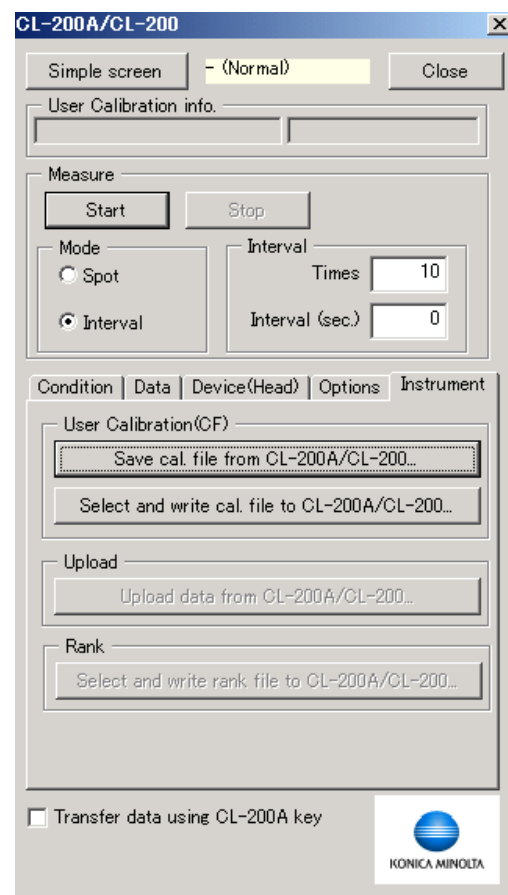
Select and write rank file to CL-500A... button

Using this button allows you to select a file (.scl file) and assign the rank list to CL-500A.

Measurement Screen

1-2. Set the items of the imported data ② (Device) CL-200/CL-200A

The instrument tab allows you to upload data from the instrument to the PC and save it as a file, or to download the filed data to the instrument.



- User Calibration (CF) -

Save cal. file from CL-200A/CL-200... button

Pressing this button open the “Save as” screen where the CF file can be saved as a CF file (.cfm file). “CF mode: CF S (CF Multi)” is selected in CL-S10w.

Select and write cal. file to CL-200A/CL-200... button

The CF value for multi calibration in CL-200/CL-200A could be set by designating the file (file extension: cfm). Also the settings on CL-S10w are ‘CF: ON’, ‘CAL Mode: S/CFS (Multi)’.

Memo

The number of Heads to be controlled and the set CF values are the same so there is a need to arrange the serial number of the heads and CF values in the same order in the file.

- Upload -

Enabled when the instrument is CL-500A.

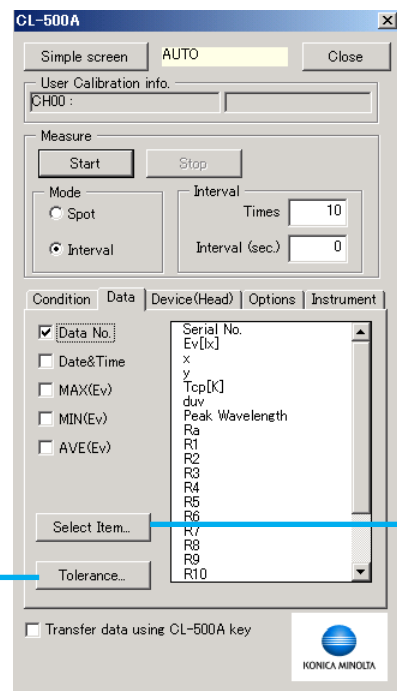
- Rank -

Enabled when the instrument is CL-500A.

Measurement Screen

1-3. Set the items of the imported data

The settings of the CL-200/CL-200A body cannot be modified.



☐ Data No. Others

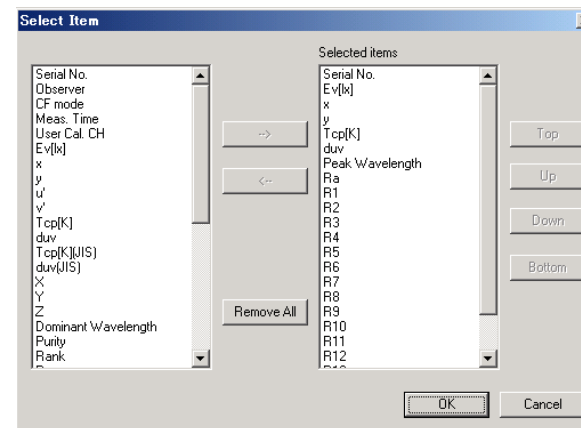
☒ The data of the checked items will be imported into Excel.

Select Item button

Pressing this button opens the measurement item selection screen. Items selected on this screen are listed on the limit setting screen.

Tolerance button

Pressing this button opens the measurement item selection screen. Items selected on this screen are listed on the limit setting screen, checked.



Memo

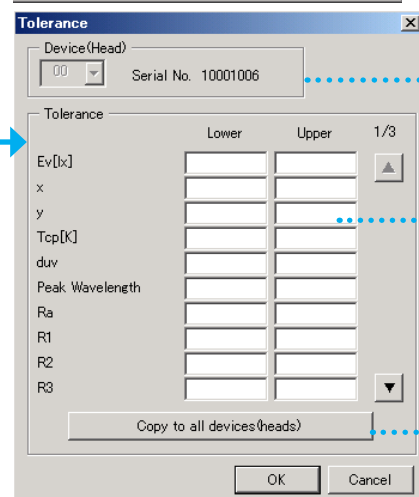
About the Tcp [K] and Tcp [K] (JIS)

Tcp [K] : Color temperature determined by Konica Minolta's original algorithm used in CL-200/CL-200A and other instruments.
(This algorithm is similar to the JIS method but was developed to enable higher-speed calculations of color temperature.)

Tcp [K] (JIS): Color temperature determined by the algorithm specified in JIS Z8725.
(CL-500A uses this algorithm.)

There might be a slight difference in the values of Tcp [K] between Tcp [K] (JIS) in some cases. The margin of error of the chromatic range of the color temperature calculable designated by JIS Z 8725 between the Tcp [K] (JIS) based values and Tcp [K] values are within $\pm 3\%$. The error falls within $\pm 1\%$ in almost all color temperature areas excluding high temperature areas. When the color temperature exceeds 19000 [K], the error may be larger than $\pm 2\%$.

Setting of Tolerance



Device (Head)

Select the serial No. of the device (head for CL-200/CL-200A) for which you are about to set the limits.

Tolerance

Please enter the upper and lower limits of the tolerance.
Blank spaces will not be taken into calculation.

Copy to all devices (heads) button

Pressing this button copies the limits of the device (head) currently selected to all the devices (heads). (The instrument itself is not capable of limiting the measurement ranges.)

Measurement Screen

1-4. Select the Head that will measure the data.

CL-500A

Simple screen: AUTO Close

User Calibration info. CH00: []

Measure: Start Stop

Mode: Spot Interval

Interval: Times 10 Interval (sec.) 0

Condition Data Device(Head) Options Instrument

Condition	Data	Device(Head)	Options	Instrument
<input type="checkbox"/> 00	10001006			
<input type="checkbox"/> 01				
<input type="checkbox"/> 02				
<input type="checkbox"/> 03				
<input type="checkbox"/> 04				
<input type="checkbox"/> 05				
<input type="checkbox"/> 06				
<input type="checkbox"/> 07				
<input type="checkbox"/> 08				
<input type="checkbox"/> 09				

Zero Calibration Update

☐ Transfer data using CL-500A key

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CL-200A/CL-200

Simple screen: (Normal) Close

User Calibration info. []

Measure: Start Stop

Mode: Spot Interval

Interval: Times 10 Interval (sec.) 0

Condition Data Device(Head) Options Instrument

Condition	Data	Device(Head)	Options	Instrument
<input checked="" type="checkbox"/> 00	80010020	<input type="checkbox"/> 10	<input type="checkbox"/> 20	
<input type="checkbox"/> 01		<input type="checkbox"/> 11	<input type="checkbox"/> 21	
<input type="checkbox"/> 02		<input type="checkbox"/> 12	<input type="checkbox"/> 22	
<input type="checkbox"/> 03		<input type="checkbox"/> 13	<input type="checkbox"/> 23	
<input type="checkbox"/> 04		<input type="checkbox"/> 14	<input type="checkbox"/> 24	
<input type="checkbox"/> 05		<input type="checkbox"/> 15	<input type="checkbox"/> 25	
<input type="checkbox"/> 06		<input type="checkbox"/> 16	<input type="checkbox"/> 26	
<input type="checkbox"/> 07		<input type="checkbox"/> 17	<input type="checkbox"/> 27	
<input type="checkbox"/> 08		<input type="checkbox"/> 18	<input type="checkbox"/> 28	
<input type="checkbox"/> 09		<input type="checkbox"/> 19	<input type="checkbox"/> 29	

Update

☐ Transfer data using CL-200A key

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☐ 00 []

The serial No. of the device (head for CL-200/CL-200A) appears.

Check the check boxes of the devices (heads) you are about to use for measurement.

Update button

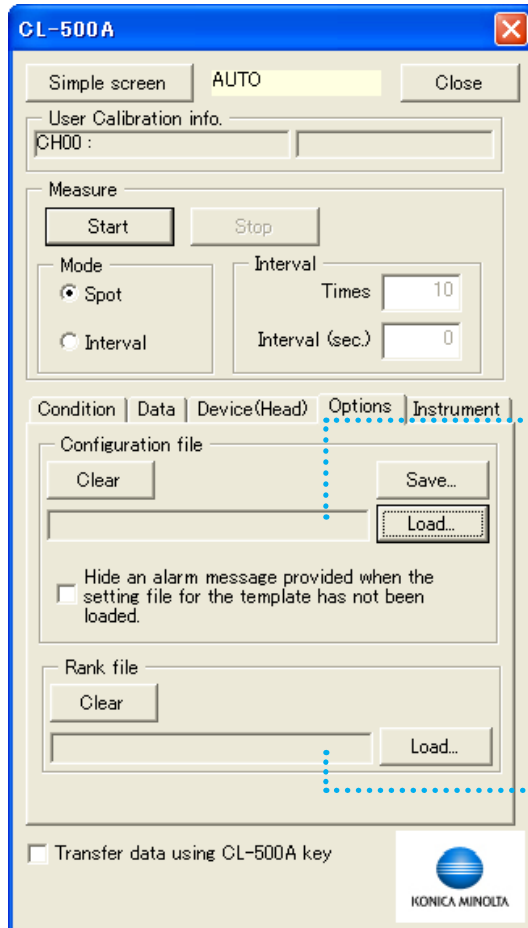
When CL-S10w opens the measurement screen or CF screen for the first time, it checks the instrument model connected to the PC (and heads and CF settings when the connected model is CL-200/CL-200A) for consistency. If you change the connection status of the instrument or perform custom calibration on the instrument, press the **Update** button.

Memo

The serial No. field highlighted in yellow denotes that the instrument needs to be zero-calibrated. This applies to CL-500A only. Press the **Zero Calibration** button. (This button is not displayed for CL-200/CL200A.)

Measurement Screen

1-5. The settings can be managed by a file



- Configuration file -

This measurement screen (consisting of a measurement frame, condition tab and data tab) allows you to set measurement conditions, measurement ranges (upper/lower limits) and other parameters and to save/load the settings as a configuration file.

Clear button

The designated configuration files (file extension: .txt) will be cleared.

The name of designated configuration files (file extension: .txt) will be shown.

Save button

The current contents will be saved as a configuration file (file extension: .txt).

The contents of the configuration files will be reflected every time the measurement screen is opened.

Load button

Designate the configuration file (file extension: .txt).

The contents of the configuration files will be reflected every time the measurement screen is opened.

☐ **Hide an alarm message provided when the setting file for the template has not been loaded.**

When using a template for measurement, you are recommended to load the setting file for the template. If the setting file has not been loaded, an alarm message will appear. Check the checkbox to hide the alarm message.

- Rank file -

The Rank file created in Rank List Setting screen can be loaded. From this, the rank according to the chromatic range could be differentiated.

Clear button

The designated Rank List File (file extension: scl) is cleared.

Load button

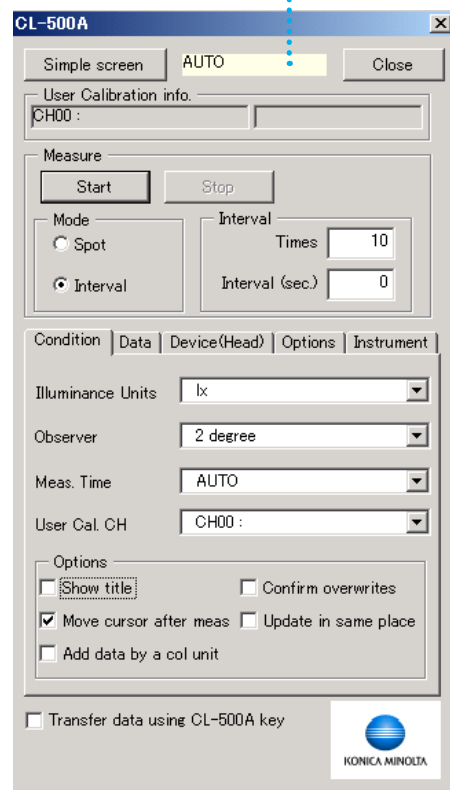
The Rank List File (file extension: scl) is designated.

The contents of the Rank List File are shown. It is also shown after CL-S10w is rebooted.

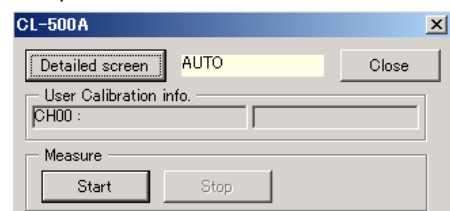
Measurement Screen

1-6. Start measurements

Detailed measurement screen



Simple measurement screen



The content of this field changes depending on the setting of **Meas. Time** (for CL-500A) or **CF mode** (for CL200/CL-200A).

Simple screen button

The simple measurement screen is shown when pressed.

- Mode -

Select Spot measurement or Interval measurement.

- Interval -

Set the Times and Interval of the measurement.

☐ Transfer data using CL-500A/CL-200A key

☒ When it is checked, CL-S10w enters into transfer mode.

This feature is enabled when CL-500A is used or only one head is connected to CL-200A.

Pressing the measurement button of CL-500A or the [▶/D-OUT] button of CL-200A transfers the data to the Excel sheet. Data transfer from CL-200A depends only on the settings stored in the instrument, no matter what settings are made via CL-S10w. Also, by pressing the Hold button of CL-200A body during transfer mode, the items of the color table could be edited. The differentiation function of the tolerance is not applied.

Detailed screen button

When pressed, the detailed screen is shown.

Spot measurement

- 1 Please select spot mode.
- 2 Please press the Measurement **Start** button.
The data of a measurement will be shown in the Excel sheet.

Interval measurement

- 1 Select Interval mode.
- 2 Enter the times and interval (sec).
Times : 1-100,000
Interval(sec) : 0-3,600 (When set to 0, it becomes continuous measurement.)

Memo

- Set the interval so that it is longer than the actual measurement time.
- Excel may slow down or terminate if a lot of data is handled in Excel spreadsheets or a number of application programs are running at the same time. You are recommended to save Excel files at appropriate intervals to prevent data loss when continuously collecting a lot of data such as spectral data using CL-S10w.

- 3 Press the Measurement **Start** button.

The data of the set number of measurements will be shown for every measurement done in the Excel sheet. The data will be added to the selected cells.

Press **Stop** button to stop the interval measurement.

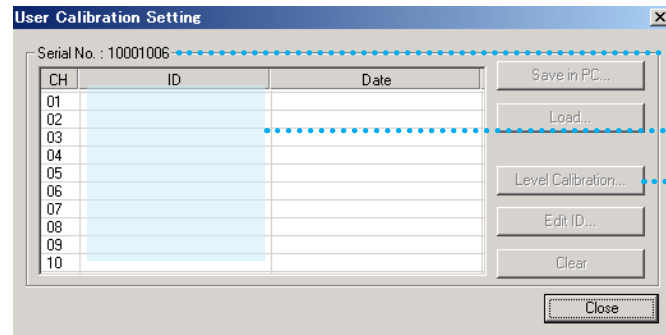
Without set Tolerance range

Data No.	Date&Time	Serial No.(0)	Ev[1x](0)	x(0)	y(0)
1	2010/04/15 14:04:22	73630105	611.1300	0.3885	0.4044
2	2010/04/15 02:04:23	73630105	610.9300	0.3885	0.4052
3	2010/04/15 02:04:25	73630105	679.9300	0.3877	0.4057
4	2010/04/15 02:04:26	73630105	614.5300	0.3885	0.4054
5	2010/04/15 02:04:28	73630105	603.9500	0.3856	0.4055
6	2010/04/15 02:04:29	73630105	604.1500	0.3856	0.4055
7	2010/04/15 02:04:30	73630105	600.0400	0.3856	0.4055
8	2010/04/15 02:04:31	73630105	608.8200	0.3885	0.4055
9	2010/04/15 02:04:33	73630105	610.7300	0.3856	0.4054
10	2010/04/15 02:04:34	73630105	619.1100	0.3885	0.4054

Within set Tolerance range

User calibration screen

2. This screen allows you to perform user calibration on **CL-500A**.



-Serial No. -

This screen lists the serial Nos. of the connected instruments. When multiple instruments are connected, this screen appears after the serial Nos. are selected.

Save in PC button

Pressing this button open the “Save as” screen where the CF value for the selected user calibration channel is saved as a CF file (.cfl file).

Load button

Select a correction factor file (.cfl file).

The contents of the selected correction factor file reflects the selected user calibration channel.

Select a correction factor file (.cfl file).

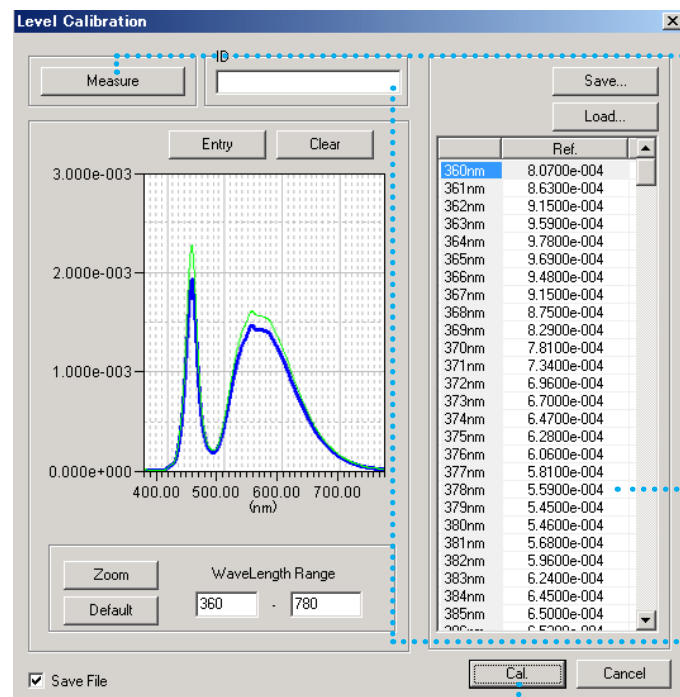
The contents of the selected correction factor file reflects the selected user calibration channel.

Edit ID button

The ID edit screen will appear. This screen allows you to edit the ID of the selected user calibration channel. (Up to 12 alphanumeric characters)

Clear button

The information on the selected user calibration channel will be cleared.



User calibration information of the connected instrument (user calibration channel, ID and time stamp) is displayed.

1. Select the user calibration channel you wish to use.

2. Press the **Level Calibration...** button.

The level calibration screen will appear.

3. Press the **Measure** button.

Measurements will be made and graphic representation (blue line) of the level calibration data be provided. (Average of three measurements)

4. Enter the data you wish to incorporate, in the reference data list.

Data in the clipboard can also be pasted (shortcut: ctrl+V) here.

Using the **load** button allows you to load a stored file (.lrv file) without entering the data.

Using the **save** button allows you to save the data as a reference data file (.lry file).

Pressing the **Entry** button gives graphic representation (green line) of the contents of the reference data list.

5. Enter an ID for the level calibration data. (Up to 12 alphanumeric characters)

6. Press the **Cal.** Button.

A coefficient will be determined depending on the reference data and be set in CL-500A as a correction factor.

If the correction factor exceeds 1000, it is rounded down to 1000.

When ☒ Save File is checked, pressing the **calibration** button opens the “Save as” screen where the correction factor is saved as a CF file (.cfl file).

User calibration screen

2. This screen allows you to perform user calibration on CL-200/CL-200A

Update

CL-S10w will check the CF value of the connected heads of CL-200/CL-200A body when the measurement screen or the CF settings screen is opened. Press the **Update** button when the connection of the heads is changed after the connection check or when the CL-200/CL-200A is custom calibrated.

1 - Head -

The serial number of the connected head is shown.
Check the head that is to be user calibrated ☒.

2 - Select calibration -

Please select calibration mode.

3 Please press the **OK** button

The user calibration screen of the selected calibration mode is shown.

4 Please select the serial number of the head to be calibrated.
The serial number of the head will be shown.

5 Please press the **Measure** button.
The measurement of all the connected heads will begin and the data of the selected heads will be shown. (Average of three measurements)

6 Please enter the Calibration Set Data.
All the selected set values of the heads will be copied to all the heads when **Copy To All Head** button is pressed.

7 Please press **Cal.** Button.
The correction factor (CF value) will be calculated with the entered calibration set data and set as the multi calibration CF value in CL-200/CL-200A.

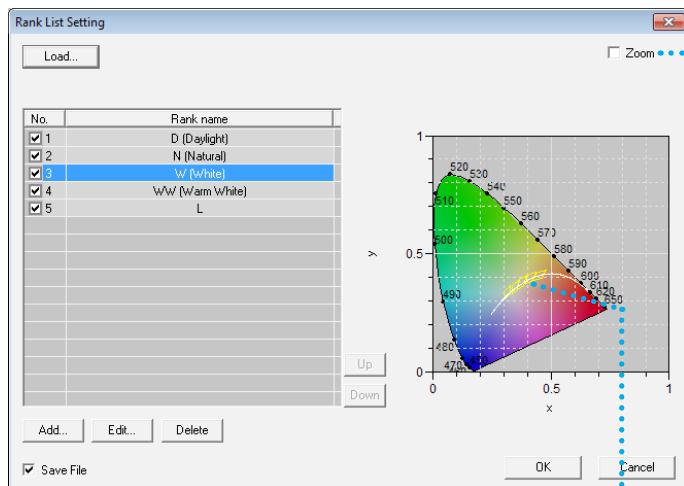
Memo

The calibration point of the smallest numbered head will be reflected in the setting value the next time CL-S10w is started.

When **Save File** is checked ☒, the 'Save as...' screen will appear when **Cal.** is pressed and the CF file (file extension: cfm) can be saved.

Rank List Setting screen

3-1. Select the Rank List



Load button

Designate the Rank List file (file extension: scl).
Saved Rank List files are loaded and shown.

A chromacity selection Rank List file is prepared as a sample template.

It is placed in the Template folder under where CL-S10w is installed.

(Example)C:/Program Files/KONICAMINOLTA
/CL-S10w/Template
/Fluorescent_Lamp.scl

No. **Rank name**

☒ The checked number rank will be selected for differentiation.

Memo

In case of overlapping chromacity range, the smaller numbered rank shall be differentiated first.

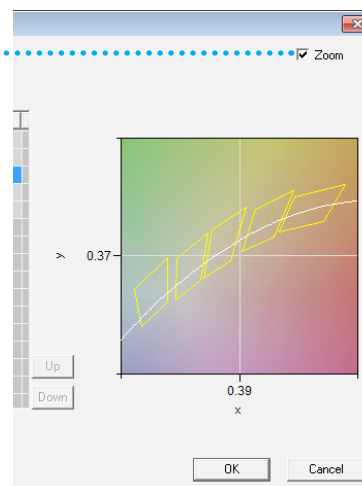
...The selected rank will be shown on the list.

Up button

Moves the selected rank up.

Down button

Moves the selected rank down.



Add... button

The edit rank screen will appear when pressed.
A new rank will be created and added to the list.
A maximum of 20 ranks could be added to the list.
(Refer to 3-2. Adding and editing Ranks)

Edit button

The edit rank screen will appear when pressed.
(The edit screen will appear also when the rank in the list is double-clicked.)
Edit the selected rank.

(Refer to 3-2. Adding and editing Ranks)

Delete button

The selected rank will be deleted when pressed.

☐ **Save File**

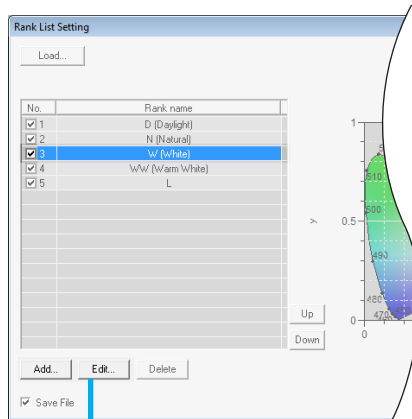
☒ When Save File is checked, the 'Save As...' screen will appear when **OK** is pressed and the rank list file (file extension: scl) can be saved. Also it will be reflected when CL-S10w is started up again.

☐ **Zoom**

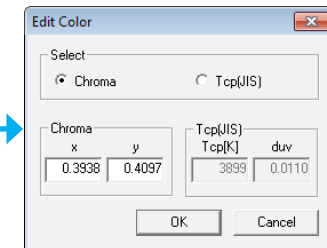
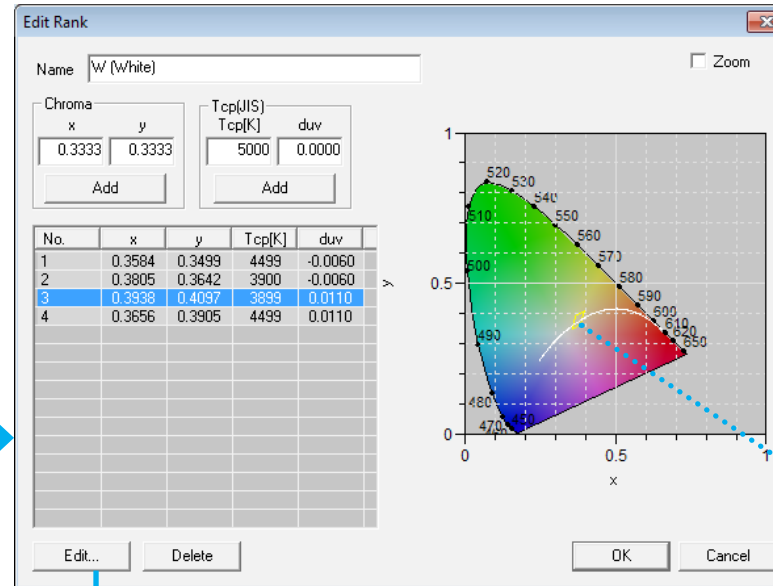
☒ When checked, the graph scale of the selected ranks in the list could be enlarged in the displayed region.

Edit Rank screen

3-2. Adding and editing Ranks



The Edit Rank screen will appear when **Add** or **Edit** button is pressed.



Name

Enter the rank name. (Up to 40 characters)

- Chroma - - Tcp(JIS) -

Enter x,y or Tcp,duv and press the **Add** button to add the chroma points to the list below.

3-10 chroma points could be added to the list.

0.000 < x < 1.000

0.000 < y < 1.000

1,563 ≤ Tcp < 100,000

-0.1 ≤ duv ≤ 0.1

Edit button

When pressed, the Edit Color screen is shown.
(The edit screen will also appear when the chroma point in the list is double-clicked.)
Edit the selected chroma point.

Delete button

When pressed, the selected chroma point is deleted.

☐ **Zoom**

☒ When checked, the graph scale of the entered chroma points could be enlarged in the displayed region.

... The chroma points are drawn connected sequentially in a straight line.

Template

There are pre-installed templates in CL-S10w.

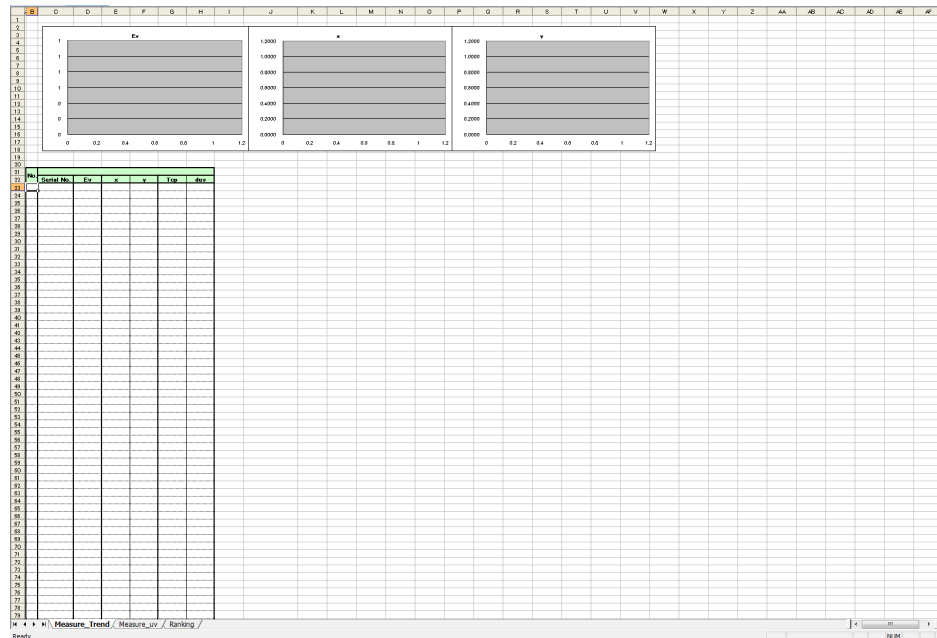
'Measure_Trend' Sheet/ 'Measure_uv' Sheet/ 'Ranking' Sheet

The Template is placed in the Template folder under where CL-S10w is installed.

(Example) C:/Program Files/KONICAMINOLTA/CL-S10w/Template

Select the KONICAMINOLTA — CL-S10w — Template from the All Programs of the Start Menu to activate the template.

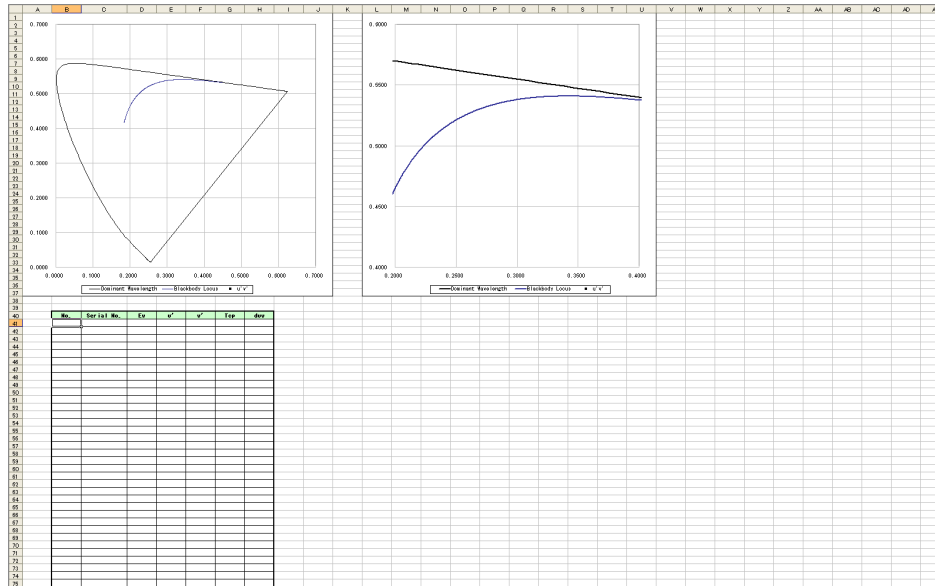
'Measure_Trend' Sheet



- ① Load setting file "Template_Trend.txt".
The checkbox of Show title in the Options area will be unchecked and Data No., Serial No., Ev[lx], x, y, Tcp[K], and duv will be selected.
See [“1-5. The settings can be managed by a file”](#) for how to load a setting file.

- ② Click on the **Start** button.

'Measure_uv' sheet

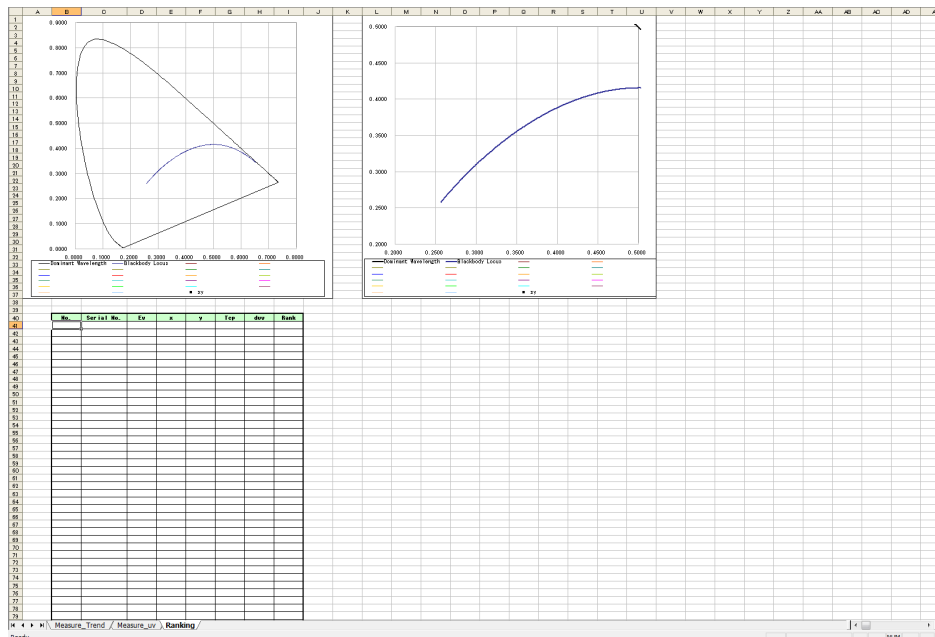


- ① Load setting file "Template_uv.txt".

The checkbox of Show title in the Options area will be unchecked and Data No., Serial No., Ev[Ix], u', v', Tcp[K], and duv will be selected. See "1-5. The settings can be managed by a file" for how to load a setting file.

- ② Click on the **Start** button.

'Ranking' Sheet



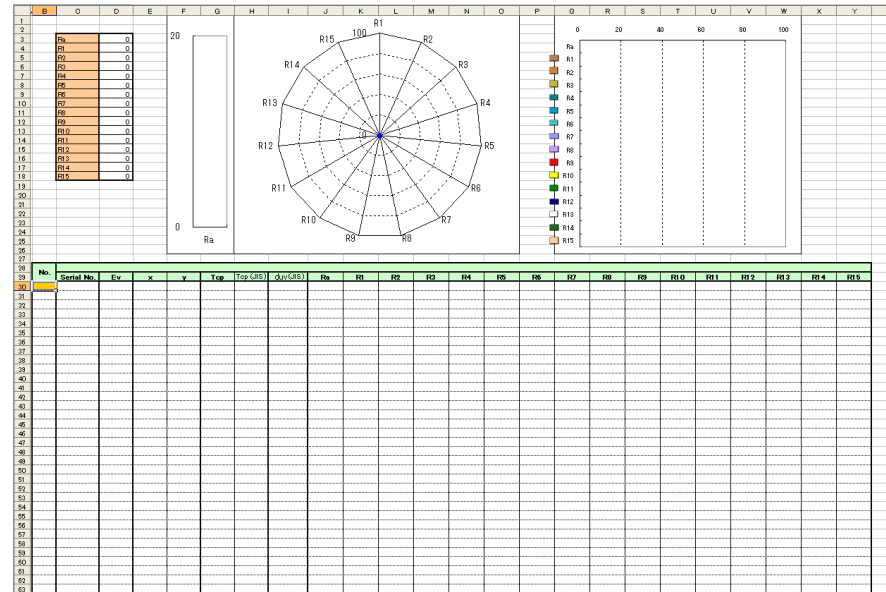
- ① Load setting file "Template_Rank.txt".

The checkbox of Show title in the Options area will be unchecked and Data No., Serial No., Ev[Ix], x, y, Tcp[K], duv and Rank will be selected. See "1-5. The settings can be managed by a file" for how to load a setting file.

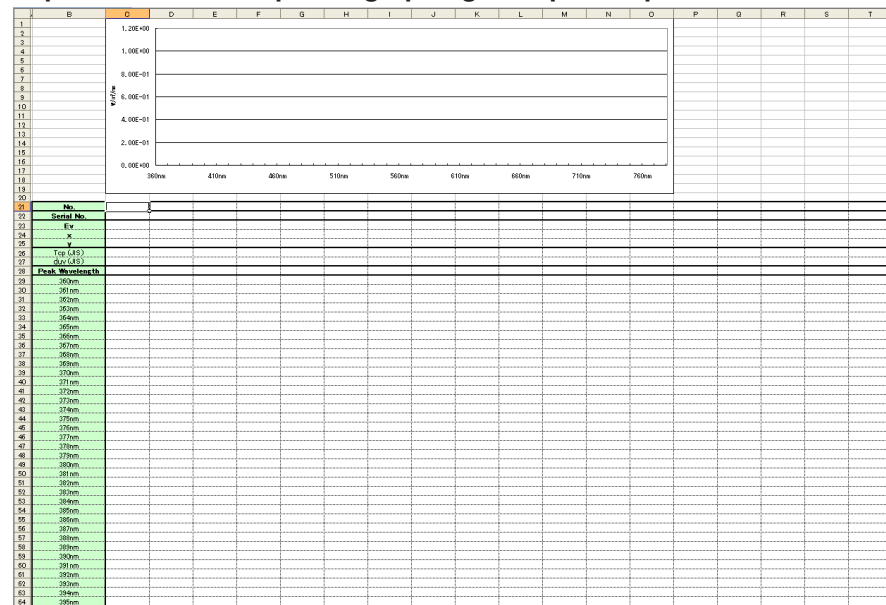
- ② Assign the rank list and click on the **Start** button.

Other template examples

“Color rendering index” sheet of color rendering index “Template_CRI.xls”



“Spectral” sheet of spectro graphing “Template_Spectral.xls”



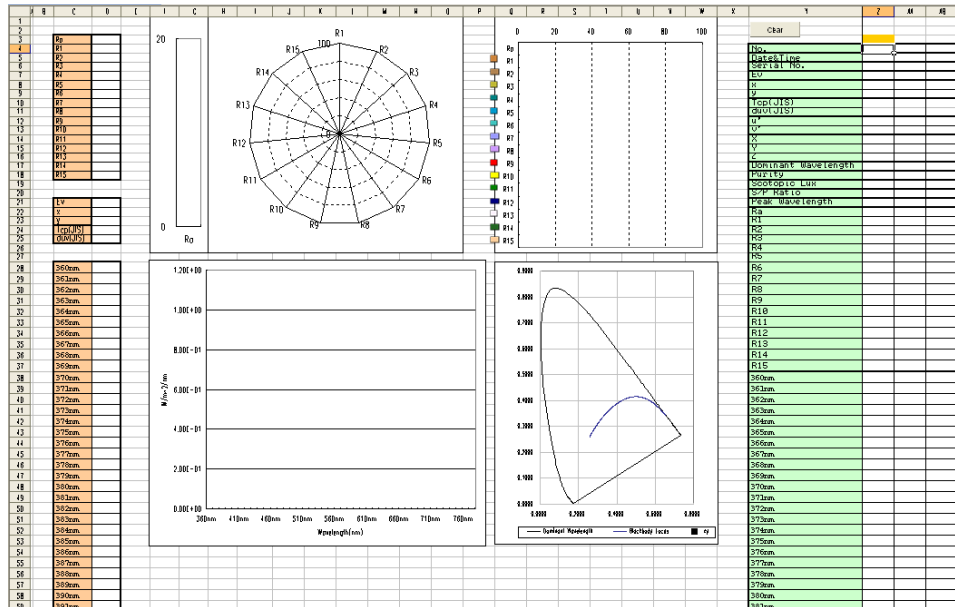
- ① Load setting file "Template_CRI.txt".
The checkbox of Show title in the Options area will be unchecked and Data No., Serial No., Ev[Ix], x, y, Tcp[K] (JIS), duv (JIS), Peak Wavelength, Ra and R1-R15 will be selected.
See [“1-5. The settings can be managed by a file”](#) for how to load a setting file.

- ② Click on the **Start** button.

- ① Load setting file "Template_Spectral.txt".
The checkbox of Show title in the Options area will be unchecked and the checkbox of Add data by columns be checked. Data No., Serial No., Ev[Ix], x, y, Tcp[K] (JIS), duv (JIS), Peak Wavelength and Spectral Data will be selected.
See [“1-5. The settings can be managed by a file”](#) for how to load a setting file.

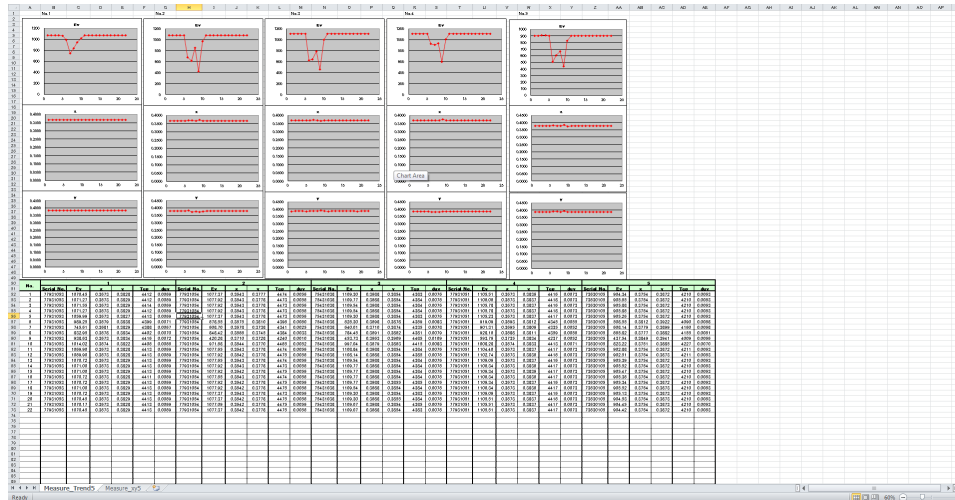
- ② Click on the **Start** button.

Color rendering index and spectrographing “Template_CRI&Spectral.xls”



- ① Load setting file “Template_CRI&Spectral.txt”.
See “[1-5. The settings can be managed by a file](#)” for how to load a setting file.
- ② Click on the **Start** button.

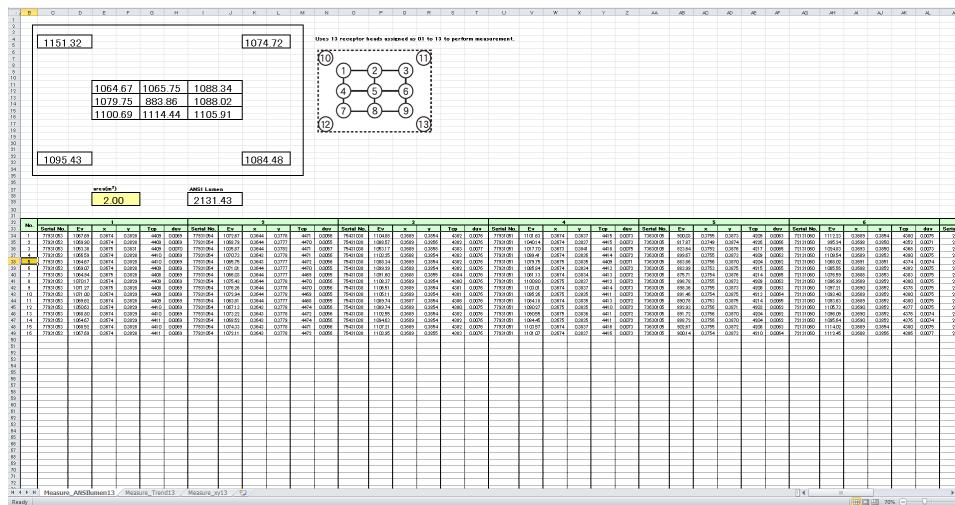
“Measure_Trend5” sheet of 5-point measurement template “Template_Multi_5.xls”



- ① Uncheck Show title in the Options area and select Data No., Serial No., Ev[lx], x , y , Tcp[K] and duv.

- ② Click on the **Start** button.

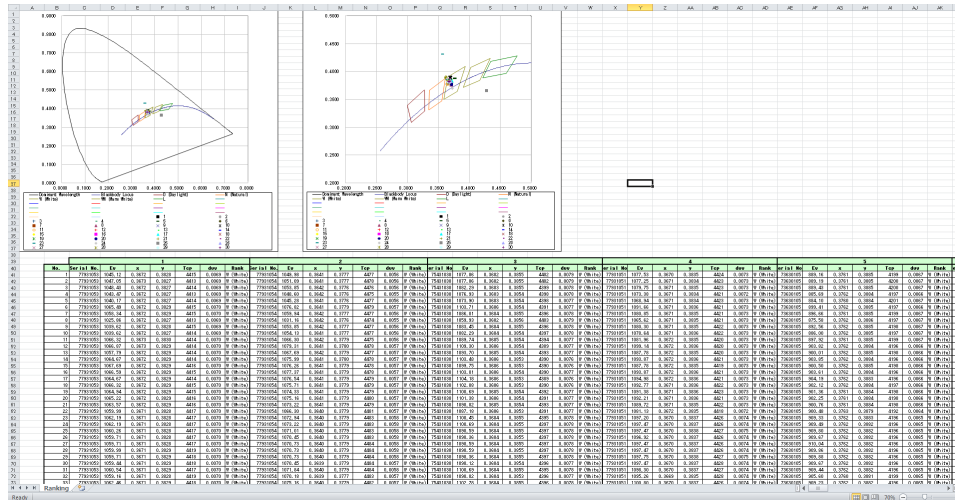
“Measure_ANSI lumen 13” sheet of 13-point measurement template “Template_Multi_13.xls”



- ① Enter the “area” for determining the ANSI lumen value.
 - ② Uncheck Show title in the Options area and select Data No., Serial No., Ev[lx], u' , v' , Tcp[K] and duv.
 - ③ Place the cursor in the cell directly under the “No.” cell in the Excel sheet and click on the **Start** button.
- First set the Excel macro security level at “**Medium**” as follows:
1. Select “**Option**” from “Tool” in the menu bar.
 - The “Option” dialog will appear.
 2. Click on “**Security**” and click on the **Marco security** button.
 - The “Security” dialog will appear.
 3. Select “**Medium**” in the “Security level” tag and click on the **OK** button.
 4. Click on the **OK** button in the “Option” dialog.

Note that the macro security level setting is saved in Excel. Change the macro security level setting as appropriate when running applications other than CL-S10w.

“Ranking” sheet of Multi (up to 30)-point measurement template “Template_MultiRank.xls”

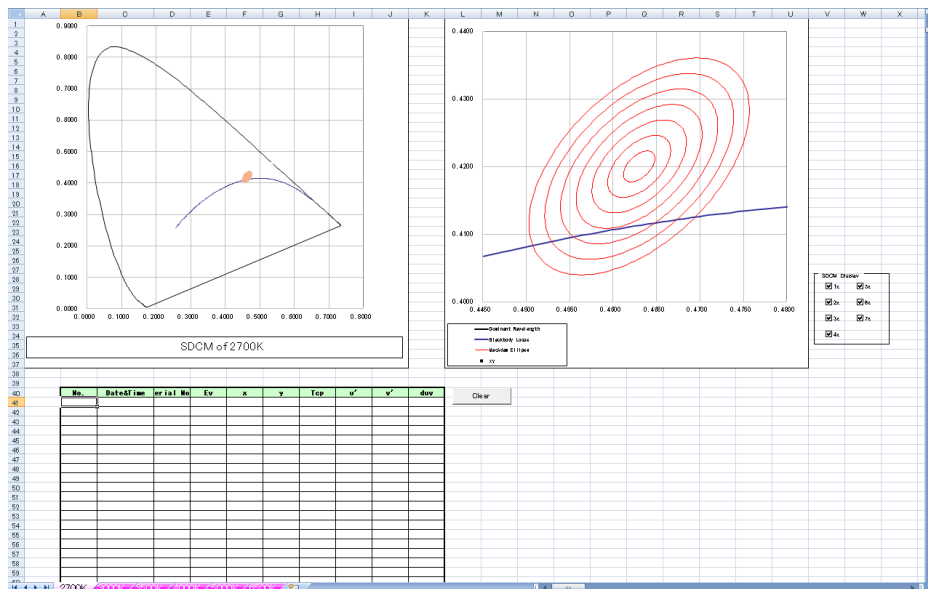


- ① Uncheck Show title in the Options area and select Data No., Serial No., Ev[lx], x, y, Tcp[K], duv and Rank.

- ② Click on the **Start** button.

MacAdam SDCM-graphing “Template_MacAdamEllipse.xls” and “Template_MacAdamEllipse_shifted.xls”

* These two templates only differ in the position of the ellipse, and can be used in the same manner.



- ① Load setting file “Template_MacAdamEllipse.txt”.
See “[1-5. The settings can be managed by a file](#)” for how to load a setting file.
- ② Click on the **Start** button.



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