Minolta LS-100/ LS-110 Luminance Meters

Measuring Luminance

Figure 1: Minolta LS-100/ LS-110 Luminance meter
(A) Focus adjustment
(B) On/Off switch
(C) Trigger
(D) External display
(E) Control panel
(F) Eye piece

Section 1: The Minolta LS-100 and LS-110 luminance meters are used for measuring the luminance of light sources.

Luminance is defined as the measured amount of light that is emitted from a particular source and falls within a specified measurement area or focal cone. These luminance meters allow:

- portable analysis of light sources and reflective surfaces
- measurements in cd/m^2 (candela/square meters) or fL (foot-lamberts)
- display of peak luminance measurements
- use of color-correction factor for accurate measurement in varied conditions
- comparative measuring against default standard calibration (Preset) or user calibration (Variable)

When operating the luminance meter, the measurement area or area of sensitivity is described by the circle centered in the view finder. The size of this circle corresponds to the focal cone and the angle of acceptance which varies between models.

Model No.	Acceptance angle	Measurement level
LS-100	1^0	0.001 to 299,900 cd/m^2
LS-110	$1/3^0$ (for smaller measurement area)	0.01 to 999,900 cd/m^2

NOTE: Luminance meters are for the measurement of specific light sources and reflective surfaces. For measurements regarding amount of light in a space or light striking a surface, use an illuminance meter (see Minolta T-10).

Section 2: Setting up the luminance meter

1. Set up meter using the function control panel (Figure 2).
2. The luminance-unit selector is used to switch the units of measurement between cd/m2 or fL. Remove battery compartment lid (top of device) and set as needed. Switching measurement units during operation will convert measurements to alternate units.
3. The **CALIBRATION** switch **(PRESET)/(VARI)** toggles between Minolta standard calibration and a variable user defined calibration.
4. The **MEASURING MODE** switch **(ABS.)/(%)** toggles between absolute reading of measurement to a **%** reading. The **%** setting is only used with a previously stored reference reading.
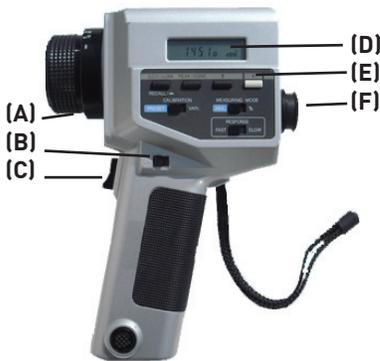
Figure 2: Control panel and LCD display, displaying luminance reading.

Figure 2: Control panel and LCD display, displaying luminance reading.

5. The **RESPONSE** switch **(FAST)/(SLOW)** toggles between a 2 second and a 4 second sampling time. For normal light conditions use **FAST** setting.
6. The **PEAK/CONT.** button will display the peak luminance reading from the sample. To activate, hold down the **F** button and press the **PEAK/CONT.** button, repeat to return to standard display.
7. The **C.C.F./LUMI.** or **RCL/^** button is the data-control key. This button is used for the recalling of a stored reading, and switching between color-correction modes.
8. The **↑** button is used to adjust values of variable reference data.
9. The **F** button releases the safety lock on readings, and is used for variable calibration mode.

Section 3: Operating the luminance meter

1. Turn meter power switch to ON position.
2. Measurement units are displayed on LCD screen. Switch as needed with luminance-unit selector.
3. Remove lens cap and eye piece cover.
4. Using the view finder, aim device at subject to be measured. The circle in center of view finder is the measurement area. For accurate measurements the subject must fill the measurement area. Adjust distance from subject as necessary.
5. Adjust focus ring on lens until subject is in focus.
6. To take measurement pull trigger and hold until measurement data appears in view finder. Measurement data is automatically displayed on external display. View finder data display shuts off after 5 seconds.
7. To display the **PEAK** luminance of the current reading, press the **PEAK/CONT.** button. The displayed reading with convert to the new setting.
8. To switch measurement units of currently displayed reading, switch the luminance-unit selector (see above instructions). Displayed data will convert to the new setting.
9. For measurement of extremely bright subjects, use the neutral density eye piece filter (included in case).
10. For use of user specified calibration mode **(VARI)** and color-correction function **(C.C.F.)** consult instruction manual.

For more product information contact manufacturer or visit manufacturer's website:
http://www.konicaminolta.com/instruments/index.html