ET130

1 m

INSTRUCTION MANUAL
Light Meter

- **MEASUREMENTS IN FOOT CANDLES (FC) AND LUX**
- **DATA HOLD**
- **MAX/MIN**
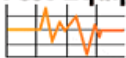- **BACKLIT LCD SCREEN**

FC/LUX | HOLD | MAX/MIN | 💡

LCD | ▥ | APO

KLEIN TOOLS®

EST. 1857

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Light Meter

ET130

C E

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GENERAL SPECIFICATIONS

Klein Tools ET130 is an easy-to-use precision light meter that measures illuminance levels in both Foot Candles (FC) and Lux.

- **Spectral Range:** 400 to 760 nm; white light CIE standard
- **Range:** 0 to 4,000 FC; 0 to 40,000 Lux (1 FC = 10.76 Lux)
- **Resolution:** 0.01 FC / 0.1 Lux
- **Repeatability:** +/- 3%
- **Accuracy:** +/- 5% reading +/-10 digits @ <10,000 Lux
  +/- 10% reading +/-10 digits @ >10,000 Lux
- **Sample Rate:** 2 times per second
- **Sensor:** Silicon photodiode with spectral response filter
- **Battery:** 9V
- **Operating Altitude:** 6562 ft. (2000 m)
- **Relative Humidity:** <80% non-condensing
- **Operating Temp:** 32° to 104°F (0° to 40°C)
- **Storage Temp:** 14° to 140°F (-10° to 60°C)
- **Dimensions:** 8.1" x 2.1" x 1.4" (206 x 54 x 36 mm)
- **Weight:** 5.5 oz. (156 g) including batteries
- **Tripod Mount:** 1/4-20 UNC
- **Calibration:** Accurate for one year
- **Drop Protection:** 3.3 ft. (1m)

Specifications subject to change.

⚠ WARNINGS

To ensure safe operation and service of the meter, follow these instructions. Failure to observe these warnings can result in severe injury or death.

- Read the instructions to ensure safe operation.
- Meter is **NOT** insulated. Avoid contact with areas where energized conductive elements may be present.
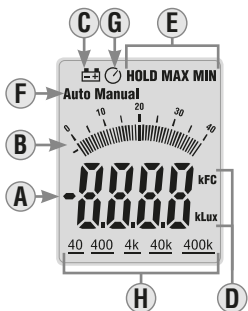- Always wear approved eye protection.

FEATURE DETAILS

Front of Meter

Back of Meter

1. Photodiode Sensor
2. 3-3/4 Digit LCD Screen
3. HOLD Button
4. MAX/MIN Button
5. Power Button

6. RANGE/FC/LUX Button
7. Backlight Button
8. 1/4-20 UNC Tripod Mount
9. Battery Cover

LCD Display Detail

A. Measurement
B. Bar Graph
C. Low Battery Indicator
D. Units (FC/Lux)
E. Function (HOLD/MAX/MIN)
F. Range (Auto/Manual)
G. Auto Power-Off Icon
H. Resolution (40/400/4K/40K)

NOTE: There are no user-serviceable parts inside meter.

FEATURE DETAILS

SPECTRAL SENSITIVITY CHARACTERISTIC
The meter's spectral response aligns with the C.I E. (International Commission of Illumination) standard.

- - - ET130 Response ——— C.I.E. Response

RELATIVE RESPONSE

WAVELENGTH (nm)
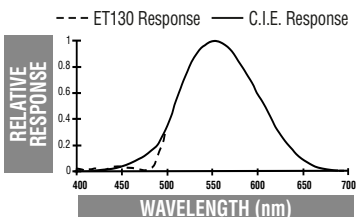
FUNCTION BUTTONS

ON/OFF
A short press of the Power Button ⑤ will power on and off the meter.

AUTO POWER-OFF
Auto Power-Off will automatically turn off the meter after 10 minutes of inactivity. When powered on, Auto Power-Off is enabled by default. A long press of the Power On/Off Button ⑤ for more than three seconds will disable the Auto Power-Off function, and the Auto Power-Off icon ⑥ will disappear from the display. A second long press will re-enable Auto Power-Off, and the Auto Power-Off icon will reappear.

BACKLIGHT
When powered on, the backlight is off by default. Press the Backlight button ⑦ to turn the backlight on or off. Backlight will remain on until it or the meter itself is turned off.

RANGE/FC/LUX
When powered on, the meter defaults to measuring in Foot Candles (FC). To switch to Lux, long-press the RANGE/FC/LUX button ⑥ for more than three seconds. A second long-press will switch back to FC. Note the Units icon ⑩ on the display.

Short presses of the RANGE/FC/LUX button will toggle the meter between Auto-ranging and Manual-ranging modes. Note the Range icon ⑥ on the display.

- When in Lux mode, short-pressing will toggle (in order) between Auto, Manual (400), Manual (4k) and Manual (40k).
- When in Foot Candle (FC) mode, short-pressing will toggle (in order) between Auto, Manual (40), Manual (400) and Manual (4k).

Note the measurement resolution icon(s) ⑪ on the display when toggling between Manual modes.

DATA HOLD
Press the HOLD button ③ to hold the current measurement on the display. Press again to return to live measuring mode.

MAX/MIN
Short presses of the MAX/MIN button ④ will toggle (in order) between Maximum Value (MAX), Minimum Value (MIN) and Measurement mode.

OPERATING INSTRUCTIONS

1. Power on the meter, then use the RANGE/FC/LUX to select FC or Lux and to select Auto or Manual range, as described in **FUNCTION BUTTONS** section.

2. If desired, press the backlight button to turn on the display backlight, as described in **FUNCTION BUTTONS** section.

3. Face the photodiode sensor horizontal to the light source, and read LCD display.

4. If desired, use the function buttons to select HOLD or MAX/MIN, as described in **FUNCTION BUTTONS** section.

5. If desired, the meter can be mounted to any standard 1/4-20 tripod via the tripod mount ⑧ on the back of the unit.

LIGHTING TYPE CORRECTION FACTORS

The meter is calibrated under a standard tungsten light source of 2856°K. If the meter is to be used under a different type of light, the correction factors below should be applied for maximum accuracy:

Incandescent	1.00	Daylight fluorescent	0.99
Daylight	1.00	Mercury Lamp	1.14
Metal Halide	1.00	Sodium Lamp	1.22
White fluorescent	1.00		

IES RECOMMENDED ILLUMINATION*			
Location		**Lux**	**FC**
Office	Conference Room	200-750	18-70
	Office area	500-750	47-70
	Lobbies, lounges	100-200	9-18
School	Auditorium, Gymnasium	100-300	9-28
	Class room	200-750	18-70
	Library, Drafting, Laboratory	500-1500	47-140
Hospital	Rooms	100-300	9-28
	Emergency Room	500-1000	47-93
	Operating Room	1000-2000	93-186
Factory	Packing work	150-300	14-28
	Parts assembly	1500 -3000	140-280
	Inspection work	750-1500	70-140
Store	Stairs, Corridor	150-200	14-18
	Stockroom	100-300	9-28
	Merchandising	750-1500	70-140

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NOTE: 1 Foot Candle (FC) = 10.76 Lux

MAINTENANCE

BATTERY REPLACEMENT

When the ⌐ + ⌐ indicator is displayed on the LCD, the battery must be replaced.

1. Remove screw and remove battery door ⑨.

2. Remove and recycle spent 9V battery.

3. Install new 9V battery.

4. Replace battery door and fasten securely with screw.

CLEANING

Be sure meter is turned off and wipe with a clean, dry lint-free cloth. ***Do not use abrasive cleaners or solvents.***

STORAGE

Remove the battery when the meter is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the General Specifications section, allow the meter to return to normal operating conditions before using.

DISPOSAL /RECYCLE

Do not place equipment and its accessories in the trash. Items must be properly disposed of in accordance with local regulations. Please see **www.epa.gov** or **www.erecycle.org** for additional information.

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