DRAPER®

EN

Original Instructions
Version 1 – June 2023

DIGITAL
LIGHT LEVEL METER

UK CA CE

12443

Read this manual in full before using this product and retain it for future use. Always use the latest version of the manual. Please visit **drapertools.com/manuals** for the latest version.

1. Intended Use

This product is a hand-held device designed to measure light levels in a given environment. An indication of ambient temperature is also given. Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

Part of our core range, this product is suitable for regular use by enthusiasts and tradespersons alike.

2. Specification

Stock No.:		12443
Part No.:		180-DLLM-1
Light measurement range:		
Illuminance range:		0-200KLux
Foot-candle range:		0 – 20KFc
Resolution:	0.1Lux (<1,000Lux) / 1Lux (>1,000Lux)	
Accuracy:	±3% ± 8dgt (<10,000Lux) / ±4% ± 10dgt (>10,000Lux)	
Spectral response:		CIE photopic (CIE human response curve)
Spectral accuracy :	CIE Vλfunction (f1' ≤ 6%, f2' ≤ 2%)	
Photo detector:		Silicon photo-diode with spectral response filter
Operating time:		up to 60 hours
Batteries:		3 × 1.5V AAA (not supplied)
Permissible ambient conditions:	Temperature	Humidity
Operation:	-20 to +60°C (-4 to +140°F)	10–90% RH
Storage:	-20 to +60°C (-4 to +140°F)	10–75% RH
Dimensions:		W 56 × H 174.5 × D 30.5mm
Weight (with batteries):		141.5g

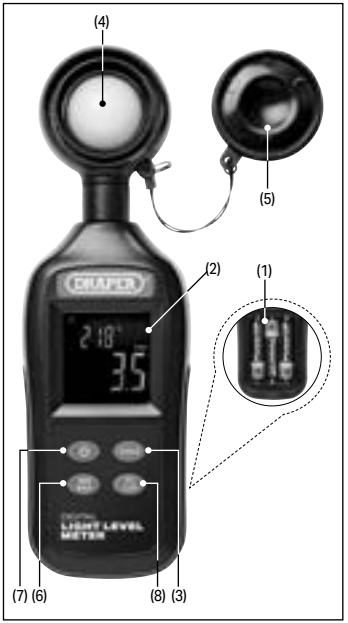
3. Health and Safety Information

Important: Read all the Health and Safety instructions before attempting to use this product.

- Use this product **ONLY** as instructed in this manual.
- **DO NOT** attempt to open, dismantle or modify this product in any way.
- Before every use, inspect the device for missing, broken, loose or corroded parts and battery leakage.
  - **DO NOT** use this product if it is damaged in any way; contact Draper Tools to discuss repair and replacement options.
  - If battery acid comes into contact with your skin, wash it off immediately with plenty of clean water.
  - If battery acid comes into contact with your eyes, flush them with plenty of clean water and seek immediate medical attention.
- **DO NOT** expose this product to liquids or wet environments.
- **DO NOT** allow the light sensor to be heated by the light source and maintain an appropriate distance from the source during testing.
- **DO NOT** use this device in environments that exhibit or are affected by strong magnetic fields.
- **DO NOT** use this product if it exhibits abnormal behaviour and have it checked by a qualified and authorised technician before next use.
- **DO NOT** abuse, mutilate or burn the battery.
- Keep this product out of reach of children.

4. Identification

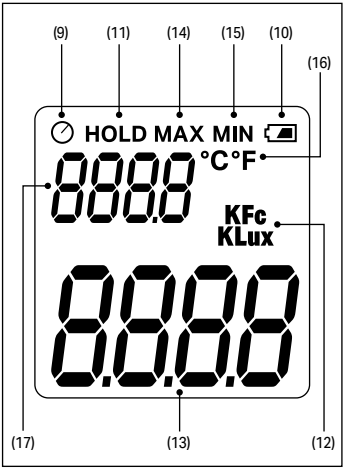
4.1 Product Overview



(1) Battery compartment
(2) Display
(3) Hold button
(4) Light sensor
(5) Light sensor cap
(6) Min/max button
(7) Power button
(8) Unit button

Please visit **drapertools.com** for our full range of accessories and consumables.

4.2 Display Overview



(9) Auto-off indicator
(10) Battery level indicator
(11) Hold data indicator
(12) Light level unit indicator
(13) Light level value
(14) Max value indicator
(15) Min value indicator
(16) Temperature unit indicator
(17) Temperature value

5. Operation

5.1 Installing Batteries

This product requires 3 × 1.5V AAA batteries (not supplied). To install the batteries, slide the battery compartment cover (1) down and away from the back of the device and insert the batteries according to the correct polarity.

5.2 Switching On and Basic Operation

Important: Ensure that the light sensor cap (5) is soundly fitted so that the light sensor (4) is fully covered while the device is switched on. When a measurement is shown on the display (2), the cap can be removed.

To switch on the device, press the power button (7). The device performs a diagnostics check during startup before readings are shown on the display. Remove the light sensor cap and stand in the position to be measured.

Hold the device vertically so that the light sensor is directed upwards towards the space or light source to be measured without obstruction. Hold the device away from your body and avoid casting shadows onto the sensor as you take measurements. The vertical position of the device during measurement should be appropriate for the purpose of the test.

Important: Take several measurements in the location to ensure that the light level remains consistent and that the reading is accurate.

The device begins measuring light levels and temperature immediately and the readings are indicated on the display. Readings are updated every 500ms.

To switch off the device, press the power button. This resets the device.

5.3 Freezing the Display

The current readings can be held on the display by pressing the hold button (3). The hold data indicator (11) illuminates to show that the display has been frozen.

Important: While data is held on the display, no other measurements are taken and the units of measurement cannot be changed. If the unit button (8) is pressed while the screen is frozen, the light level reading units will update as appropriate when the screen is released.

To resume measurements, press the hold button again. The hold data indicator is hidden and the display updates in real-time.

5.4 Maximum and Minimum Values

The display can be set to show the maximum or minimum value recorded for both light levels and temperature during an active session.

Press the min/max button to display the maximum value recorded. Each subsequent press of the min/max button (6) alternates between the highest and lowest values recorded since the device was switched on. The max (14) or min (15) value indicators illuminate as appropriate to identify the value shown on the display.

Important: While min/max mode is active, no other measurements are displayed unless they exceed the min or max reading currently shown on the screen. These new readings are then locked until they are surpassed by new data. The units of light level measurement can be changed while this mode is active.

To exit min/max display mode, press and hold the min/max button for three seconds.

5.5 Light Level Reading Units

To change the unit of the light level reading, press the unit button (8). Each press of the button alternates between the available units of measurement.

5.6 Temperature Reading Units

The unit of the temperature reading can be changed during startup.

Important: Ensure the correct unit of measurement for temperature is enabled before capturing meaningful readings as all readings are lost when the device is switched off.

While the device is off, press and hold the hold button (3). Keeping the hold button depressed, also press the power button (7) to switch on the device. The device will launch with the other temperature units enabled.

The default unit for temperature measurement is degrees Celsius.

5.7 Automatic Switch-Off

By default, the device is configured to power off automatically after approximately 15 minutes of inactivity.

If automatic switch-off function is enabled, the auto-off indicator (9) is illuminated on the device display.

To disable the automatic switch-off function, press and hold the unit button (8) while the device is off and, keeping the unit button depressed, also press the power button (7) to switch on the device. The device will launch with the function disabled.

Important: If automatic switch-off is disabled, this applies only to the current active session. Automatic switch-off is automatically enabled the next time that the device is switched on.

Important: If automatic switch-off is disabled, the device can only be powered down by pressing the power button.

5.8 Low Battery Warning

An approximate indication of the device battery level is shown in the corner of the display. When the battery level indicator (10) is empty, the batteries must be changed.

Important: Low power to the device may affect the accuracy of the measurements displayed.

5.9 Error Codes

The messages “OL” and “LO” are shown on the display (2) if the measurement values are beyond the upper or lower limits of the device’s capability range.

6. Maintenance and Disposal

Important: Other than the batteries, this product has no user-serviceable parts; however, regular product care will extend the life of the product. Any additional servicing or repairs **MUST** be performed by an authorised and qualified professional.

Important: Remove the batteries from the product before cleaning.

- Keep the light sensor and the light sensor cap free from dust and debris and **DO NOT** allow the sensor to become scratched.
- Ensure that the light sensor cap fits soundly around the light sensor and keep the sensor covered when is not in use.
- Keep the buttons free from dust and debris to ensure that they function effectively when pressed.
- Clean the device with a dry cloth **ONLY**; **DO NOT** allow moisture to enter the device housing.
- **Important: DO NOT** clean this product using abrasives, solvents or other aggressive substances as they may damage plastic or insulated parts.
- Have the device recalibrated every 12 months by an authorised technician.
- Store this product in a cool, clean and dry location, out of direct sunlight and out of reach of children.
- Remove the battery when storing the device for extended periods of time.

At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.

- **DO NOT** dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.
- **DO NOT** burn or mutilate batteries; this may release toxic or corrosive substances.
- Dispose of batteries separately and in accordance with local regulations.

7. Warranty

Should the tool develop a fault, return the complete tool to your nearest distributor or contact Draper Tools directly. Proof of purchase must be provided.

If, upon inspection, it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty covers parts and labour for 12 months from the date of purchase. However, if the tools are hired out, the warranty period is 90 days from the date of purchase.

This warranty does not apply to any consumable parts, batteries or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper Tools repair agent.

Visit **drapertools.com/warranty** for full details.

8. Explanation of Symbols

Read the instruction manual

Warning!

Do not abandon in the environment

Do not incinerate or throw onto fire

WEEE – Waste Electrical
& Electronic Equipment

Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish

European conformity

UK Conformity Assessed