

User Guide

Luminometer LED Pen

Article code: LTHPEN01





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Introduction

The LED Pen is dedicated to running ATP performance verification and calibration on the MVP ICON® instrument with firmware 5.5.0 and above.

The LED Pen provides a stable and reliable light output to guarantee consistent performance.

Important Usage Guidelines

The LED Pen has been designed for use in a laboratory or office setting.

- Performance is guaranteed for a temperature range of 18–25 °C.
- Do NOT take the luminescent rod into factory processing areas.
- Do NOT immerse the instrument body in liquid or allow liquid to enter any part of the instrument.
- Do NOT expose to high temperatures

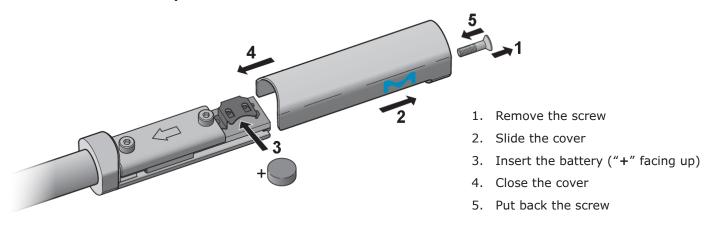
Do NOT forcefully insert the LED Pen in luminometer. Improper orientation may result in damage to the instrument and render it unusable.

To ensure the stability and longevity of the LED Pen, the following precautions MUST be taken:

- Do NOT expose to direct sunlight or intense artificial light before use and do NOT subject LED Pen to prolonged light exposure.
- If the LED Pen is exposed to bright light prior to use, put it in its packaging and wait a minimum of 2 minutes before proceeding.
- Store the LED Pen in its original packaging when not in use and within temperature storage of 18-25 °C.
- Handle LED Pen carefully. Any damage or drop could affect LED Pen functioning or light emission performance. In such case, LED Pen should not be used anymore for verification or calibration

System general use

How to install the battery

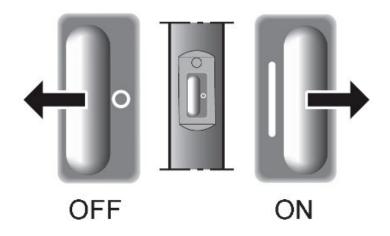


ONLY SR626 or SR626W button cell shall be used with the LED Pen.

DO NOT USE other battery types that may damage the system or lead to inconsistent results.

RESPECT POLARITY when installing the button cell.

How to Switch the system ON and OFF



- Slide the switch to the Right to switch ON the system ("I" marking shall be visible)
- Slide the switch to the Left to switch OFF the system ("o" marking shall be visible)

A. Battery status



Battery OK



Replace battery*

*Once the Red Icon shows up, please change the battery.



No Battery, Battery empty or Battery incorrectly inserted

Switch OFF the LED Pen when not in use to avoid draining the battery.

MVP ICON® ATP Performance verification

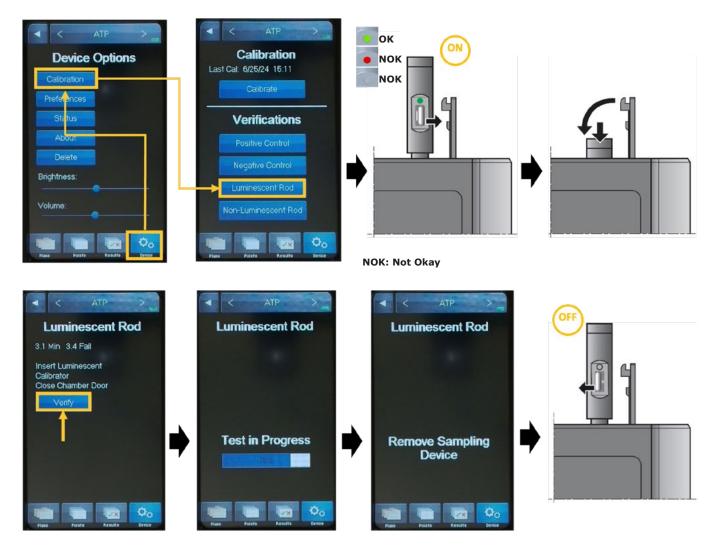
Before completing performance verification or calibration readings:

- Ensure the LED Pen has NOT expired.
- Ensure that the battery is still functional when starting Luminescent verification or calibration (see "How to check the battery")

If a given test point result or MVP ICON® ATP Positive Control verification (Cat. No. **64001BC**) reading is not what is expected, it is suggested to confirm this result with the LED Pen.

Luminescent Verification

- 1. With the instrument in ATP mode, select Device >> Calibration >> Verification.
- 2. Select Luminescent rod.
- 3. **Switch ON** the LED Pen, check that battery LED (see "How to check battery") is lighting, then insert LED Pen in the MVP ICON, close the door and select **Verify**.
- 4. When reading is completed, remove the LED pen and switch it OFF



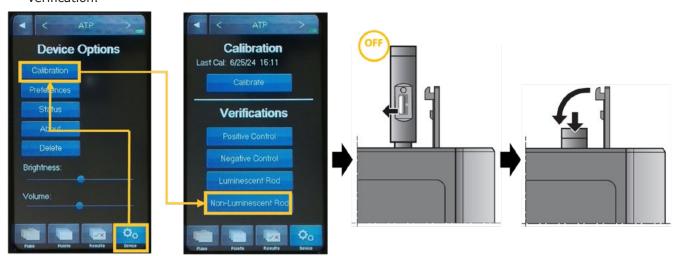
If **Baseline Reading Required** message appears, remove the LED Pen (switch **OFF** to save battery), close door, and select **OK**. The instrument will then renew the baseline in the chamber within 15 sec.

When finished, switch **ON** the LED Pen, insert it, close door then Select **Calibrate** to resume.

On successful completion, a PASS result is presented, along with the associated Zone value and acceptable limits.

Non-Luminescent Verification

 Select Non-Luminescent Rod, Switch OFF the LED Pen and follow the on-screen prompts to run performance verification.





On successful completion, a PASS result is presented, along with the associated Zone value and acceptable limits.

Always perform Luminescent Rod verification first, then continue to Non-Luminescent Rod verification.

MVP ICON® ATP calibration

All MVP ICON® instruments are factory calibrated prior to being shipped. Because several factors can cause the LED Pen results to be out of specification, a full calibration should only be performed if either:

- Non-Luminescent performance verification results are not ≤1.5 Zones even after cleaning and repeated tries.
- Luminescent performance verification results are consistent within ±0.1 Zones of each other, but are not within ±0.1 Zones of the Zone value printed on the label.

Accepting a particular calibration will set the sensitivity for all later readings. **IT IS NOT** possible to change a calibrated instrument back to a former calibration.

- 1. The instrument in ATP mode, select Device >> Calibration >> Calibrate.
- 2. Select the Reference Value white text-entry field then enter the 5-digit reference (VAL) value wrote down on LED Pen label. Select **OK** to store and continue.



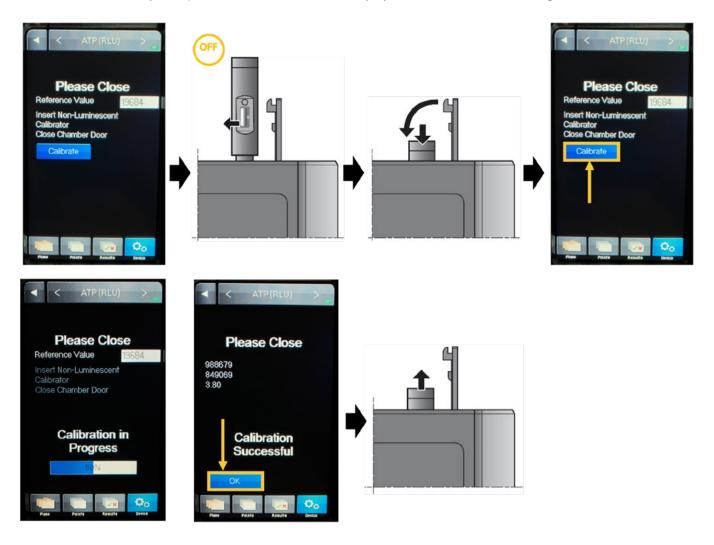
3. Switch ON the LED Pen, check that the battery LED is lighting, insert the LED Pen in the MVP ICON, close the door, select **Calibrate**.





NOK: Not Okay

- 4. When finished, switch OFF the LED Pen, re-insert it, Close door then select Calibrate.
- 5. On successful completion, the instrument screen will display Calibration Successful along with current date and time.



The new calibration is now stored in the device and in the home screen, the Last Cal date will display this most recent date and time.

If Calibration Failed message appears, repeat the calibration.

Causes For Inconsistent ATP Verification results

Several factors can cause out-of-specification results. Before trying to re-calibrate the instrument, first rule out these possible causes:

- Contamination in the Instrument's Sample Chamber: Test Results that have changed suddenly, especially immediately after a number of sampling devices have been run, can indicate a contamination problem. LED Pen results can increase or decrease as a result of foreign materials fouling the optics chamber of the instrument. If you suspect contamination of the instrument, please refer to the MVP ICON® User Guide.
- Dirty LED Pen: Clean LED Pen as described in Cleaning and Storage and repeat your readings.
- Damaged LED Pen: if LED Pen has been dropped or present visual damaged, stop use of the LED Pen and use a new one instead.
- Exposure to Light: Inconsistent readings can also arise if the LED Pen is exposed to light prior to being read. Insert the LED Pen in the MVP ICON® and wait a minimum of 2 minutes before trying to read again.
- Empty battery: Replace the battery and launch a new "Verification" test

For questions or assistance, contact your local Technical Service or go to SigmaAldrich.com and select 24/7 SUPPORT.

Cleaning and Storage

- DO NOT directly spray on the LED Pen
- DO NOT autoclave the LED Pen
- Clean the outside of LED Pen bottom end (White diffuser Only) with a lint free, static-free cloth that has been moistened with reagent-grade isopropyl or ethyl alcohol then Air dry
- Store at 15-32 °C (59-90 °F)
- · Protect from direct light exposure.
- Store in original closed packaging away from light

Specifications

Dimensions	Width	15 mm
	Depth	13 mm
	Height	177 mm
	Weight	32 g
Material of construction	Housing	Aluminium
	Diffuser	Co-polyester
Powering	Battery	SR626 (Silver Oxide / 1.55 V)
Environmental conditions	Altitude	Less than 3000 m
	Temperature	
	1. storage	15-32 °C
	2 Operation	18-25 °C
	Relative humidity	Max. 80%, non-condensing
Regulatory compliance		<u> </u>
	CAN ICES-001 (A) / NMB-001 (A)	

System disposal

In accordance with the European Union directive on the management of waste electrical and electronic equipment (WEEE), this product must not be disposed of in unsorted municipal waste at the end of its life. It must be taken to a collection and recycling center. For further information, go to SigmaAldrich.com/weee.

Standard Product Warranty

The applicable warranty for the products listed in this publication can be found at http://www.sigmaaldrich.com/terms (within the "Terms and Conditions of Sale" applicable to your purchase transaction).

Notice

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Technical Assistance

For more information, please visit **SigmaAldrich.com** for up-to-date worldwide contact information

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