Lazmin DT-2234C+

Lazmin Digital Tachometer DT-2234C+ User Manual

Model: DT-2234C+

1. Product Overview

The Lazmin Digital Tachometer DT-2234C+ is a non-contact device designed for accurate RPM measurements of rotating objects. It features a clear LCD display and high measuring accuracy, suitable for various applications.

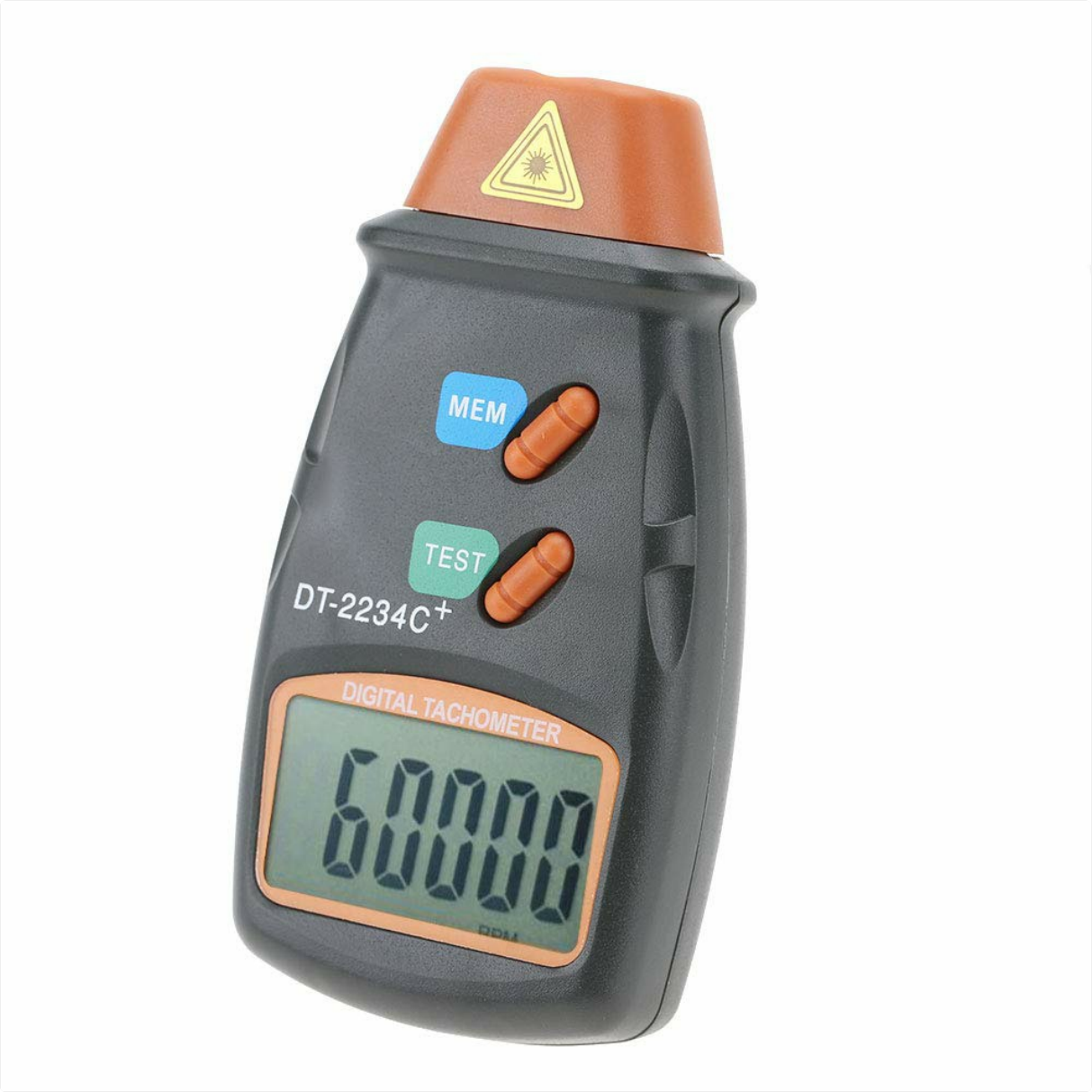

Image 1.1: The Lazmin Digital Tachometer DT-2234C+ showing its application in measuring RPM for various rotating machinery like automobiles, washing machines, fans, and engines.

Key Features:

- **Wide Measuring Range:** Accurately measures RPM from 2.5 to 99,999 RPM.
- **High Accuracy:** Provides readings with an accuracy of ±(0.05%+1 digit).
- **Non-Contact Measurement:** Utilizes an infrared aim for safe and precise measurements.
- **Clear LCD Display:** Features a 5-digit, 18mm (0.7") LCD for easy readability.
- **Data Memory:** Automatically records maximum, minimum, and last measured values.
- **Auto Range & Low Battery Indication:** Includes automatic range selection and a low battery warning.

2. Setup

2.1 Battery Installation

1. Locate the battery compartment cover on the back of the tachometer.
2. Slide the cover open.
3. Insert one 9V 6F22 battery, ensuring correct polarity (+/-).

4. Close the battery compartment cover securely.

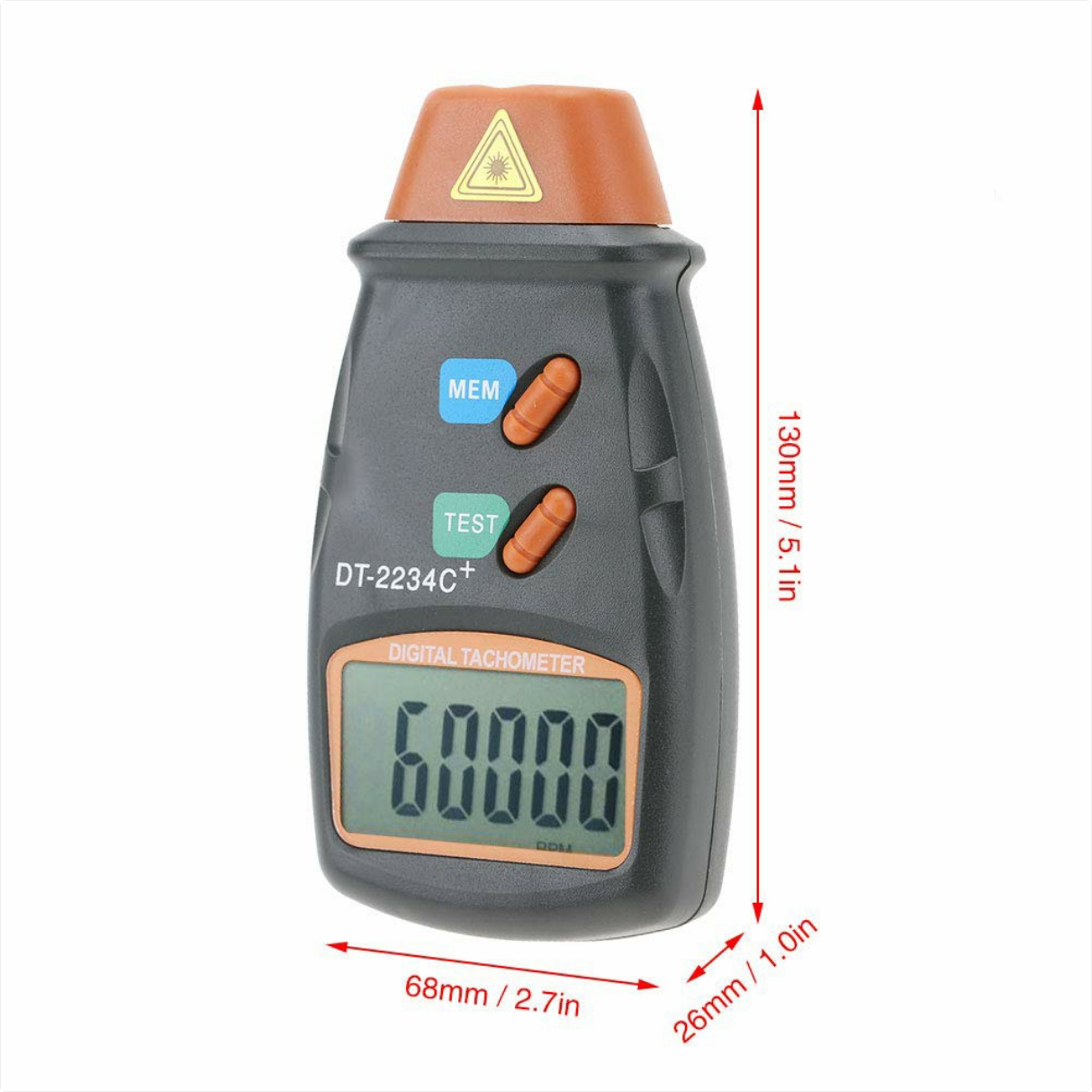

Image 2.1: Rear view of the tachometer with the battery cover removed, illustrating the battery installation process.

2.2 Applying Reflective Tape

For accurate non-contact measurements, a piece of reflective tape must be applied to the rotating object. The tachometer measures the RPM by detecting the reflection of its laser beam off this tape.

1. Clean the surface of the rotating object where the measurement will be taken.
2. Cut a small piece of the provided reflective tape.
3. Firmly apply the reflective tape to the rotating surface. Ensure it is flat and smooth.
4. For best results, apply the tape perpendicular to the direction of the laser beam.

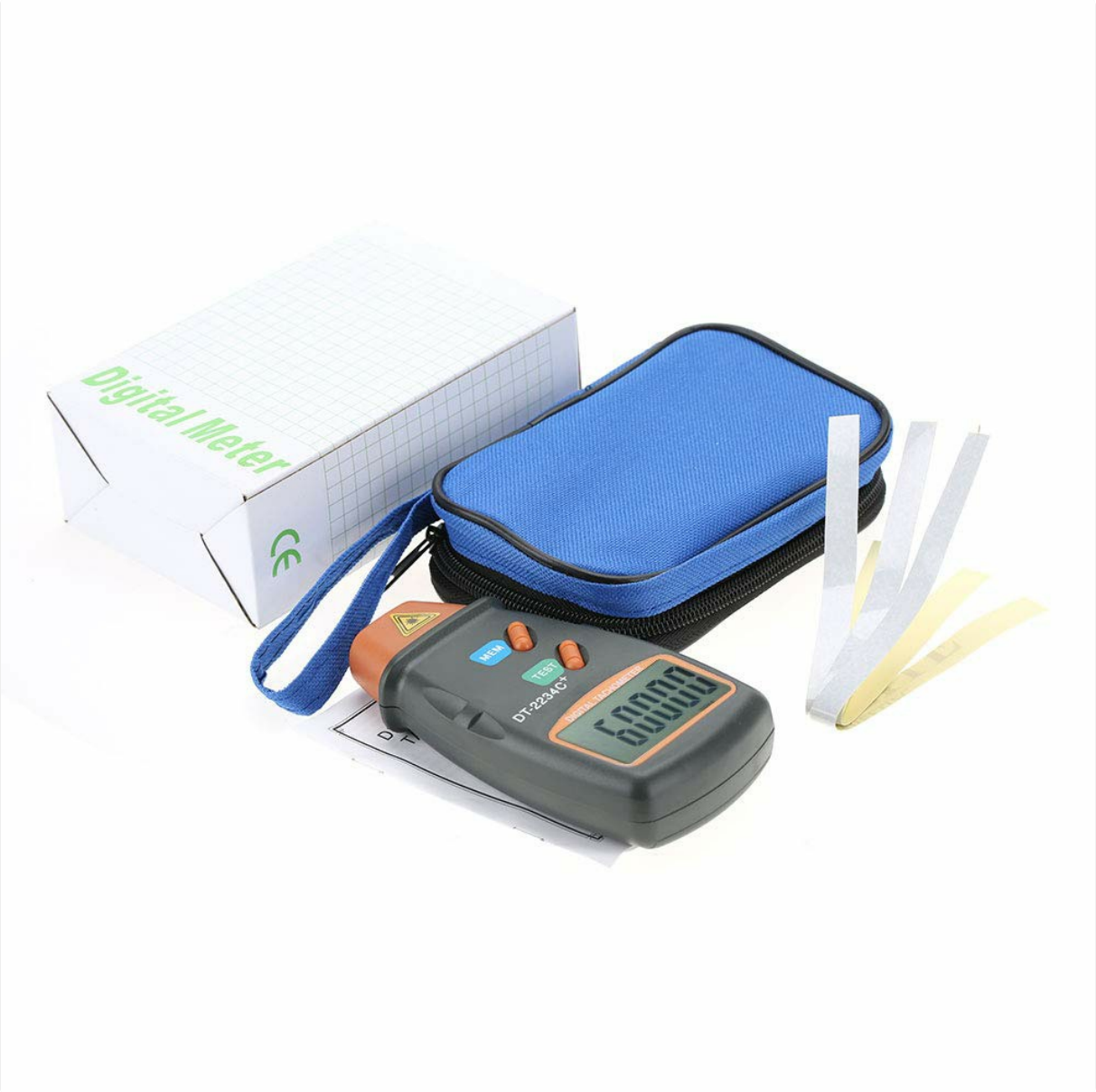

Image 2.2: The tachometer package contents, including the device, a blue carrying bag, and strips of reflective tape essential for operation.

3. Operating Instructions

3.1 Taking a Measurement

1. Ensure the reflective tape is properly applied to the rotating object.
2. Hold the tachometer approximately 50-500mm (2-20 inches) away from the target.
3. Press and hold the **TEST** button. A laser pointer will activate, indicating the measurement point.
4. Aim the laser beam at the reflective tape on the rotating object.
5. The RPM reading will be displayed on the LCD screen.
6. Release the **TEST** button to stop measuring. The last measured value will remain on the display.

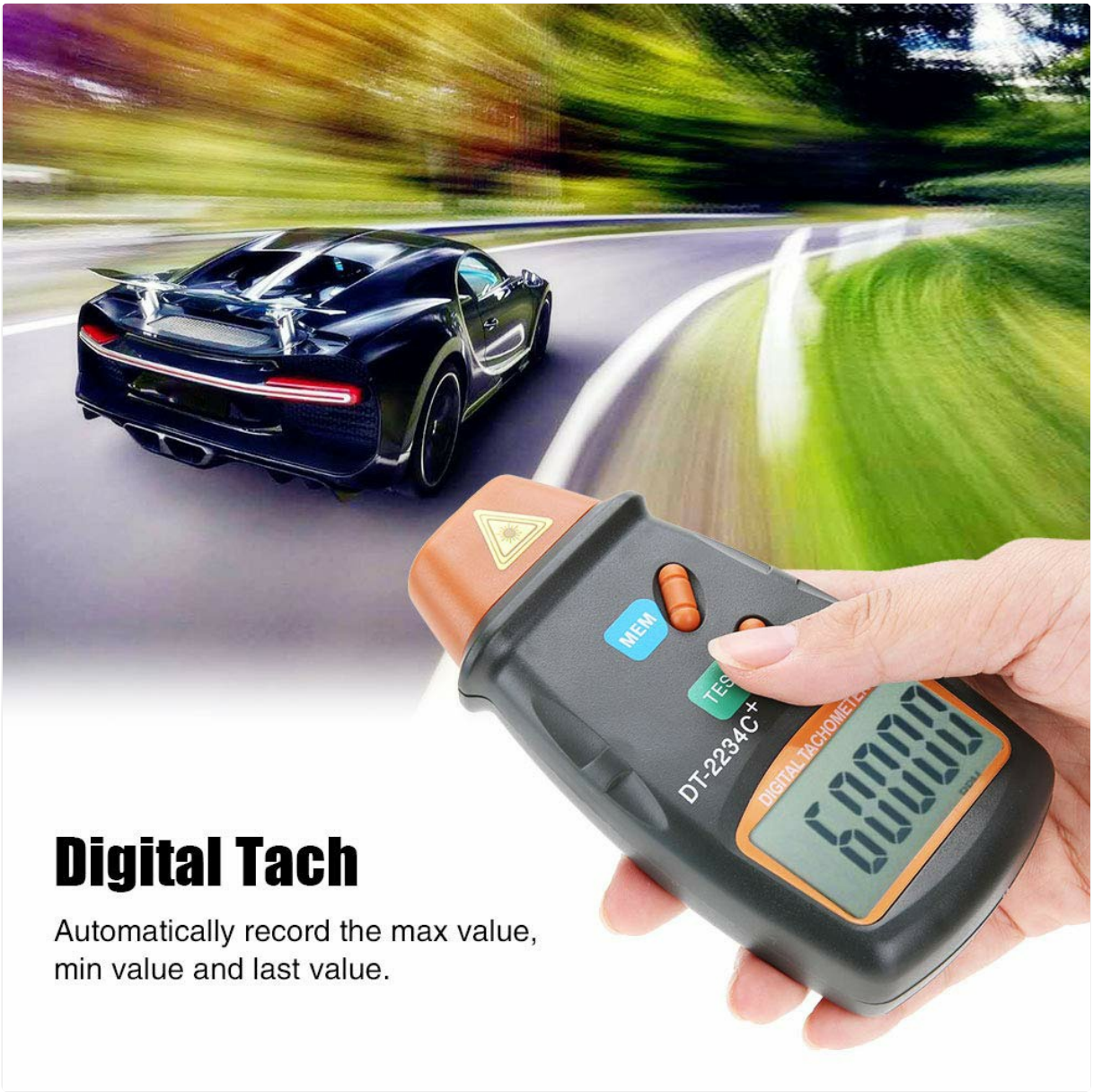

Image 3.1: Proper handling of the digital tachometer while taking a measurement, demonstrating how to aim the laser at the target.

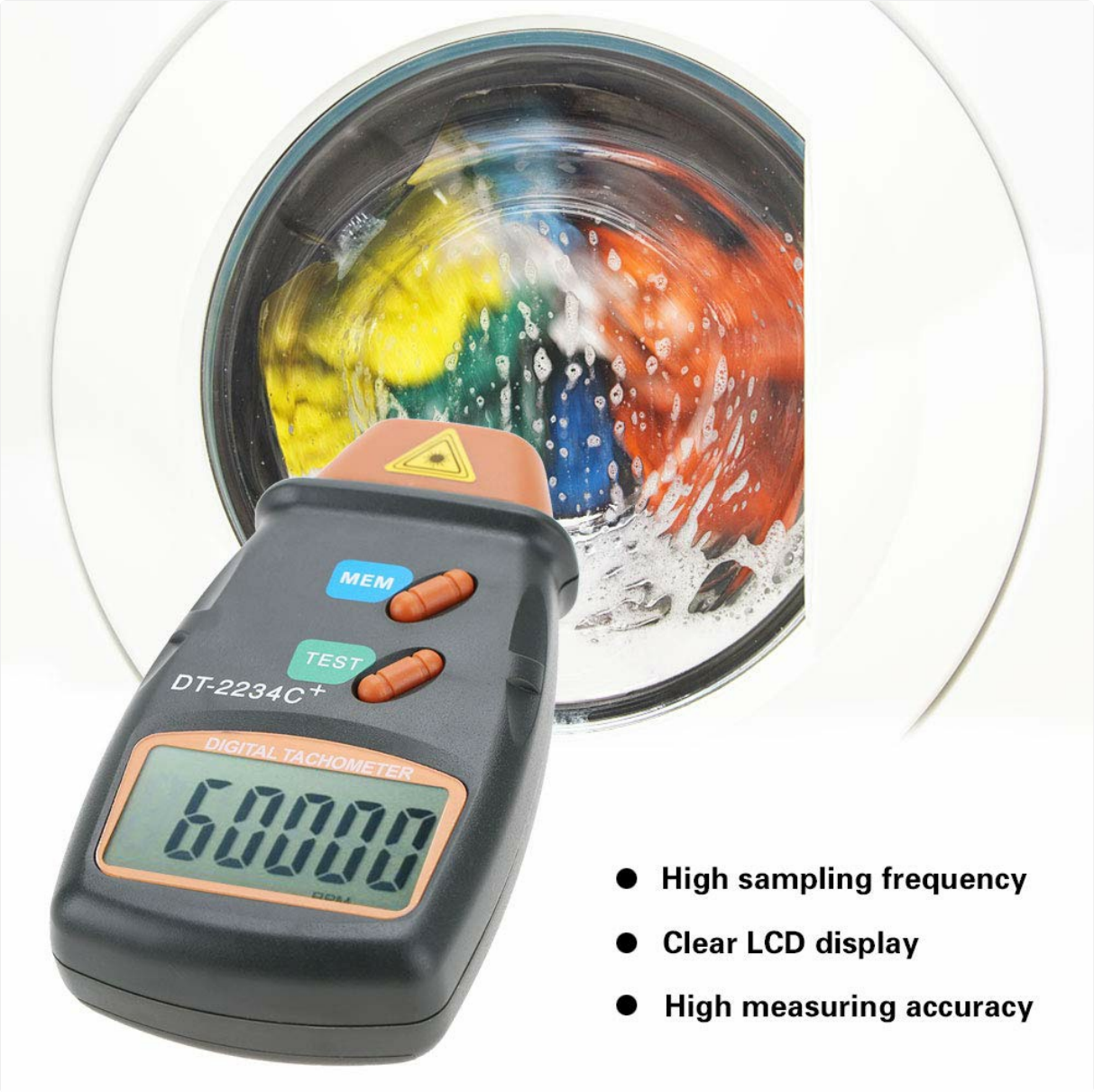

Image 3.2: The tachometer in action, measuring the rotational speed of a washing machine drum, highlighting its practical application.

3.2 Memory Function

The tachometer automatically records the maximum, minimum, and last measured values. To access these values:

1. After taking a measurement, press the **MEM** button once to display the maximum RPM value.
2. Press the **MEM** button again to display the minimum RPM value.
3. Press the **MEM** button a third time to display the last measured RPM value.
4. The display will cycle through these values with each press of the **MEM** button.

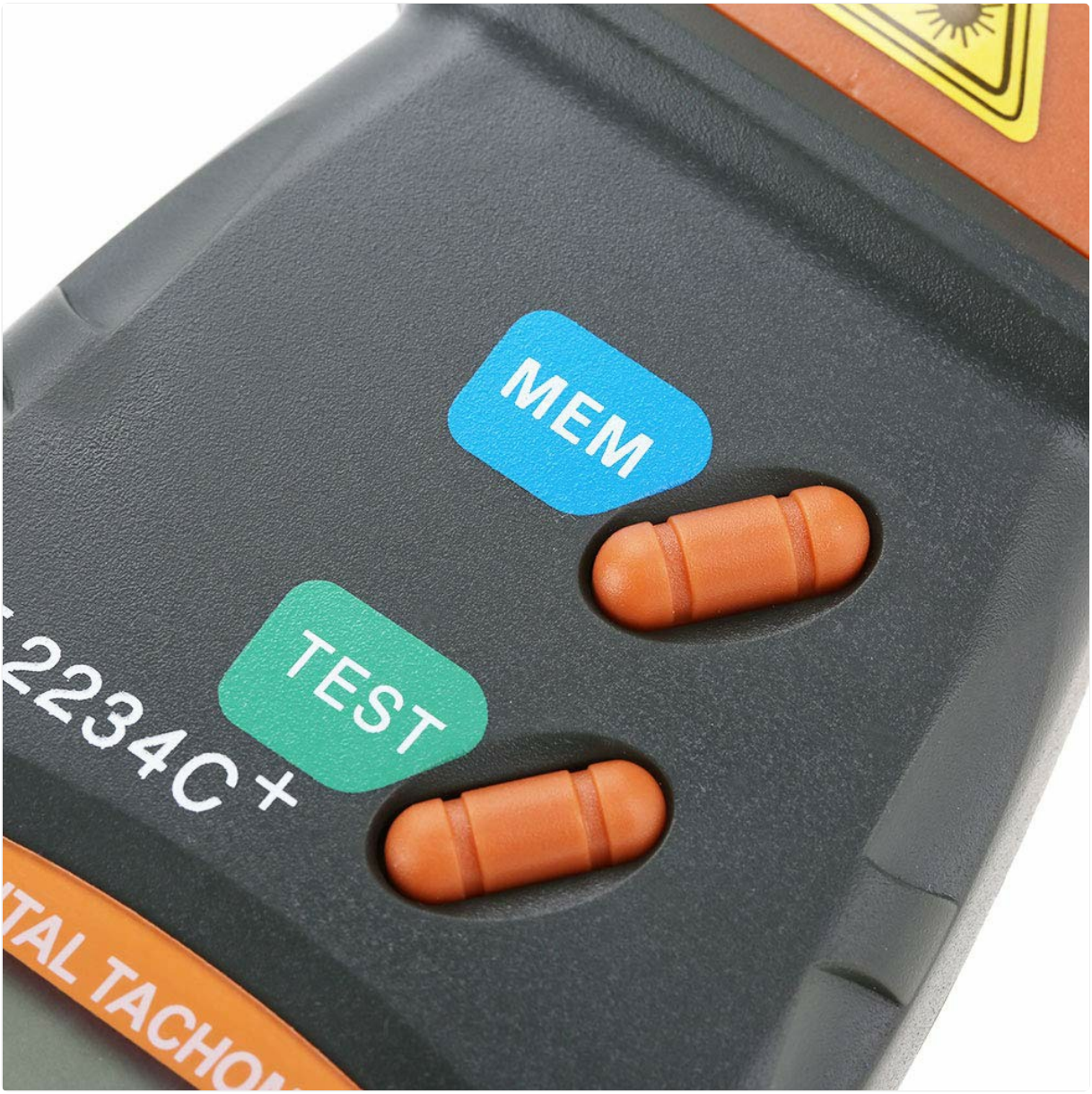

Image 3.3: A detailed view of the tachometer's control buttons, specifically highlighting the 'MEM' (Memory) and 'TEST' buttons for operation.

4. Maintenance

4.1 Cleaning

- Wipe the device with a soft, dry cloth.
- Do not use abrasive cleaners or solvents, as these may damage the casing or display.
- Keep the laser emission and reception lenses clean for optimal performance.

4.2 Storage

- When not in use for extended periods, remove the battery to prevent leakage.
- Store the tachometer in a cool, dry place, away from direct sunlight and extreme temperatures.

4.3 Battery Replacement

When the low battery indicator appears on the display, replace the 9V battery as described in Section 2.1.

5. Troubleshooting

- **No Display/Power:**
  Solution: Check if the battery is installed correctly and has sufficient charge. Replace the 9V battery if necessary.
- **Inaccurate Readings:**
  Solution: Ensure the reflective tape is clean, flat, and securely applied. Verify the measuring distance is within 50-500mm. Ensure the laser is aimed directly at the reflective tape. Avoid strong ambient light that might interfere with the sensor.
- **Laser Not Activating:**
  Solution: Ensure the **TEST** button is pressed and held firmly. Check battery level.
- **"OVER" or "UNDER" on Display:**
  Solution: This indicates the RPM is outside the measuring range (2.5-99,999 RPM). Ensure the object's speed is within this range.

6. Specifications

Parameter	Specification
Model	DT-2234C+
Material	ABS Plastic
Display	5-digit 18mm (0.7") LCD
Measuring Range	2.5 RPM - 99,999 RPM
Resolution	0.1 RPM (2.5-999.9 RPM), 1 RPM (1000-99,999 RPM)
Accuracy	±(0.05% + 1 digit)
Measuring Distance	50-500mm / 2-20 inches
Time Base	6MHz Quartz Crystal Oscillator
Range Selection	Auto Range
Sampling Time	0.8s (over 60 RPM)
Power Supply	1 x 9V 6F22 Battery (not included)
Power Consumption	Approx. 30mA
Working Temperature	0°C ~ 50°C (32°F ~ 122°F)
Item Size	130 x 68 x 26mm / 5.1 x 2.7 x 1.0 inches
Package Weight	Approx. 150g / 5.3oz

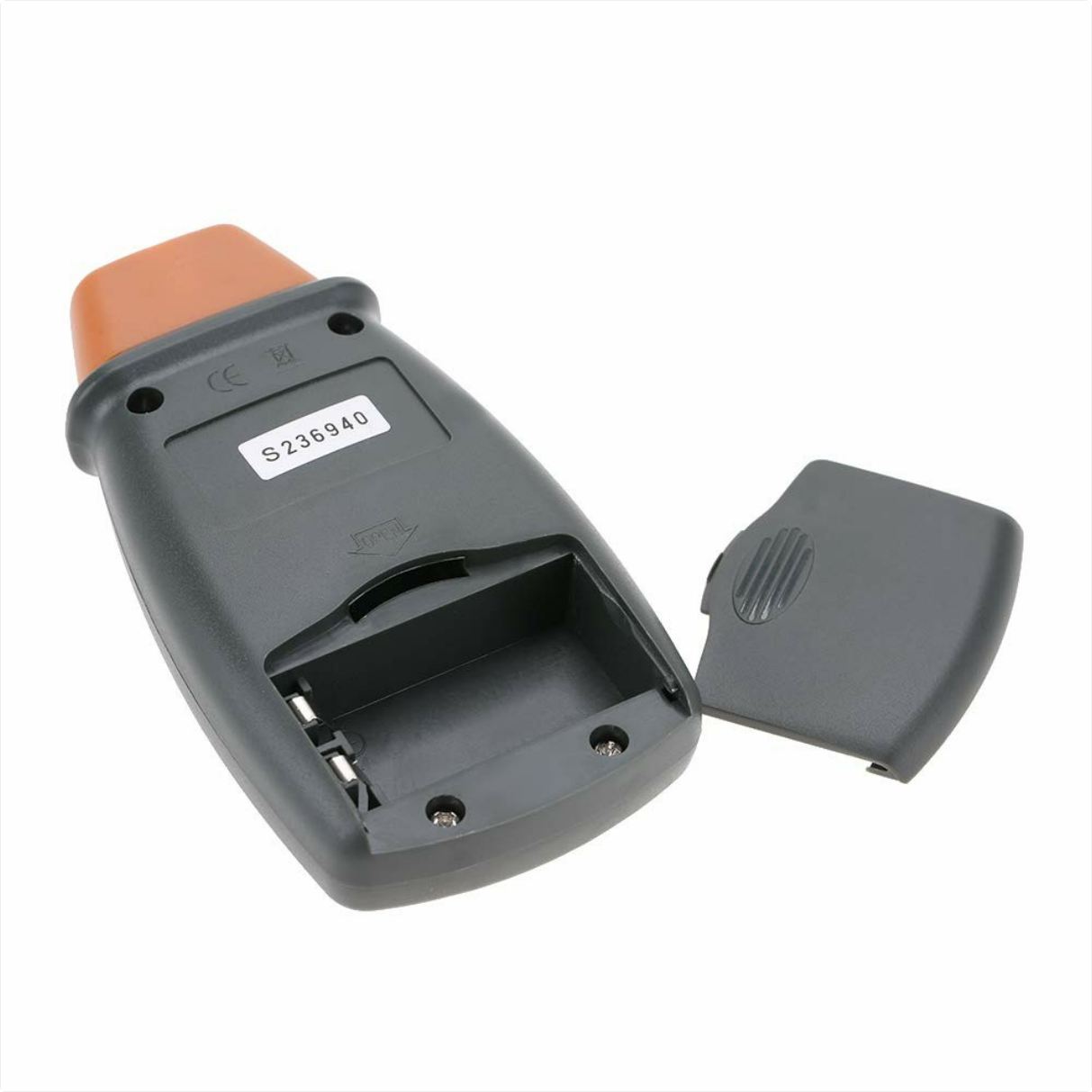

Image 6.1: Dimensions of the Lazmin Digital Tachometer DT-2234C+.

7. Warranty and Support

For warranty information and technical support, please refer to the documentation included with your product packaging or visit the official Lazmin website. Keep your purchase receipt as proof of purchase for any warranty claims.