



*Nothing else measures up!*

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## Optical Tachometer



**Code: 348480**

## Operating Instructions

# Optical Tachometer

## WARNING!!!

To avoid injury to animal or human eyes, please do not point the laser beam in your eyes or look directly at the beam. If the instrument is not to be used for any extended period, please remove battery.

## 1. Features

- This digital tachometer provides fast and accurate non-contact RPM and surface speed measurements of rotating objects.
- This tachometer uses the CPU technique, photoelectric technique and junction laser technique in the one instrument combined PHOTO TACH. (RPM & REV)
- Two test modes: RPM (Rotate Speed Mode) and REV (Count Mode)
- Wide measure range and high resolution
- High visible digital LCD and backlight display
- Built-in memory recalls Max, Min and Last value stored.

## 2. Specifications

Display:	5 digits LCD Display.
Accuracy:	$\pm(0.05\%+1 \text{ digits})$
RPM Test Range:	2 to 99,999RPM
Count Range:	1 to 99,999REV
Resolution:	0.1 RPM (2 to 999.9 RPM) 1 RPM (over 1000 RPM)
Sampling Time:	0.5 sec (over 120 RPM)
Detecting Distance:	50mm to 500mm
Time Base:	Quartz crystal
Power Consumption:	Approx 45mA
Power Supply:	9V Battery or 6V Exterior DC
Operating Temp:	0°C to 50°C
Dimension:	160 x 58 x 39mm
Weight:	151g

## 3. Measuring Manual

Apply a reflective mark to the object being measured. Depress the “MEAS” button and align the visible light beam with the applied target. Verify that monitor indicator lights when the target aligns with the beam. Then the current mode is the last time mode. If you need to change the mode, release the “MEAS” button and press the “MODE” button before the instrument auto powers off (when the “MEAS” button is released the instrument will auto power off in 10 sec) and it will change between “RPM” and “REV” (revolution). Select the mode you need, depress the “MEAS” to start measuring. Pressing the “MEM” button can recall the Max, Min and Last value of last time measuring.

## 4. Measuring Considerations

**Reflective Mark:** Cut and the tape into approx 12mm (0.5”) squares and apply one square to each rotation shaft.

- a) The non-reflective area must always be greater than the reflective area.
- b) If the shaft is normally reflective, it must be covered with black tape or black paint before attaching reflective tape.
- c) Shaft surface must be clean and smooth before applying reflective tape.

**Very Low RPM Measurements:** As it is easy to get high resolution and fast sampling times, if measuring the very low RPM values, then we suggest applying more reflective tape. Then divide the reading shown by the amount of reflective tape to get the real RPM.