

ENGINEER SL-71

Engineer SL-71 LED Flashlight Magnifier User Manual

Model: SL-71 | Brand: ENGINEER

1. INTRODUCTION

The Engineer SL-71 is a lightweight, LED-illuminated inspection magnifier designed for detailed examination. It features 10x magnification, a scratch-resistant twin lens construction, and an integrated square scale for precise measurements. This manual provides essential information for the proper setup, operation, and maintenance of your SL-71 magnifier.



The Engineer SL-71 LED Flashlight Magnifier, featuring a white magnifier head with a black lens ring, attached to a black cylindrical handle with a white power switch. The handle also displays battery installation instructions.

2. PRODUCT OVERVIEW

The SL-71 magnifier is engineered for clarity and durability, making it suitable for various inspection tasks, including printed circuit board (PCB) work. Its design ensures a fixed focal point, focusing directly on the object held against its faceplate.

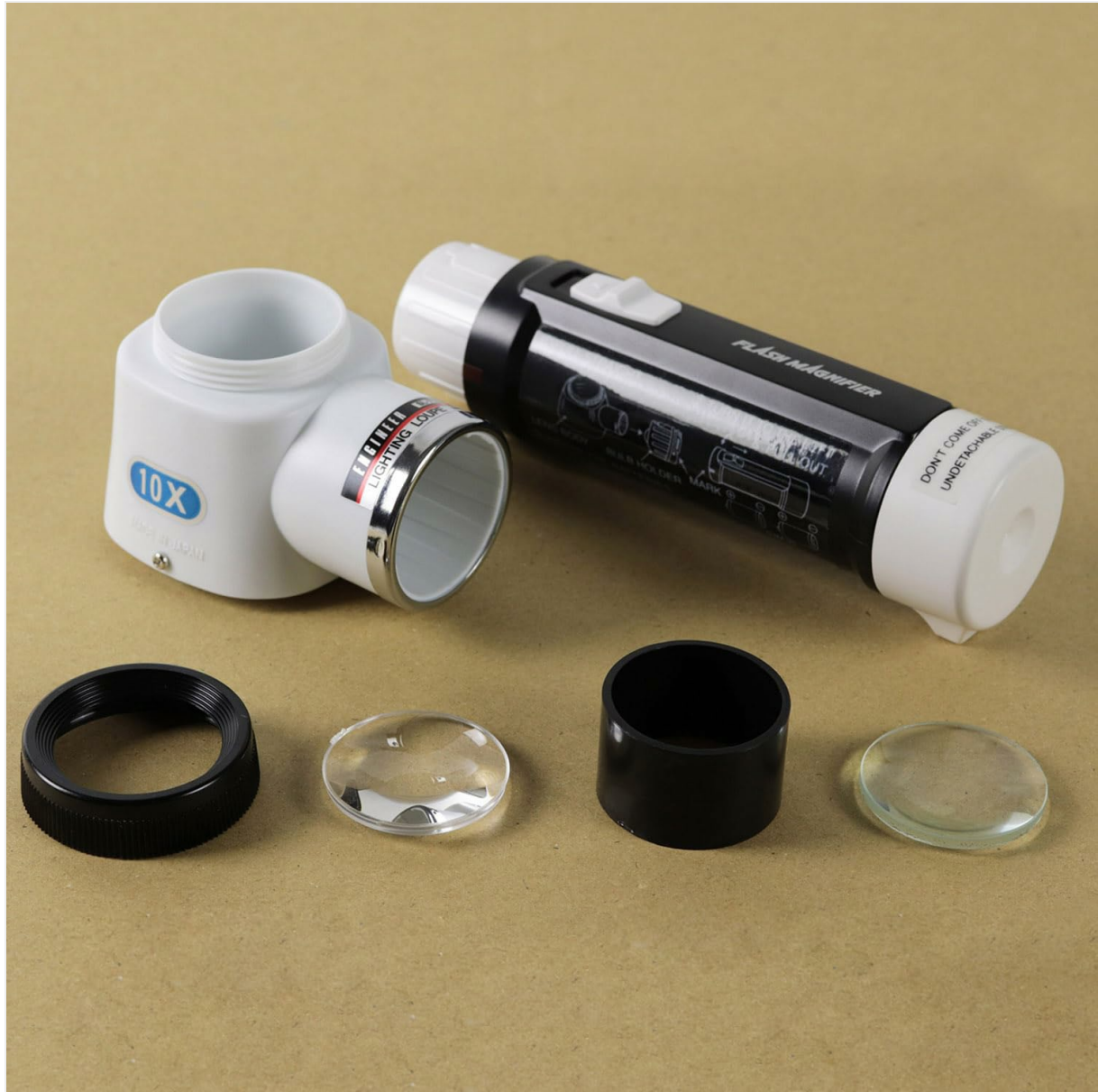
Key Features:

- **10x Magnification:** Provides clear, enlarged views for intricate details.
- **LED Illumination:** Integrated LED light source ensures bright, consistent lighting of the inspection area.
- **Scratch-Resistant Twin Lens:** Durable lens construction designed for longevity and clear vision.
- **Integrated Square Scale:** An internal 20mm precisely graduated scale allows for accurate measurements.
- **Battery Operated:** Uses 2 x C type batteries for portable operation.

3. SETUP

Battery Installation:

1. Locate the battery compartment on the handle of the magnifier.
2. Gently pull the end cap of the handle straight off.
3. Turn the bulb holder to the left and pull it out to access the battery slots.
4. Insert two (2) C-type batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
5. Reinsert the bulb holder, turning it to the right to secure.
6. Replace the end cap by pushing it straight back onto the handle until it clicks into place.



The handle section of the Engineer SL-71 magnifier, featuring printed instructions for battery installation, indicating how to open the compartment and insert C-type batteries.

4. OPERATING INSTRUCTIONS

Using the Magnifier:

1. **Power On/Off:** Locate the white slide switch on the side of the handle. Slide it forward to turn on the LED illumination and backward to turn it off.
2. **Positioning:** Place the magnifier's lens directly over the object you wish to inspect. The fixed focal point ensures the object is in focus when held against the faceplate.
3. **Inspection:** Look through the eyepiece to view the magnified object. The LED light will illuminate the area for enhanced clarity.

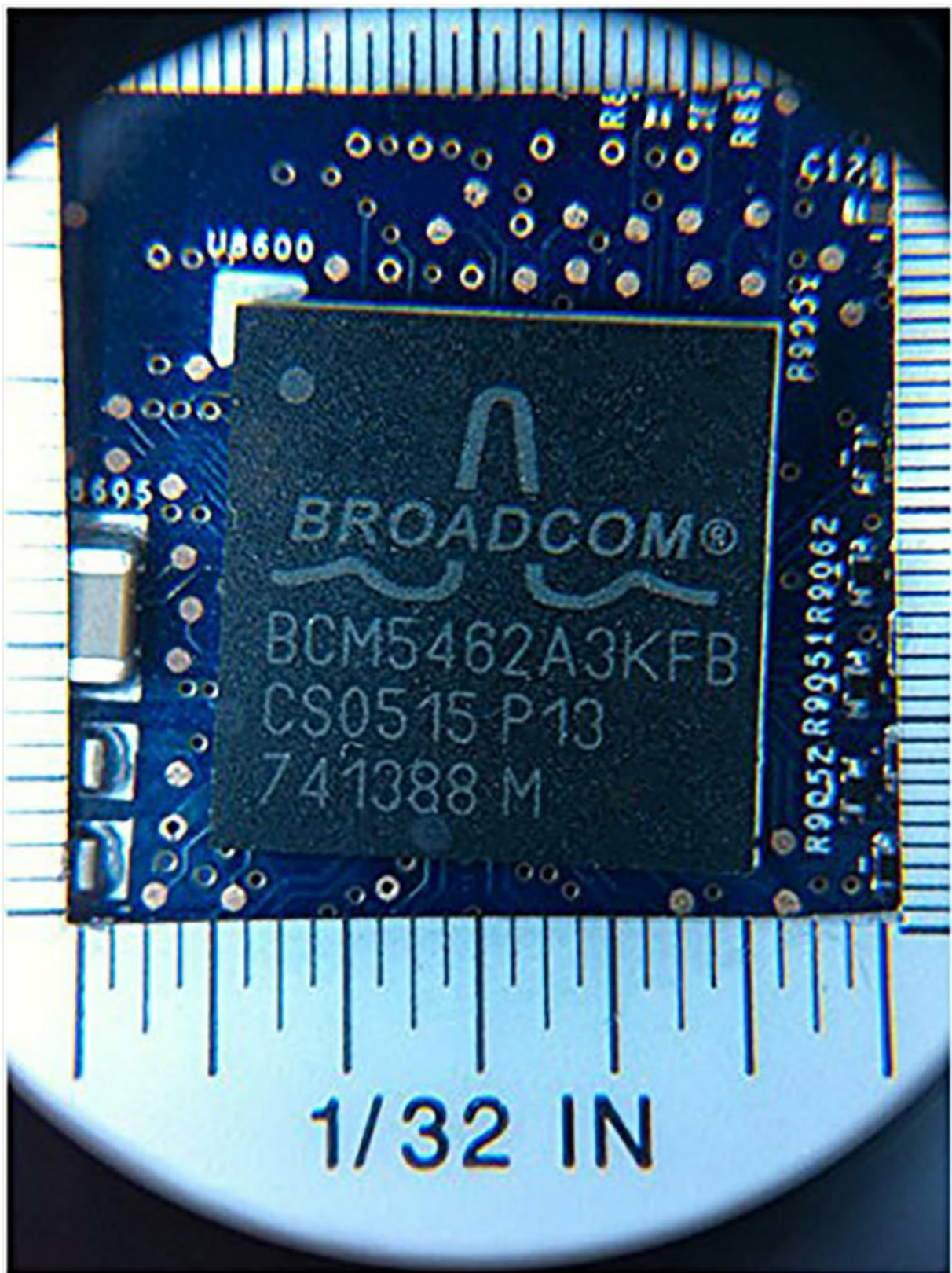


The Engineer SL-71 magnifier positioned over a green circuit board, demonstrating its use for detailed inspection of electronic components.

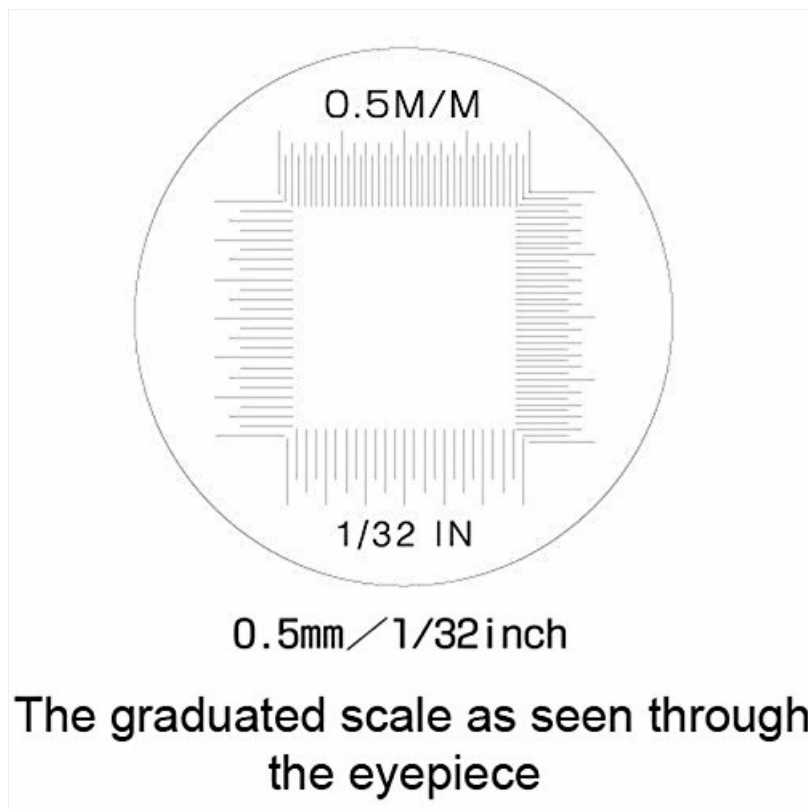
Using the Integrated Scale:

The SL-71 includes an internal graduated scale for measuring small components or features. This scale is visible through the eyepiece when the magnifier is in use.

- Align the object to be measured with the markings on the scale visible within the lens.
- The scale provides measurements in millimeters (0.5mm increments) and inches (1/32 inch increments).



A close-up view through the Engineer SL-71 magnifier, clearly showing the integrated 1/32 inch scale superimposed on a microchip on a circuit board, used for precise measurements.



A diagram illustrating the integrated graduated scale as seen through the magnifier, showing markings for 0.5mm and 1/32 inch measurements.

5. MAINTENANCE

Cleaning the Lens:

To maintain optimal clarity, keep the lens clean. Use a soft, lint-free cloth specifically designed for optical lenses. Avoid abrasive materials or harsh chemicals, which can damage the lens coating.

Battery Replacement:

When the LED illumination dims or fails to turn on, it is time to replace the batteries. Follow the battery installation steps outlined in Section 3.

Storage:

Store the magnifier in a clean, dry place away from direct sunlight and extreme temperatures. While the lens is scratch-resistant, proper storage helps prevent dust accumulation and potential damage.

6. TROUBLESHOOTING

- **LED does not light up:**

- Check if the batteries are inserted correctly with the proper polarity.
- Replace the batteries with fresh C-type batteries.
- Ensure the power switch is fully engaged in the 'on' position.

- **Image is blurry or unclear:**

- Ensure the magnifier's faceplate is placed directly on the object being inspected. The focal point is fixed.
- Clean the lens surface using a soft, lint-free cloth.

7. SPECIFICATIONS

Brand	ENGINEER
Model Number	SL-71
Magnification	10x
Lens Material	Glass
Illumination	LED
Batteries Required	2 x C type (included)
Product Dimensions	6.93 x 2.05 x 0.1 inches
Item Weight	188 Grams (6.63 ounces)
Color	Black, White
Integrated Scale	20mm graduated scale (0.5mm / 1/32 inch)

8. WARRANTY AND SUPPORT

Warranty information for the Engineer SL-71 LED Flashlight Magnifier is typically provided at the time of purchase or included with the product packaging. For specific warranty details, claims, or technical support, please refer to the documentation accompanying your product or contact the manufacturer directly through their official website.