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Fafeicy LY800D

Fafeicy LY800D Auto-Darkening Welding Helmet Lens Instruction Manual

Model: LY800D

1. Introduction

Thank you for choosing the Fafeicy LY800D Auto-Darkening Welding Helmet Lens. This manual provides essential information for the safe and effective use, installation, and maintenance of your welding lens. Please read this manual thoroughly before use and retain it for future reference.

2. Safety Information

Welding operations involve inherent risks. Always follow standard safety procedures and wear appropriate personal protective equipment (PPE). This auto-darkening lens is designed to protect your eyes from harmful UV/IR radiation and intense visible light during welding. However, it is crucial to:

- Ensure the lens is correctly installed in a compatible welding helmet.
- Inspect the lens for any damage before each use. Do not use if cracked or damaged.
- Do not look directly at the welding arc without proper eye protection.
- This lens is not suitable for laser welding or overhead welding applications where molten metal could fall onto the lens.
- Keep the lens clean to ensure optimal performance and visibility.

3. Product Overview

The Fafeicy LY800D is an advanced auto-darkening filter (ADF) designed for integration into welding helmets, providing reliable eye protection and clear visibility during welding tasks.

Key Features:

- **Large Viewing Area:** A 100 x 83 mm window provides an expansive and clear field of vision, reducing eye strain.
- **Fast Response Time:** Quick darkening response of 1/10000 seconds upon arc ignition.
- **Adjustable Sensitivity:** Continuous sensitivity adjustment allows customization for various welding environments and light conditions.
- **Variable Shade Control:** Dark state shades from DIN5-9 to DIN9-13, with a light state of DIN4.
- **Rapid Recovery:** Adjustable recovery time from 0.1s to 0.8s for quick return to light state.

- **UV/IR Protection:** Permanent UV/IR protection up to DIN16, even in the light state.
- **Multiple Arc Sensors:** Equipped with 4 arc sensors for reliable arc detection.

Components:

The LY800D lens consists of the main filter cartridge, integrated solar cells, and an external adjustment knob connected via a cable.



Figure 3.1: Front view of the Fafeicy LY800D Auto-Darkening Welding Helmet Lens. This image shows the main viewing window, the solar panel strip at the bottom, and the connected external adjustment knob.



Figure 3.2: Close-up view of the external adjustment knob for the LY800D lens. This knob allows users to fine-tune sensitivity and delay settings.

4. Specifications

Parameter	Value
Model	LY800D
Frame Group Size	133 x 114 x 10 mm (5.24 x 4.49 x 0.39 inches)
Viewing Window Size	100 x 83 mm (3.94 x 3.27 inches)
Light State Shade	DIN4
Dark State Shade	DIN5~9 / DIN9~13 (Adjustable)
Switching Time (Light to Dark)	1/10000 seconds

Parameter	Value
Sensitivity Adjustment	Continuously adjustable
Recovery Time (Dark to Light)	0.1s to 0.8s (Adjustable)
Power Supply	CR2450 Lithium Battery (600mAh capacity)
UV/IR Protection Level	DIN16 (Permanent)
Number of Arc Sensors	4
Product Weight	168 grams

5. Setup and Installation

The LY800D lens is designed to be installed into compatible welding helmets. Follow these general steps for installation:

1. **Prepare the Helmet:** Ensure your welding helmet is clean and free from debris. Remove any existing passive lens or auto-darkening filter.
2. **Insert the Lens:** Carefully slide the LY800D auto-darkening filter into the designated slot in your welding helmet. Ensure it sits securely and is oriented correctly (solar cells typically face outwards).
3. **Secure the Lens:** Depending on your helmet model, secure the lens using retaining clips or a frame. Ensure the lens is firmly held in place to prevent movement during welding.
4. **Connect Adjustment Knob:** If your helmet has an external port for the adjustment knob, feed the cable through and secure the knob in its position.
5. **Test Functionality:** Before welding, perform a quick test. Point the helmet towards a bright light source (not the sun) or simulate an arc with a lighter to ensure the lens darkens and returns to the light state correctly.



Figure 5.1: Example of the LY800D lens integrated into a welding helmet. This illustrates how the lens fits into the helmet's viewing area.

6. Operation

Once installed, the LY800D lens operates automatically. The solar cells power the unit, and the internal CR2450 battery provides backup power and ensures operation in low light conditions.

Adjusting Settings:

- **Sensitivity:** Use the external adjustment knob to set the sensitivity. Higher sensitivity means the lens will darken with less intense light, suitable for low amperage welding or when the arc is partially obscured. Lower sensitivity is for high amperage welding or bright ambient light.
- **Delay (Recovery Time):** The delay setting controls how long the lens remains dark after the welding arc stops. A shorter delay (0.1s) is useful for tack welding, while a longer delay (0.8s) helps protect eyes from afterglow and reduces eye fatigue during continuous welding.
- **Shade Level:** The LY800D automatically adjusts its shade within the DIN5-9 to DIN9-13 range based on arc intensity. The light state is fixed at DIN4.



Figure 6.1: Feature diagram highlighting key operational aspects such as large viewing window, dimming acceleration, sharpness adjustment, responsive recovery, and eye protection.

7. Maintenance

Proper maintenance ensures the longevity and optimal performance of your LY800D welding lens.

- **Cleaning:** Clean the lens regularly with a soft, lint-free cloth. Use a mild glass cleaner if necessary, but avoid abrasive cleaners or solvents that could damage the lens coating. Ensure the solar panel is clean for efficient charging.
- **Battery Replacement:** The LY800D uses a CR2450 lithium battery. While the solar cells extend battery life, eventual replacement may be necessary. To replace, locate the battery compartment (usually on the side or back of the lens cartridge), open it, replace the old battery with a new CR2450, and close the compartment securely.
- **Storage:** Store the lens in a dry, cool place away from direct sunlight and extreme temperatures when not in use.
- **Inspection:** Periodically inspect the lens for any signs of damage, such as cracks, scratches, or loose components. Replace the lens if any damage is found.

8. Troubleshooting

If you encounter issues with your LY800D lens, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Lens does not darken	◦ Low battery ◦ Dirty arc sensors ◦ Sensitivity set too low ◦ Lens damaged	◦ Replace CR2450 battery. ◦ Clean arc sensors with a soft cloth. ◦ Increase sensitivity setting. ◦ Replace the lens.
Poor visibility	◦ Dirty lens surface ◦ Scratched lens	◦ Clean lens with a soft cloth and mild cleaner. ◦ Replace the lens.
Lens flickers	◦ Low battery ◦ Sensitivity set too high ◦ Arc sensors partially blocked	◦ Replace CR2450 battery. ◦ Decrease sensitivity setting. ◦ Ensure arc sensors are clear and unobstructed.

9. Warranty and Support

Specific warranty information for the Fafeicy LY800D Auto-Darkening Welding Helmet Lens is not provided in this manual. For warranty claims, technical support, or further assistance, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.

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