

ANDELI CA OPTIM-600LB-TGB

ANDELI Intelligent Auto Darkening Welding Helmet (Model CA OPTIM-600LB-TGB) Instruction Manual

1. INTRODUCTION AND OVERVIEW

The ANDELI Intelligent Auto Darkening Welding Helmet, Model CA OPTIM-600LB-TGB, is designed to provide superior eye protection and comfort across various welding, cutting, and grinding applications. This helmet features advanced digital controls, a wide panoramic true color view, and efficient Type-C fast charging with solar support.

- **180° Panoramic True Color View:** Experience an expansive 7.2" x 3.2" total viewing area, including a 4.6" x 3.2" main auto-darkening lens and two 1.3" x 2.5" side lenses. All lenses offer true color views with high optical clarity.
- **Intelligent Fully Digital Auto-Darkening Filter:** Manage Shade, Sensitivity, and Delay parameters precisely via internal panel controls. Powered by a high-speed microprocessor for accurate arc detection and shade control.
- **Type-C Fast Charging with Solar Support:** Equipped with a rechargeable lithium-polymer battery and solar assist. Achieves full charge in 2.5–3 hours, offering extended runtime. The sealed design enhances dust and water resistance, eliminating the need for frequent battery replacement.
- **1/30000s Fast Auto-Darkening:** Features 4 premium arc sensors for rapid light-to-dark switching in 1/30000s. Easily adjust shade and sensitivity for diverse working environments.
- **No Compression & Lightweight Design:** The pivot-style headgear incorporates 6 separate contact points to evenly distribute weight and reduce pressure, ensuring comfortable all-day wear.
- **True Color Technology:** Utilizes 2 layers of LCD auto-darkening glass and 1 integrated optical filter for superior clarity and multi-directional protection against harmful UV/IR rays.

2. SETUP

2.1 Headgear Adjustment

The helmet's headgear is designed for maximum comfort and adjustability. Before first use, adjust the headgear to ensure a secure and comfortable fit.

- **Pivot Style Headgear:** The headgear features 6 separate contact points that distribute weight evenly, preventing pressure points.
- **Adjustable Straps:** Use the adjustable straps and tightness adjustment knob to customize the fit to your head circumference.
- **Cushioned Padding:** Breathable padding is included for enhanced comfort during prolonged use.

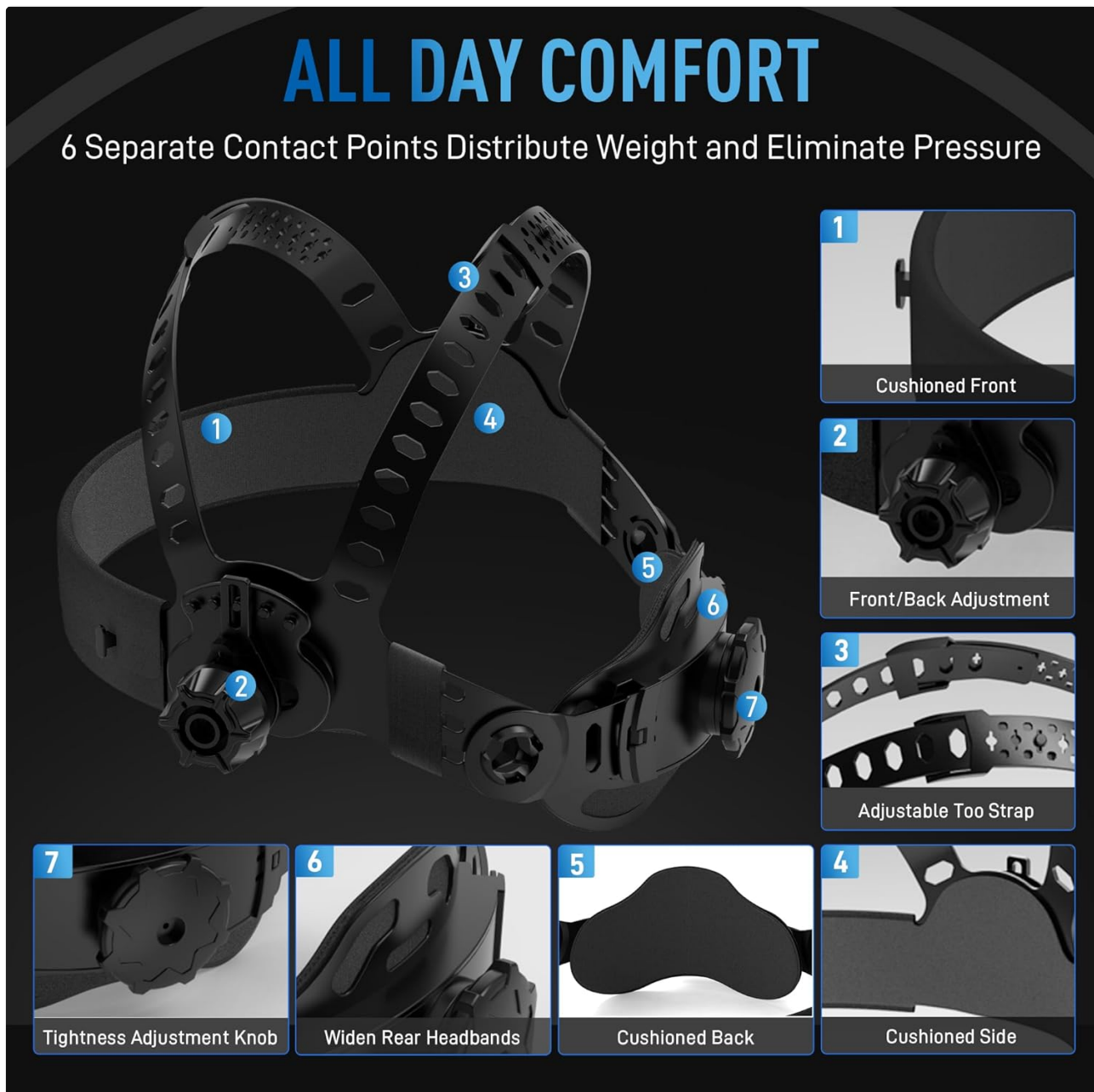


Figure 2.1: Detailed view of the headgear adjustment points for optimal comfort.

2.2 Initial Charging and Battery Check

The helmet is powered by a rechargeable lithium-polymer battery with solar assist. Ensure the battery is adequately charged before use.

- **Type-C Charging:** Connect the provided Type-C charging cable to the helmet's charging port. A full charge takes approximately 2.5–3 hours.
- **Solar Assist:** The integrated solar panel helps maintain battery charge during outdoor use.
- **Low Battery Indicator:** The helmet features a low battery indicator to alert you when charging is needed.



Figure 2.2: Dual power capability with Type-C fast charging and solar support.

2.3 Protective Film Removal

Before using the helmet for the first time, carefully remove any protective films from both the inner and outer surfaces of the lenses to ensure clear vision.

3. OPERATING INSTRUCTIONS

3.1 Mode Selection

The helmet offers four distinct modes for various applications:

- **Welding Mode:** For STICK/MIG/TIG welding.
- **Grinding Mode:** For grinding tasks.
- **Cutting Mode:** For cutting operations.
- **Lock Mode:** Used for temporarily locking the current darkening settings during repetitive welding tasks.

Use the internal panel controls to select the appropriate mode for your task.

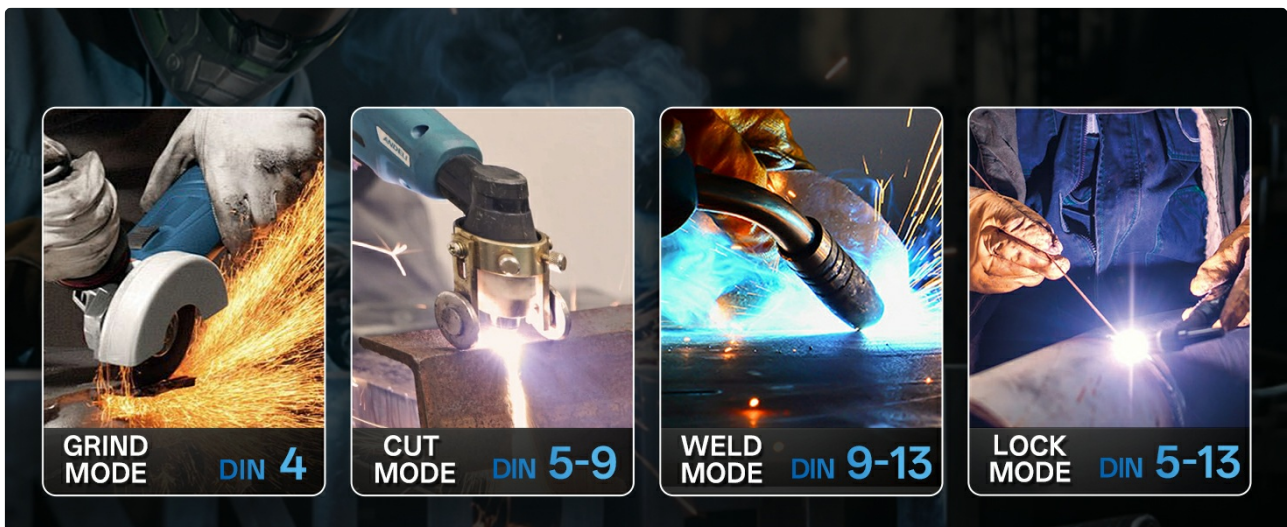


Figure 3.1: Selectable modes for various applications.

3.2 Shade, Sensitivity, and Delay Adjustment

The helmet features intelligent fully digital controls for precise management of shade, sensitivity, and delay

settings.

- **Shade Control:** Adjust the shade level (4/5-9/9-13) to suit the intensity of the arc.
- **Sensitivity Control:** Adjust sensitivity to accommodate different lighting conditions and ensure optimal arc detection.
- **Delay Control:** Set the time for the lens to switch back from dark to light state after welding.



3.3 Auto-Darkening Test

Before each use, it is recommended to perform a test of the auto-darkening function to ensure proper operation. Locate the 'TEST' button on the internal control panel and press it. The lens should momentarily darken and then return to its light state.



Figure 3.3: Internal digital control panel with test button.

4. MAINTENANCE

4.1 Battery Charging and Care

The helmet's lithium-polymer battery is rechargeable via Type-C and supported by solar power. No coin cell battery replacement is needed due to the sealed design.

- **Charging:** Use the provided Type-C cable to charge the helmet.
- **Storage:** Store the helmet in a cool, dry place. The included storage bag can help protect it from dust and damage.





SPECIFICATIONS		PACKAGE INCLUDES	
Viewing Size	4.53"X3.23" Viewing Lens + 2 Side View(without auto darkening)		
True Color	1/1/1/2 Optical Clarity	Replacement Lens*3	
Light States	DIN 3.0		
Dark States	DIN5-9/9-13	Storage bag*1	
Auto Darkening Time	0.08ms Light-dark		
Delay Time	0.1-1.0s Dark-light	Type-C charging cable	
UV-IR Protection	Up To Shade DIN16 At All Time		
Power Source	Polymer Battery, Type-C Charging		
Operating Temperature	-5C~+55°C/23°F~131°F		
Weight	1LB/ 560g		Welding Helmet*1

Figure 4.1: Package contents including charging cable and storage bag.

4.2 Lens Replacement

The helmet comes with 3 replacement lenses. Replace lenses if they become scratched, pitted, or otherwise damaged to maintain optical clarity and protection.

- Refer to the detailed instructions provided in the included manual for specific steps on how to replace the inner and outer protective lenses.

4.3 Cleaning

Clean the helmet and lenses regularly with a soft, damp cloth. Avoid abrasive cleaners or solvents that could

damage the helmet's surface or lens coatings.

5. TROUBLESHOOTING

If you encounter any issues with your ANDELI welding helmet, consider the following common troubleshooting steps:

- **Lens not darkening:** Ensure the battery is charged. Check sensitivity settings. Perform the auto-darkening test.
- **Poor visibility:** Clean the lenses. Replace scratched or damaged lenses. Adjust shade settings.
- **Helmet uncomfortable:** Re-adjust headgear straps and tightness knob. Ensure padding is correctly positioned.
- **Intermittent darkening:** Check for obstructions to arc sensors. Ensure sensitivity is set appropriately for ambient light.

For further assistance, please contact customer support.

6. SPECIFICATIONS

Viewing Size	4.53"x3.23" Viewing Lens + 2 Side View (without auto darkening)
True Color	1/1/1/2 Optical Clarity
Light States	DIN 3.0
Dark States	DIN5-9/9-13
Auto Darkening Time	0.08ms Light-dark
Delay Time	0.1-1.0s Dark-Light
UV-IR Protection	Up to Shade DIN16 At All Time
Power Source	Polymer Battery, Type-C Charging
Operating Temperature	-5C~+55C/23F~131F
Weight	1LB / 560g
Product Dimensions	30.48 x 25.4 x 20.32 cm
Item Model Number	CA OPTIM-600LB-TGB
Included Components	Replacement Lens*3, ANDELI Storage bag*1, Type-C charging cable *1, Welding Helmet*1

7. WARRANTY AND SUPPORT

The ANDELI Intelligent Auto Darkening Welding Helmet comes with a 1-year warranty.

- **Return Policy:** A 30-day return/replacement policy is available through the retailer.
- **Manufacturer Contact:** For technical support or warranty claims, please contact support@andeligroup.com.

8. PRODUCT IMAGES

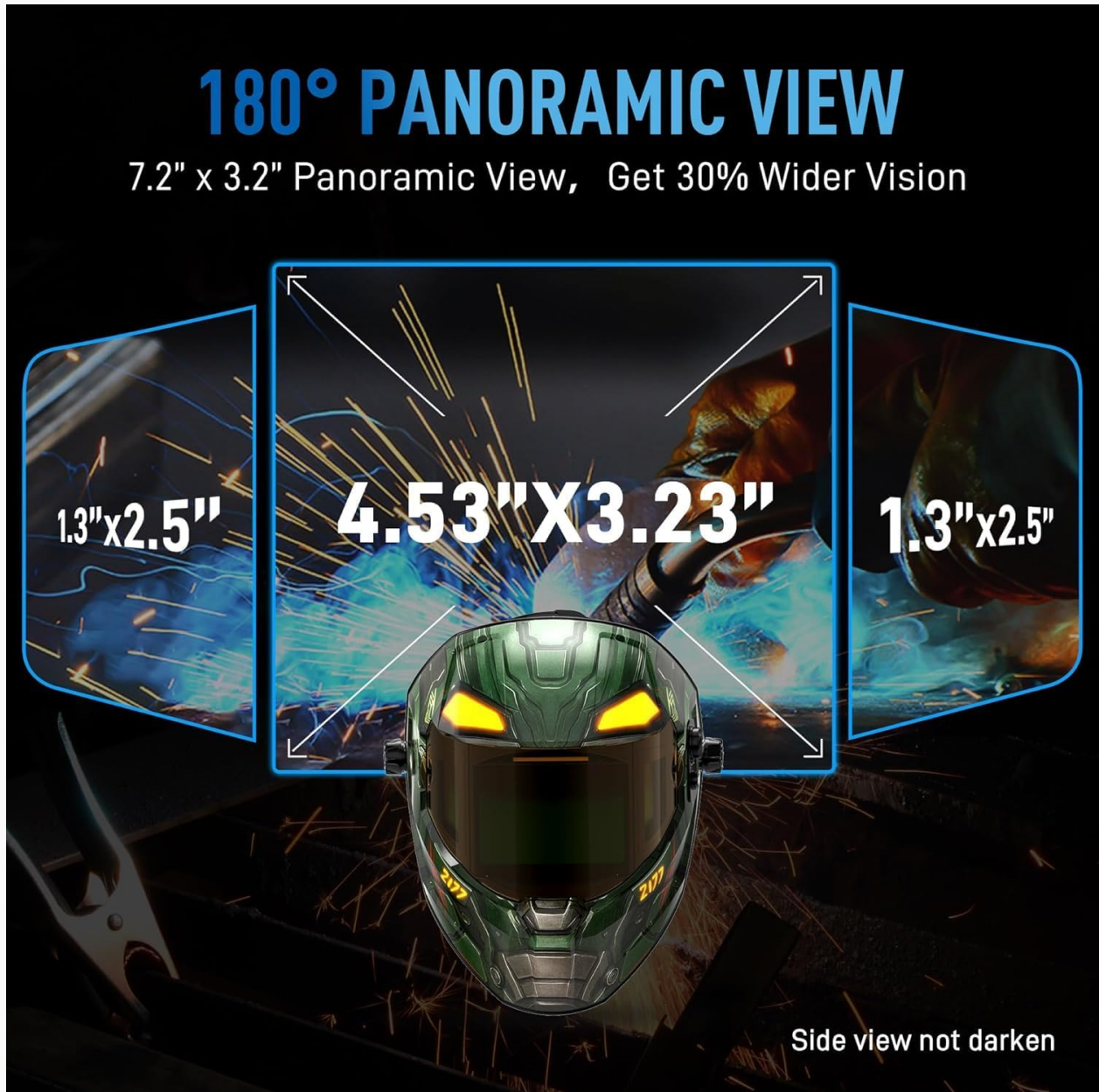


Figure 8.1: The helmet's 180° panoramic view, highlighting the main and side auto-darkening lenses for an expanded field of vision.

UPGRADED TRUE COLOR

Unmatched heat resistance and visual clarity



Traditional Lens

ANDELI True Color

Figure 8.2: Visual comparison demonstrating the superior clarity and true color representation of the ANDELI lens compared to traditional green-tinted lenses.

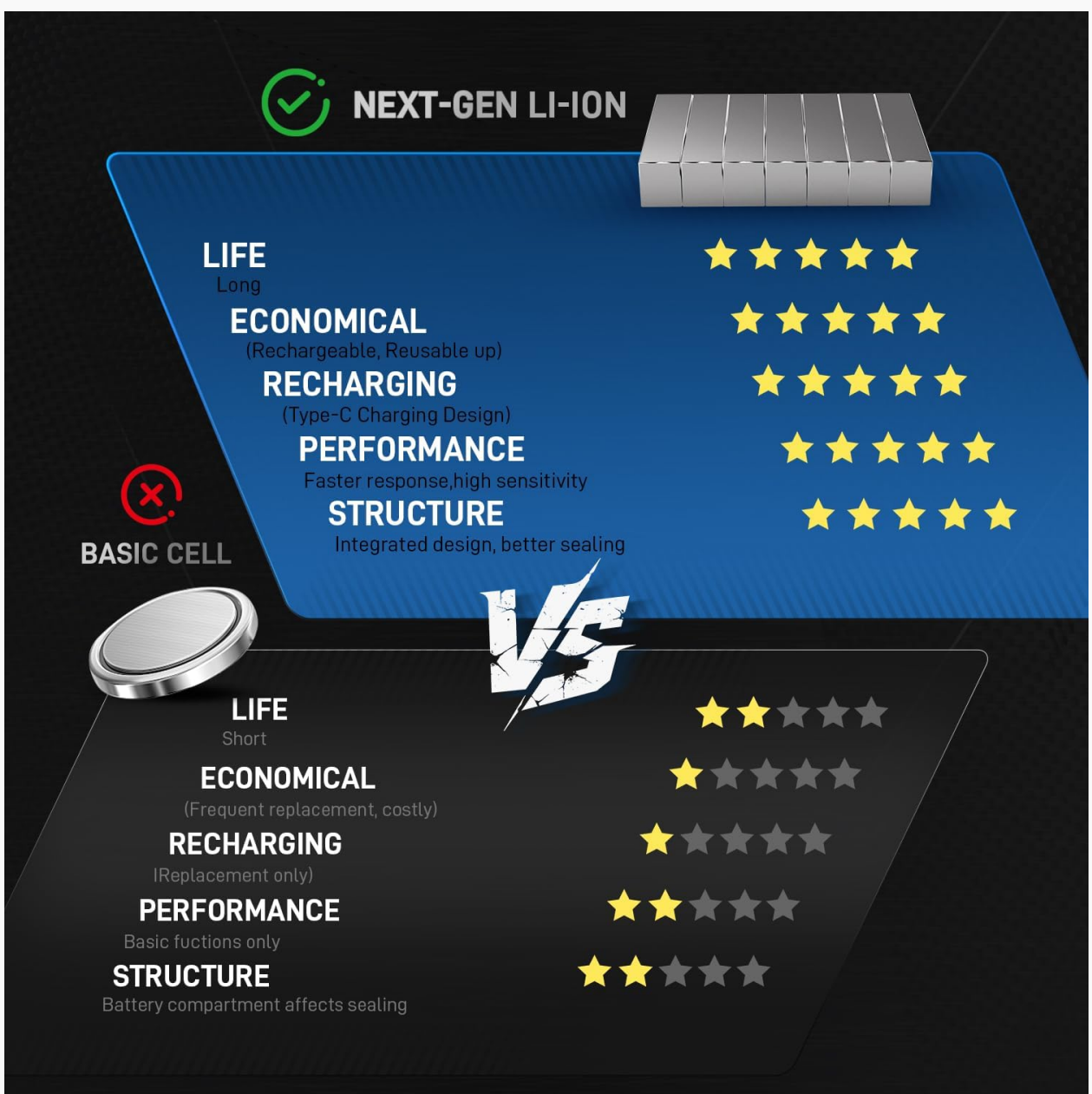


Figure 8.3: Comparison of Next-Gen Li-Ion battery performance against basic cell batteries, emphasizing longer life, economy, recharging, and integrated structure.

FASTER PHOTOSENSITIVITY

Detecting 5Amp TIG welding arcs to provide superior eye protection



4

ARC Sensors



1/30000^s

Higher sensitivity Control



Technological
Innovation



Figure 8.4: Explanation of the helmet's faster photosensitivity, featuring 4 arc sensors and a rapid 1/30000s response time for enhanced eye protection.

9. OFFICIAL PRODUCT VIDEOS

Your browser does not support the video tag.

Video 9.1: This video demonstrates the features of an auto-darkening welding helmet, including its panoramic view, fast darkening capabilities, adjustable sensitivity and delay, and comfortable headgear. While showcasing a different brand, the functionalities are highly relevant to the ANDELI Intelligent Auto Darkening Welding Helmet.