Ennostar Group

Automotive Lighting

As a leading automotive LED manufacturer, Ennostar provides lighting solutions from chip to module stages, with products having automotive-grade certification and already implemented by multiple brand car manufacturers. Leveraging outstanding optoelectronics core capabilities, Ennostar continues to innovate automotive lighting technology and products with its partners. Examples include adaptive driving beam (ADB) headlights, RGB dynamic display headlights, interior ambient lighting, and eye-friendly reading lights, meeting various lighting needs inside and outside the vehicle.

LED Front Light

Market Trends & Growth Potential in Products/Technology

As time progresses, the dominance of LED headlights has been increasingly solidified, with their penetration rate surpassing 80% in 2023. The widespread adoption of LED technology has led to rapid advancements in brightness, efficiency, and functionality. Looking ahead, we can expect to see more innovative designs and features, including smarter and more energy-efficient lighting systems, as well as more personalized optical designs, to provide drivers with a safer and more comfortable driving experience.

Headlights and Daytime Running Lights

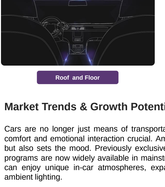
Ennostar's Highlights

- Brightness meets the specifications for headlight applications and maintains stability in high-temperature and low-temperature voltage variations, which is well-suited to meet the evolving environmental demands of headlight applications.
- Small size, low thermal resistance, high-power operation, in line with the miniaturization requirements of headlights
- High-quality management production, certified by AEC-Q102
- Comprehensive pattern layout, the best choice for international automotive lighting manufacturers

Ennostar is with you in every step

Products	Epitaxial Wafer	Chip	Package	Module
	●	●	●	●

Adaptive driving beam (ADB) headlights



Ennostar's Highlights

- Matrix LED design, individually controlled high-performance LED lighting
- Glare-free high beam, avoiding direct headlight glare on pedestrians, and capable of projecting images or text to communicate driving conditions to pedestrians

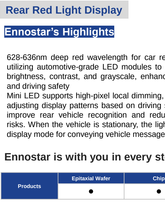
Ennostar is with you in every step

Products	Epitaxial Wafer	Chip	Package	Module
	●	●	●	●

Ambient Lighting

Doors

Center Console



Roof and Floor

Dashboard and Control Panel

Market Trends & Growth Potential in Products/Technology

Cars are no longer just means of transportation but also private spaces, making in-car comfort and emotional interaction crucial. Ambient lighting not only decorates the interior but also sets the mood. Previously exclusive to luxury models, smart LEDs and control programs are now widely available in mainstream vehicles. This means more consumers can enjoy unique in-car atmospheres, expanding the market potential for automotive ambient lighting.

Ennostar's Highlights

- Equipped with LED D65 specifications, accurate color points, and temperature compensation, ensuring color consistency under different temperatures
- Full-color LEDs are equipped with control ICs, allowing intelligent color adjustment according to requirements
- Complies with automotive standards AEC-Q100 and AEC-Q102

Ennostar is with you in every step

Products	Epitaxial Wafer	Chip	Package	Module
	●	●	●	●

Matrix Mini RGB LED Display

Market Trends & Growth Potential in Products/Technology

Mini RGB LED displays revolutionize automotive exteriors, favored by automakers and consumers. This lighting integrates trends like personalization, message communication, and safety upgrades, displaying dynamic messages for pedestrian communication, enhancing driver safety. Prominent brands are adopting this technology, replacing linear light sources with combined white light and full-color displays, marking an irresistible trend in automotive lighting.

Front Full-Color/ White Light Display

Ennostar's Highlights

Front Full-Color + White Light Display + Front Full-Color

- High brightness, high contrast, high grayscale.
- The application of combining front full-color display (RGB daytime running light) with white light display (logo display) enhances overall visibility and improves driving safety.

Rear Red Light Display

Ennostar's Highlights

- 628-636nm deep red wavelength for car rear displays, utilizing automotive-grade LED modules to ensure high brightness, contrast, and grayscale, enhancing visibility and driving safety
- Mini LED supports high-pixel local dimming, dynamically adjusting display patterns based on driving scenarios to improve rear vehicle recognition and reduce accident risks. When the vehicle is stationary, the lights switch to display mode for conveying vehicle messages.

Ennostar is with you in every step

Products	Epitaxial Wafer	Chip	Package	Module
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Door Welcome Lights

Ennostar's Highlights

- Featuring a streamlined light strip and customizable module design, equipped with a light sensor, it operates based on ambient light sources and door movements within an effective range.

Ennostar is with you in every step

Products	Epitaxial Wafer	Chip	Package	Module
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Eye-friendly Reading Light

Ennostar's Highlights

- With sunlight-similar spectrum illumination or high MP ratio lighting, it provides sufficient brightness and uniformity without causing glare, enhancing the reading environment inside the vehicle.
- Sunlight-similar spectrum can reflect color accuracy, reducing eye fatigue and offering more natural colors.

Ennostar is with you in every step

Products	Epitaxial Wafer	Chip	Package	Module
	●	●	●	●