

REFOND AUTOMOTIVE BUSINESS OVERVIEW – BY PRODUCT LINE

Lighting LEDs

Headlights

Taillights

Interior lighting

Smart lighting

Backlight LEDs and miniLEDs

Edge-lit LEDs

Direct-lit LEDs

Direct-lit miniLED panel

Direct view miniLEDs

Interior: Smart surface/ ambient

Exterior: Dynamic lights/ turning

Lamp/ modules

Refond LIRI (subsidiary) Modules

XunChi lamps (share holding)

Winner lamps (share holding)



# AUTOMOTIVE PRODUCT

Innovation leads to the future



Leading innovative supplier of Lighting & Display

Mini Ambient Lights

Mini Tail Lights

Mini Dynamic Logo

In-Vehicle Displays Backlighting

Intelligent Sensors

Headlights



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YouTube





Medium

Refond Optoelectronics

REFOND INNOVATIVE MINILEDs

Intelligent interactive pixel taillights



Intelligent Interactive Pixel Taillight

- Pixelated design offers a diverse range of intelligent scene designs.
- LVDS data transmission with CAN/Ethernet options.
- RGB pitch size min 0.9mm, single color pitch size min 0.3mm, meeting various display requirements
- Single-color, white light, or RGB full-color available
- Shape and size Customizable
- AEC-Q qualified

Dynamic interactive logo



Mini LED Dynamic Car Logo

- Pixelated design, offers a variety of colorful intelligent scene innovations.
- LVDS data transmission.
- RGB pitch size min 0.9mm, single color pitch size min 0.3mm, meeting various display requirements
- Single-color, white light, or RGB full-color available
- Shape and size Customizable
- AEC-Q qualified

Infotainment display



15.6-Inch Local Dimming Backlight

- Ultra-high brightness, clear even in strong sunlight
- Thousands of dimming zones, superior contrast ratio
- Ultra-high definition, more refined picture quality
- Ultra-thin design, extremely low power consumption

Ambient lighting





Smart RGB-E37

- Simple circuit design
- Support large number of serial nodes, max. 4096 nodes
- Automatic temperature compensation and self-diagnosis activation
- Capable of main wavelength, brightness, and color calibration

REFOND AUTOMOTIVE LEDs

Headlights	    	Ceramic N in 1
	   	ADB & Bi-color
Signal lights	    <div>2720 0.5~2W</div>     <div>3535 0.5W</div>	
	    <div>3030 0.5~2W</div>     <div>3528 PLCC4 0.2W</div>	
	  <div>3014 0.3~0.4</div>   <div>3528 lens 0.2W</div>	
Interior lights	  <div>2835 0.5W</div>	
	     <div>3528 PLCC2 0.06W</div>	
	    <div>2214 0.06W</div>	
	     <div>1608 0.06W</div>	
Smart lights	   <div>3030 3535 3528</div>	

## QUALITY ASSURANCE

<div>SYSTEM CERTIFICATION</div> <div></div> <div>Through international benchmarking of major enterprises and third-party SGS social responsibility audits, meet the requirements of the EICC Electronic Industry Code of Conduct.</div>	<div><div>IATF 16949 ISO 9001 IECQ QC 080000 ISO 14001</div><div>ISO 17025 ISO 45001 IEC 27001 ESD (ANSI S20.20)</div></div> <div><div>Quality System</div><div></div><div>Third-party testing meets international standards requirements ROHS, REACH, HFIEC/EN 62471LM80, and others.</div></div>
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## REFOND MILESTONES



## LABORATORY

377 R&D employees, 22.5 of the total employees  
14 masters and doctors


Refond Laboratory Center obtained CNAS accreditation in 2015 and consists of laboratories in Shenzhen, Yiwu, and Gedian (under construction). With comprehensive laboratory capabilities, it is committed to building a first-class LED research and development center. It has been successively approved as a national-level laboratory, the Shenzhen LED TV backlight engineering technology research and development center, and the Guangdong LED TV backlight engineering technology research and development center, and has been awarded the CNAS certificate.

Adhering to the philosophy of valuing talent, research, and innovation, Refond has submitted a total of 576 patent applications over the years, successfully registering a large number of patents, with a total of 433 authorized patents, including 172 invention patents.

The Refond Laboratory Center adopts the latest theories and experimental technologies in various disciplines to continuously innovate and conduct in-depth research in three major areas: product software and hardware development, advanced process development, and material development. It has also established special teams for the joint development and design of advanced equipment, reducing product failure rates throughout the entire process from product design, process design to reference guidance, and testing feedback, providing better system optical design solutions.



## MANUFACTURING CAPABILITIES



Shenzhen Headquarters



Shenzhen Production Base



Zhejiang Production Base

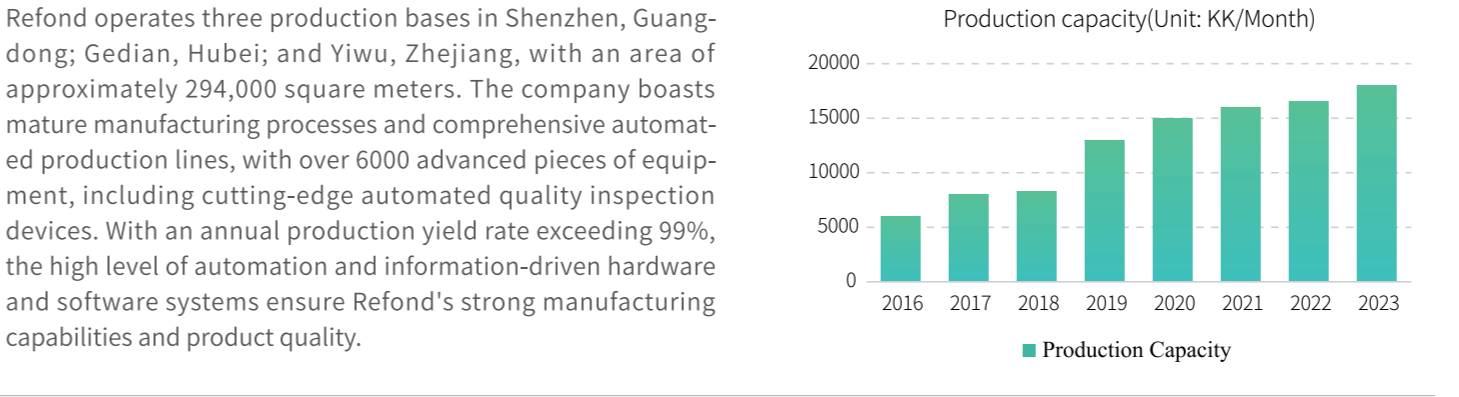


Hubei Production Base

Area: 34,000 square meters  
Employees: 300+  
Production: Automotive LEDs/Large and Small Backlight/MiniLED

Area: 160,000 square meters  
Employees: 1300+  
Production: Lighting/Electrical/RGB/Optocoupler/Specialty LEDs

Area: 100,000 square meters  
Employees: 500+  
Production: Automotive LEDs/MiniLED/Backlight/Touch Display/Electronic Paper Modules



## ABOUT REFOND

**Corporate Mission:** Innovation enriches life.

**Corporate Vision:** Become the world's leading technology company

Refond Optoelectronics Co., Ltd. (Stock Code: 300241), established in 2000, is a globally renowned innovative technology company engaged in the research, development, production, and sales of LEDs, modules, and application solutions.

Technological innovation, leading-edge technology, and product differentiation are the core competencies that ensure Refond's success. The company has steadily expanded and promoted development in professional fields such as lighting, display, automotive, electronics, and touch display, establishing strategic partnerships with top global brands. Refond focuses on research and business development in emerging fields such as automotive lighting and displays, Mini LEDs, AI sensor devices, and touch display electronic paper to enhance its core competitiveness and sustainable profitability.

As a professional supplier of automotive-grade LED components, Refond Optoelectronics entered the automotive LED market in 2007. With industry-leading R&D capabilities, we have extensively developed our automotive product line, providing advanced integrated solutions from automotive interiors, in-vehicle backlighting, and automotive exteriors to invisible light and automotive sensing. We have an independent and comprehensive automotive-grade production, manufacturing, and testing system, strictly adhering to the IATF16949 quality management system, meeting VDA automotive quality management standards, and achieving AEC-Q102 certification.

Automotive Interior Product Line: 1608, 2214, 3528, EMC3014, 3535plcc6, primarily used in interior switches, buttons, dashboards, central control displays, reading lights, and ambient lighting. Automotive Exterior Product Line: EMC2720, EMC3030, EMC3537 dual-color, Ceramic 1~5 chips, primarily used in exterior position lights, brake lights, turn signals, daytime running lights, reverse lights, and high/low beam headlights.

www.refond.com



REFOND

创新科技. 丰富人类生活!  
Innovation enriches life

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