

Li-Fi Market Report by Component (LED Lamps, Optical Sensor, Microcontroller, Software and Others), Application (Indoor Networking, LBS (Location Based Services), In-Flight Communication and Entertainment, Underwater Communication, and Others), Transmission Type (Unidirectional, Bidirectional), End-User (Retail, Consumer Electronics, Automotive and Transportation, Healthcare, Defense and Security, and Others), and Region 2024-2032

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Abstracts

The global Li-Fi market size reached US\$ 686.9 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 22,139.4 Million by 2032, exhibiting a growth rate (CAGR) of 45.7% during 2024-2032.

Light fidelity (Li-Fi), or visible light communication (VLC), refers to a wireless optical networking technology that utilizes light to transfer data at high speeds. It uses the visible light spectrum, ultraviolet (UV) and infrared radiations (IR). The system operates through light-emitting diodes (LEDs) and microcontrollers that trigger the conversion of light waves into electric signals. These signals are then received by photodetectors that interpret the changes in light intensity as data. This technology can connect remote and distant terrains across vast areas that cannot be reached through optical fibers, owing to which it finds extensive applications across various industries, including healthcare, automotive, aerospace, electronics, information technology (IT) and defense.

The primary factors driving the market growth include hyper-urbanization and the increasing construction of smart cities across the globe. Furthermore, widespread adoption of cloud computing, big data tools and multi-tier data center architectures across industries is also providing a boost to the market growth. In comparison to the traditionally used alternatives, such as Wi-Fi, Li-Fi systems offer massive bandwidth spectrum, higher speeds, enhanced data security and minimal network and radio interference. Additionally, the increasing adoption of automated systems across residential and commercial sectors is creating lucrative opportunities for the industry players for business expansion. The growing applications of indoor location-based services, such as smart car parking, smart lighting, health monitoring, logistics and shopping assistance have increased the demand for high-speed data communication systems. Other factors, including the rising need for advancements in the existing technologies, lowering prices of LED systems and extensive research and development (R&D) activities, are projected to drive the market in the upcoming years.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global Li-Fi market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on component, application, transmission type and end user.

Breakup by Component:

- LED Lamps
- Optical Sensor
- Microcontroller
- Software
- Others

Breakup by Application:

- Indoor Networking
- LBS (Location Based Services)
- In-Flight Communication and Entertainment
- Underwater Communication
- Others

Breakup by Transmission Type:

Unidirectional

Bidirectional

Breakup by End-User:

Retail

Consumer Electronics

Automotive and Transportation

Healthcare

Defense and Security

Others

Breakup by Region:

North America

United States

Canada

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined with some of the key players being FSONa Networks Corp, General Electric Co., LG Innotek, Lightpointe Communications, Lucibel, LVX System, Oledcomm, Philips, PureLi-Fi Ltd., Semicon Light Company, Sunpartner Technologies, Wipro LLC, etc.

Key Questions Answered in This Report

1. What was the size of the global Li-Fi market in 2023?
2. What is the expected growth rate of the global Li-Fi market during 2024-2032?
3. What are the key factors driving the global Li-Fi market?
4. What has been the impact of COVID-19 on the global Li-Fi market?
5. What is the breakup of the global Li-Fi market based on the component?
6. What is the breakup of the global Li-Fi market based on the application?
7. What is the breakup of the global Li-Fi market based on the end-user?
8. What are the key regions in the global Li-Fi market?
9. Who are the key players/companies in the global Li-Fi market?

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