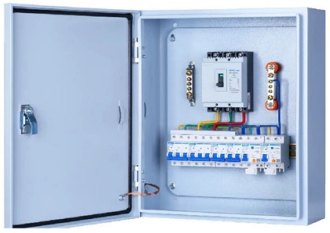
JEWELBLU OPTICAL SYSTEMS

Supply Quotation for Visible Light Communication Modules



Overview

The sale of LEDs for visible light communication systems is included in the light-emitting diode segment of the market.

Key Takeaways

Visible Light Communication (VLC) modules are commercially available from leading suppliers such as Signify, Osram Opto Semiconductors, Broadcom, Vishay, pureLiFi Ltd., and Qualcomm, with market prices influenced by component type, data rate, and application.Overview of VLC Modules

VLC modules use LEDs or laser diodes to transmit data via visible light (400–800 nm) and are received by photodiodes or image sensors. Modules vary by:

• Component type: LEDs, photodetectors, microcontrollers, and integrated chips

• Transmission type: Unidirectional or bidirectional

• Applications: Indoor networking, automotive Li-Fi, IoT connectivity, healthcare, defense, and underwater communication

• Data rates: From 10 kbit/s with standard lamps to gigabit-class speeds with advanced LEDs and modulation schemes
Key Suppliers and Manufacturers
• Signify (Philips Lighting): Offers VLC chips and modules for enterprise networking and smart buildings

• Osram Opto Semiconductors: Provides high-speed LEDs and photodetectors for VLC applications

• Broadcom & Vishay: Supply semiconductor VLC chips for indoor positioning and automotive Li-Fi

• pureLiFi Ltd.: Specializes in Li-Fi modules for commercial and industrial deployments

• Qualcomm & Panasonic: Develop VLC-enabled communication devices and integrated solutions

Market Pricing and Trends

• The VLC chip market is projected to grow from USD 0.68 billion in 2025 to USD 2.15 billion by 2034, with a CAGR of 13.7% .

• The overall VLC system market is expected to reach USD 5.3 billion by 2034, growing at 18.5% CAGR .

• Pricing for individual modules depends on data rate, integration level, and application. High-speed, bidirectional modules for enterprise or automotive use are typically more expensive than basic indoor networking modules.

• Adoption is driven by LED proliferation, Li-Fi integration, and demand for secure, interference-free communication .

Requesting a Quotation

To obtain a formal supply quotation, consider:

• Defining module specifications: Data rate, transmission type, range, and interface.

• Selecting suppliers: Contact manufacturers like Signify, Osram, Broadcom, Vishay, pureLiFi, or Qualcomm for pricing.

• Volume and customization: Bulk orders or custom modules may reduce per-unit cost.

• Additional services: Some suppliers offer integration support, software, and network management tools. By providing these details to suppliers, you can receive accurate quotations tailored to your application and deployment scale.

Article Content

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