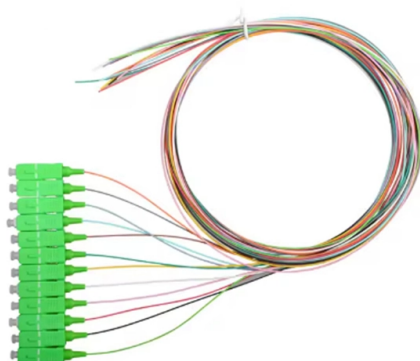


Red Light Pen Illumination Module



Overview

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Key Takeaways

A red light pen illumination module is an integrated lighting system within a pen-type device, designed to provide adjustable visible red light for optical fiber testing or low-light writing applications. Overview and Functionality

A red light pen with an illumination module typically consists of a pen body, battery compartment, illumination structure, and control circuitry. The illumination module uses LEDs to emit red light, which can be adjusted in brightness via a rotating knob or power regulation module, allowing users to conserve battery power while achieving the desired illumination level (CN216669213U). In optical fiber applications, the pen often includes an optical fiber adapter, optical amplifier, analog-to-digital conversion module, control chip, and wireless transmission module. The optical amplifier enhances detected signals, which are then converted to electrical signals, processed, and transmitted for monitoring or recording purposes. This setup ensures accurate detection of fiber breakpoints or faults (CN216669213U).

Key Features

- **Adjustable Brightness:** Users can control the LED output to suit ambient lighting conditions, improving visibility without additional light sources (CN216669213U).
- **Battery-Powered:** Typically powered by a rechargeable or replaceable battery housed in the pen body.

- **LED Illumination:** Provides a focused red light for precise detection or writing in low-light environments.
- **Optical Fiber Compatibility:** Many models support SC, FC, and ST connectors, making them suitable for fiber optic testing over distances up to 25 km (VFL-22P, VFL-22M) .
- **Portable Design:** Compact and lightweight, often with a metal or durable plastic body, making it easy to carry and use in fieldwork.
- **Additional Functions:** Some pens include cameras, stylus tips, or wireless data transmission for enhanced functionality (CN216669213U) .

Applications

- **Optical Fiber Testing:** Detecting fiber breakpoints, verifying continuity, and locating faults in fiber optic networks.
- **Low-Light Writing:** Red light pens are used in night-time writing, medical, or military applications where minimal light disturbance is required (Amazon LED pen) .
- **Maintenance and Field Work:** Portable illumination for technicians working in dimly lit environments.

Commercial Examples

- **VFL-22P and VFL-22M:** Pen-type fiber optic red light pens with strong LED sources, universal 2.5mm interfaces, and detection distances up to 25 km, featuring USB charging and LED illumination for dark environments (VFL-22P, VFL-22M) .
- **Lighted Tip Pen with Stylus:** Multi-purpose LED pen for writing in the dark, featuring red LEDs to protect night vision and a stylus tip for touchscreens (Amazon) . In summary, a red light pen illumination module combines adjustable LED lighting, battery operation, and optional optical fiber testing capabilities to provide a versatile tool for both technical and everyday low-light applications.

Article Content

CN216669213U

The utility model relates to the technical field of application of optical fiber red light pens, in particular to an optical fiber red light pen

Light source-MINI stable light source, red light pen, lighting pen ...

30 years of experience in R&D and manufacturing - Jilong JILONG, as a professional supplier of optical communication products and

VFL-22P red light pen, lighting pen, clear light pen, 30mw fiber optic ...

30 years of experience in R&D and manufacturing - Jilong JILONG launched the VFL-22P pen-type red light pen, which is designed

Amazon : Laser Pointer

650nm red line laser module industrial laser module adjustable focus line length
19.7" DC plug diameter 10mm (point-1pack)

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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