Optical module casing made of zinc alloy



Overview

A critical but often overlooked component in this system is the zinc alloy shell for optical module connectors.

Key Takeaways

Zinc alloy is widely used for optical module casings due to its high precision, structural strength, thermal conductivity, and excellent electromagnetic shielding.

Material Properties and Advantages

Zinc alloy offers high fluidity, making it ideal for hot-chamber die-casting, which allows manufacturers to produce complex shapes with thin walls and high dimensional accuracy. Its lower melting point compared to aluminum enables faster production cycles, stronger parts, and cost-effective near-net-shape casting. Zinc alloy casings provide mechanical strength, corrosion resistance, and oxidation resistance, ensuring optical modules operate reliably in harsh environments.

Additionally, zinc alloy exhibits superior thermal conductivity and EMI shielding, protecting sensitive optical and electrical components from heat and electromagnetic interference.

Manufacturing Process

Optical module housings are typically produced using precision zinc alloy die-casting, which ensures high dimensional stability and structural integrity. The process involves pouring molten zinc alloy into molds under high pressure, allowing for complex geometries and precise tolerances. Components such as pull tabs may be made from stainless steel or TPV injection, while the main housing is zinc alloy die-cast.

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

This method supports MSA-compliant designs for SFP, SFP+, QSFP, QSFP-DD, OSFP, and other optical transceivers, ensuring interoperability across different vendors and standards.

Applications

Zinc alloy optical module casings are widely used in fiber optic communications, data centers, network switches, and 5G infrastructure. They are suitable for high-speed modules such as 400G, 800G, and QSFP112, providing reliable EMI shielding, heat dissipation, and mechanical protection.

OEM and OD

M manufacturers often offer customized zinc alloy housings to meet specific design requirements, including color-coded handles and precision machining for enhanced performance.

Performance and Reliability

Zinc alloy housings undergo rigorous testing for thermal resistance, environmental resilience, and electromagnetic interference shielding. They comply with ISO 9001, ISO 14001, and Telcordia GR-468 standards, ensuring consistent quality, long service life, and minimal environmental impact. The combination of precision die-casting and high-quality zinc alloys allows optical modules to maintain signal integrity and operational stability even under extreme conditions.

In summary, zinc alloy casings are the preferred choice for optical modules due to their combination of mechanical strength, thermal management, EMI shielding, and precision manufacturability, making them essential for modern high-speed optical communication systems.

Article Content

What makes Zinc Alloy the superhero of optical module shells?

A critical but often overlooked component in this system is the zinc alloy shell for optical module connectors. These metal housings not only provide structural strength but also protect delicate

MSA QSFP Housing Die Casting Zinc Alloy QSFP DD

The MSA QSFP Housing encompasses the physical and mechanical features that house the optical and electrical components of a QSFP module. Its design is

Zinc Alloy Optical Module Housing

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

The housing of optical modules is typically made from Zinc Alloy die casting shell, providing excellent mechanical properties, good corrosion resistance, and oxidation resistance, ensuring that the optical

Custom Die Casting For Optical Transceiver Enclosure Supplier

GuangWei supplies SFP / SFP+ module housings with precision zinc alloy die-casting. High EMI shielding, superior heat dissipation, MSA-compliant design for optical transceivers.

Module Precision Zinc Die-Casting Optical Transceiver Housing for

This high-precision zinc alloy die-casting casing is engineered specifically for next-generation high-speed optical transceivers, including 400G, 800G, and 1.6T modules (SFP, OSFP, QSFP-DD).

400g 800g 1.6t Osfp Qsfp-Dd of Precision Zinc Die-Casting Optical ...

This high-precision zinc alloy die-casting casing is engineered specifically for next-generation high-speed optical transceivers, including 400G, 800G, and 1.6T modules (SFP, OSFP, QSFP-DD).

High Precision Zinc Alloy Die Casting Parts for Optical Transceiver ...

This custom zinc alloy die casting housing is purpose-built for optical transceiver and optical module components, covering common form factors including SFP, SFP+, and QSFP.

Optical Module Shell

Discover precision optical module shells in zinc alloy or stainless steel, ideal for fiber laser modules. OEM/ODM supported, 100% inspected.

SFP+SC Housing Standard Fiber Optical Module

The SFP+SC housing is made from zinc alloy die casting, it have higher thermal conductivity, intensity and consistency. The shield use SUS304 stainless steel

The Advantages of Zinc Alloy for Transceiver Housing

Transceiver housing is made of zinc alloy die-casting, and is mainly used in optical modules and the optical communication industry.

OSFP Housing Standard 800G OSFP Module Case

OSFP housing, is a protective casing designed to hold and protect optical modules used in various communication and networking applications.

Assemblable Die Casting Housing for Optical Module

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

Assemblable Die Casting Housing for Optical Module, Find Details and Price about Zinc Alloy Optical Module Structure 800g Zinc Alloy Parts from Assemblable Die

Qsfp28 Die Casting Housing for Optical Module

Since established in 2002, Shenzhen Aoli Casting Hardware Products Co., Ltd has been grown from a professional zinc alloy die-casting

Assemblable 800g Osfp Zamak 3# Base Die Castings for Optical Module

Assemblable 800g Osfp Zamak 3# Base Die Castings for Optical Module, Find Details and Price about Die Casting Zinc Alloy Parts from Assemblable 800g Osfp Zamak 3# Base Die Castings for Optical

MINI SFP Housings Customized Optical Transceiver Case

MINI SFP Housings, is a protective casing designed to hold and protect optical modules used in various communication and networking applications.

ISO Approved 800g Optical Module Housing Shell

Since established in 2002, Shenzhen Aoli Casting Hardware Products Co., Ltd has been grown from a professional zinc alloy die-casting manufacturer to a professional enterprise engaged in

100g Qsfp28 Lr4 Die Casting Housing for Optical

Since established in 2002, Shenzhen Aoli Casting Hardware Products Co., Ltd has been grown from a professional zinc alloy die-casting

Zinc Alloy Hot Chamber Die Casting SFP/SFP+ Optical

Zinc Alloy Hot Chamber Die Casting SFP/SFP+ Optical Module Structure, Find Details and Price about Zinc Machining Part Zinc Alloy Bottom Shell from Zinc

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

Contact Us

Continue your research online:

Website: https://cgweb.co.za
Technical inquiry: https://cgweb.co.za/project-enquiry.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved