

Tungsten-copper components for optical modules



Overview

WCu alloy components possess the unique benefits of both tungsten and copper. They demonstrate excellent resistance to high temperatures and arc erosion, as well as to high strength, high density, low thermal expansion, and superb electrical and thermal conductivity. This composite material is highly machinable and can be tailored to meet numerous specifications through material composition. Our molybdenum-copper composites are most suitable for IGBT power modules and modern GaN or SiC MOSFET power transistors used in inverters of electric cars. WCu alloy goes into the. On July 6, 2023, China's leading high-performance copper alloy manufacturer, SXSR Advanced Alloy Materials Technology Corporation, announced: The tungsten copper alloy base for Optical module chips developed by the company is one of the components of the Optical module, which is mainly made of. The invention discloses a preparation method of a tungsten-copper heat sink component for an optical module, which is used for preparing spherical composite powder based on wet grinding and spray drying granulation, wherein a copper phase and an activated sintering element are distributed in gaps. The optical chip base made of copper-tungsten material has both the low expansion characteristic of tungsten and the. Copper and copper alloy backplane is used for the support bracket on the sputtering target, the backplane mainly. Chromium-zirconium copper features Chromium-zirconium copper.

Article Content

Tungsten Copper Electronic Packaging Materials-ATTL

Tungsten copper materials combine the low thermal expansion rate of tungsten with the high thermal conductivity of copper. They help effectively release heat from electronic devices and cool various

All Products

O Optical transceiver modules, optical devices, and wireless devices Optical fibers and optical fiber cables

Tungsten-copper alloy (W-Cu)

Tungsten Copper is an alloy composed primarily of Tungsten, with Copper added to enhance its ductility and thermal conductivity. This combination creates a material with exceptional strength, durability,

What is Co-Packaged Optics (CPO) Technology? | Corning

What is Co-Packaged Optics? What is Co-Packaged Optics? Co-Packaged Optics (CPO) is a technology and design approach where optical components, such as lasers and photodetectors, are

Tungsten-copper Rods for Microelectronic Materials

Therefore, they are extensively utilized for the packaging and heat dissipation in radio frequency microwave devices, power semiconductor devices, and optical communication devices.

Heat Sinks | Supplier | Manufacturer

This allows for the creation of high-temperature package components capable of handling high heat fluxes and power densities in the advanced electronics market. Many of our heat sinks are made of

Tungsten Copper Alloy Parts

Tungsten copper alloy parts combine the hardness and high density of tungsten with the electrical and thermal conductivity of copper. Products

Progress in Research on Co-Packaged Optics

In the 5G era, the demand for high-bandwidth computing, transmission, and storage has led to the development of optoelectronic

Uses of Tungsten Copper Alloys in Electronic Component Filed

For EDM processing, electronic packaging, or high-voltage applications, tungsten-copper alloy delivers unmatched performance, cost-effectiveness, and reliability.

The Leading Tungsten Copper Alloy Supplier Of Finisar

SXSR Company provides an overall solution for high-performance material manufacturing and product processing of Optical module chip base, with 3D printing, vacuum sintering furnace and

Integrating silicon photonics with complementary metal-oxide ...

Optical interconnects offer higher bandwidth density and lower energy per bit than copper, and complementary metal-oxide-semiconductor-compatible silicon photonics provides a scalable,

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The tungsten-copper heat sink component for the optical module is prepared by adopting an injection molding process, the raw material utilization rate is high, the size precision of parts...

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical modules typically have an electrical interface on the side that

Heat Sinks | Supplier | Manufacturer

Our tungsten-copper composites provide high thermal conductivity and perfect expansion matching with compound semiconductors used in opto-electronics

Optical Module: A Comprehensive Analysis from Source to Terminal

Optical modules are key transmission components in communication networks, and their applications, technologies, types, and terminology are diverse. It can be confusing for those new to

Tungsten Copper Alloy

Tungsten Copper Alloy (W Cu) Background Information Consisting of pure tungsten (W) powder suspended in a matrix of copper (Cu), these alloys are readily machinable and known for good

Implementation Agreement for a 3.2Tb/s Co-Packaged (CPO) Module

ABSTRACT: This Implementation Agreement specifies key aspects and electro-optical-mechanical details of a 3.2Tb/s Co-Packaged Module encompassing optical and copper cable attach

How to Choose Optical Modules Correctly?

What is an Optical Modules? Optical modules are pivotal components in optical fiber communication systems, operating at the physical layer—the foundational level of the OSI model.

Laser Powder Bed Fusion of Copper-Tungsten Composites for Heat

Due to the absence of a solid solubility of tungsten (W) in copper (Cu), copper-tungsten (Cu/W) systems are classified as pseudo-alloys. Since elemental W is embedded within a continuous

Tungsten-copper Rods for Microelectronic Materials

Copper tungsten is a metal matrix composite consisting of the low thermal expansion of tungsten fused with the superior thermal and electrical

Copper Tungsten Alloys Manufacturers

The tungsten copper submounts can be supplied plated for use of AuSn preform or with patterned or unpatterned AuSn metallization with AuSn solder of different compositions.

Tailoring the microstructure and properties of tungsten-copper ...

The tungsten-copper (W-Cu) composite, benefiting from the exceptional mechanical-physical properties of W and excellent conductivity of Cu, is a typical pseudo-alloy without mutual

Optical Components and Modules

Everything you need to build an optical network from end-to-end. Thin-film filter and PLC based AWG for multiplexing, a full suite of components for optical amplification use, optomechanical or MEMS-based

The Evolution of Optical Communication Modules: From COB to

The rapid growth of AI computing, hyperscale data centers, and high-performance networking is driving optical interconnects closer to switching and computing silicon. As bandwidth

Cu-W (Copper-Tungsten)

Cu-W is a combination of Tungsten (W) which has low thermal expansion, and Copper (Cu) which has high thermal conductivity. The thermal expansion can be adjusted to surrounding materials such as

China Chromium Zirconium Copper alloy, Copper Chromium

Sirui is professional in the production of Cu-Cr (VI), Cu-W (SF6) and Cu-Cr-Zr alloys, short circuit ring/ bar and shrink ring, metal chromium, the electrode products, as well as the key components and

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