

Tungsten Copper for Optical Modules



Overview

Innovative alloys, like the new tungsten-copper material developed by Sirui New Materials, are emerging to address the intense heat in 400G+ modules. These modules are essential for converting electrical signals into light signals and vice versa, forming the backbone of fiber optic communication systems in data centers. 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. The thermal properties of our molybdenum-copper laminates (CMC) can be customized for specific requirements of high-frequency electronics such. Heatspreaders for Opto electronics, Wireless communication, LED substrates 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 Alumina and Kovar. Also, with. Contrary to injection molding technology, Spectra-Mat's unique technology to infiltrate copper in an highly homogeneous sintered tungsten matrix guarantees the homogeneity of thermal conductivity of the tungsten copper submounts along the three axes, a very important requirement for multi diodes. For the first time, here we report the assembly of a pyridine-protected tungsten-copper cluster on porous alumina, and find superior optical limiting (OL) properties retainable for multilevel clustering due to unaffected reverse saturable absorption (RSA) and constant photo-excited triplet states.



Article Content

Progress, challenges and potentials/trends of tungsten-copper (WCu ...

Abstract Tungsten-copper (W Cu) composites/pseudo alloys with excellent properties are extremely desirable for applications as electrode materials, functional graded materials, electronic

Tungsten-Copper Clusters Assembled on Porous

For the first time, here we report the assembly of a pyridine-protected tungsten-copper cluster on porous alumina, and find superior optical limiting (OL)

Cisco Optics | Transform Your Network

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your network.

Heat Sinks | Supplier | Manufacturer

Our tungsten-copper composites provide high thermal conductivity and perfect expansion matching with compound semiconductors used in opto-electronics and photonic devices, like laser diodes and HHL

Synthesis and Processing Techniques of Tungsten

This review presents a general survey on synthesis and processing techniques of tungsten copper (W-Cu) composite powders for achieving electrical contact

Structural evolution, optical properties, and photocatalytic ...

A novel synthesis process to obtain copper-tungsten heterostructure materials and the annealing temperature's effect on the structure, microstructure, and optical band gap was thoroughly

A study of copper-tungsten oxide materials for ...

Tungsten copper (W-Cu) composites, as a traditional refractory material, are promising materials for manufacture of electrical contacts and electrodes, heavy duty electronic contacts,

Semiconductor Components | Packaging

Paste used for HTCC metallization is typically made using a refractory metal such as tungsten or molybdenum and is much lower in cost than the gold or silver metallization used in LTCC material

Tungsten-copper clusters assembled on porous alumina for optical ...

For the first time, here we report the assembly of a pyridine-protected tungsten-copper cluster on porous alumina, and find superior optical limiting (OL) properties retainable for multilevel

Customized Performance Requirements of Copper-Tungsten

The integration of copper-tungsten (CuW) alloys in aerospace and electronic packaging demands tailored performance characteristics to meet extreme operational conditions. This article dissects

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

Understanding Lasers, Laser Diodes, Laser Diode Packaging and

This chapter serves as a layman's introduction to lasers, laser diodes, and laser diode packaging. Within the thermal management scope, the use of copper tungsten is examined in detail.

Engineering performance of tungsten network reinforced

To solve poor engineering performance of copper-tungsten alloys operated at high temperatures, 3D network tungsten frameworks were prepared using a selective

Cu-W (Copper-Tungsten) | Sumitomo Electric

Heatspreaders for Opto electronics, Wireless communication, LED substrates. Cu-W is a combination of Tungsten (W) which has low thermal expansion, and Copper (Cu) which has high thermal

How Tungsten Copper Alloy WCu Base Flange Heat Sink Becomes

PESCO's Tungsten Copper Alloy (WCu) Base Flange Heat Sink, with its designable CTE and excellent thermal-mechanical properties, is becoming the key answer to solving this industry

Starview Copper SFP Optical Transceiver Module

Starview Copper SFP Optical Transceiver Module Applications Up to 1.25 Gb/s bi-directional data links Hot-pluggable SFP footprint Low power dissipation(1.05W

Copper-tungsten

Copper-tungsten (tungsten-copper, CuW, or WCu) is a mixture of copper and tungsten. As copper and tungsten are not mutually soluble, the material is composed of distinct particles of one metal

Fabrication and characterization of CMOS-compatible integrated tungsten ...

In this work, we present overhead tungsten (W) heaters for thermo-optic tuning. These overhead heaters are fabricated entirely using CMOS fabrication technology and they are fully compatible with

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

Sirui New Material (688102.SH): Tungsten-copper alloys with different ...

GelonghuiMarch 25 | Sirui New Materials (688102.SH) said on the investor interactive platform that the tungsten-copper alloy material developed by the company has low expansion and higher thermal

Engineering performance of tungsten network reinforced copper matrix ...

In this paper, tungsten reinforced copper matrix composites with two types of W skeletons were prepared using a SLM technique, in which copper was melted and infiltrated into the

Optical Module Housings Guide

Innovative alloys, like the new tungsten-copper material developed by Sirui New Materials, are emerging to address the intense heat in 400G+ modules. These alloys provide high thermal

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.

Copper tungsten oxide (Cu_xWO_y) thin films for optical and ...

The purpose of the present paper is twofold: (i) to explore the discharge conditions for deposition of ternary copper tungsten oxide films and (ii) to examine the deposited films with respect

Synthesis and Processing Techniques of Tungsten Copper Composite ...

This review presents a general survey on synthesis and processing techniques of tungsten copper (W-Cu) composite powders for achieving electrical contact materials for power engineering applications.

Recent progress in development of tungsten-copper composites ...

Tungsten copper (W-Cu) composites, as a traditional refractory material, are promising materials for manufacture of electrical contacts and electrodes

Copper and nickel co-doping effects on the Structural, Optical and ...

Copper and nickel co-doping effects on the Structural, Optical and Electrical properties of tungsten trioxide nanoparticles by prepared by co-precipitation technique.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://watermanfinance.co.za>

Email: sales@watermanfinance.co.za

Phone: +49-176-8294713

Address: Neue Mainzer Str. 66-68, 60311 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

