

Optoelectronic butterfly-shaped fiber optic welding tray



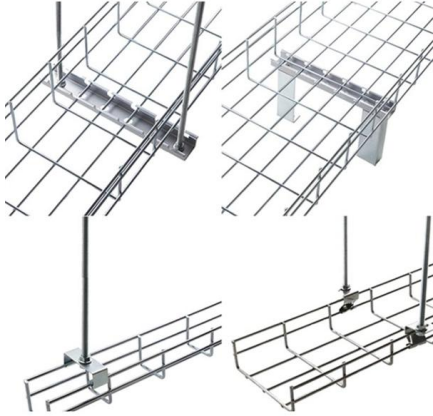


Overview

The 14-pin Butterfly Package is a compact industry standard housing for optoelectronic modules, with options for hermetic sealing. It provides a fiber feed-through, electrical fan-out, and built-in thermal management for photonic integrated circuits (PICs). A 2 or 3-beam vertical configuration laser microwelding cell utilizing a fiber-coupled Nd:YAG laser. Additional features include automatic alignment, device characterization, testing capabilities and sophisticated component tracking throughout the entire assembly process. We designed and fabricated butterfly (BFY) modules with an optical coupling set-up, which is well suited for small-scale production and rapid prototyping of waveguide-fed InP and GaAs OEICs like diode lasers, semiconductor amplifiers and optical modulators.



Optoelectronic butterfly-shaped fiber optic welding tray



High Precision Fiber Optic Welding Machines for FTTX

Fiber-optic fusion splicing machines are essential tools in modern infrastructure development and communication systems. These precision instruments join optical fibers with minimal signal loss,

A novel inspection of fiber post-weld-shift in butterfly laser module

Butterfly packaging technology with a fiber pigtail is widely used in packaging optical modules, and laser welding is used to join components in a butterfly package. During laser welding,



FE discretization of the fiber ferrule-to-dual saddle

Controlling welding-induced-alignment-distortion (WIAD) and maintaining coupling efficiency is obviously the most challenging issue in assembling of fiber-optic



Butterfly laser coupling and welding equipment with polarization

The invention provides a butterfly laser coupling and welding equipment with polarization maintaining optical fiber, including an optical fiber clamp module, a tube shell clamp module, a welding module



Laser micro-welding of 40G optoelectronic butterfly package with

The effects of material selection, laser power, weld diameter/penetration, and beam balancing on post-weld-shift (PWS) during pigtailed of 40G optoelectronic modules have been numerically modeled



Butterfly -Type Fiber Optic Package for Laser Fiber

Butterfly -Type Fiber Optic Package for Laser Fiber Optic Module, Find Details and Price about Butterfly Cavity Optoelectronic Package from



Fiber Optic Alignment and Laser Welding

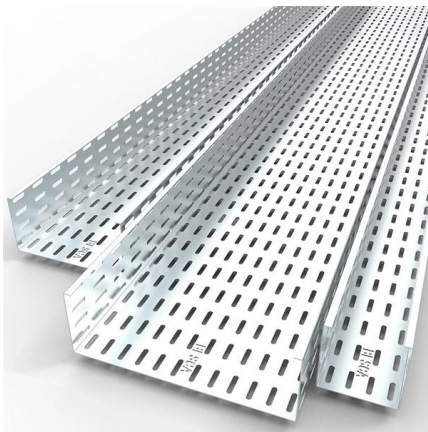
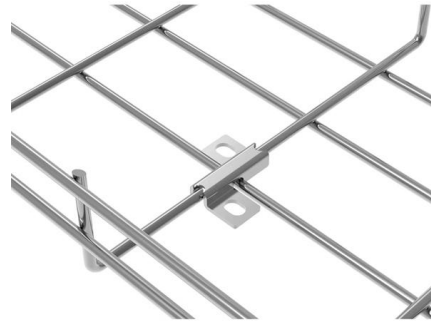
A fiber optic startup needed to ramp production for their fiber optic transponder modules. Their current equipment for aligning and fastening the fiber optic to the





Laser microwelding for fiber-chip coupling modules with tapered

We design a laser welding machine for fabricating butterfly (BFY) modules with an optical coupling setup that is well suited for rapid prototyping and small-scale production of InP and GaAs-based waveguide



Fiber-Alignment Shifts in Butterfly Laser Packaging by Laser-Welding

We present an efficient laser welding assembling sequence for minimizing the misalignment from the postweld shift in butterfly packages during fiber-to-semiconductor laser coupling.

Laser welding induced alignment distortion in butterfly laser module

References (9) Abstract Welding-induced-alignment-distortion (WIAD) is a serious issue in fiber-optic component attachment using laser welding, which can significantly affect the packaging yield.



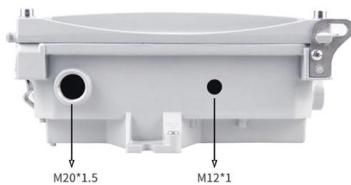
Experimental investigation of laser welding assembling sequences for

Abstract We present an efficient laser welding assembling sequence for minimizing the misalignment from the postweld shift in butterfly packages during fiber-to-semiconductor laser coupling.



Design Guidelines for the 14-pin Butterfly Package

The 14-pin Butterfly Package is a compact industry standard housing for optoelectronic modules, with options for hermetic sealing. It provides a fiber feed-through, electrical fan-out, and built-in thermal



Butterfly

Standard packages for optical telecom transmissions and pump lasers. The most common Butterfly configuration is a 14-pin package with a CuW or CuMo base for enhanced heat dissipation.

Laser microwelding for fiber-chip coupling modules with tapered

We introduce, to our knowledge for the first time, an adjustable welding technique, which we call "strain-reducing" welding, which has several benefits in comparison to the well-known "laser hammering"



Butterfly -shaped optical fiber optical cable

They are called butterfly-shaped due to their unique design, which features a flat shape with two parallel fiber ribbons running down the center of the



Minimization of welding-induced alignment distortion in butterfly laser

Laser welding technology is widely used in fiber optic components assembling. A big issue in fiber optic packaging using laser welding is the welding-induced alignment distortion (WIAD),



Butterfly laser coupling and welding equipment with polarization

The invention provides a butterfly laser coupling and welding equipment with polarization maintaining optical fiber, including an optical fiber clamp module, a tube shell clamp module,

Fischer et al, Laser micro welding for ..doc

This kind of fiber end is called fiber taper and works like a lens with diameters from 20 um to 50 um (fig. 2). With this tapered fibers a coupling efficiency of more than 50% can be reached.



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- Comprehensive specifications
- Customized non-standard products



Components and the welding points of the butterfly-type

The measurement of the relative post-weld-shift (PWS) in the butterfly-type laser module packaging processes is very difficult because the components are very

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Fiber optic cables have been developed as a medium to transfer information within a communication system. The fibers are linked to optical transmitters and optical receivers.

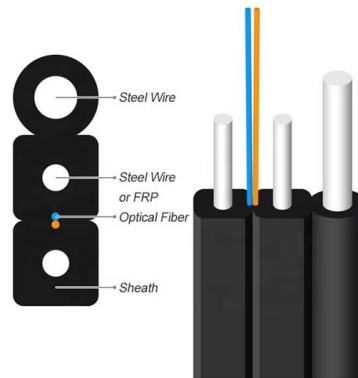


Fiber Laser Welding: A Comprehensive Guide - OMTech

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Fiber Laser Welding Guide: Principles, Advantages & Applications

Discover the ultimate guide to fiber laser welding. Learn how it works, its advantages over traditional methods like TIG and MIG, and its core applications.



LASER WELD

These systems are typically used for optical assembly and for coupling light out of photonic device packaging (butterfly, TO, custom), using, for example, either ferruled optical components or



Laser micro-welding of 40G optoelectronic butterfly package with

The effects of material selection, laser power, weld diameter/penetration, and beam balancing on post-weld-shift (PWS) during pigtailing of 40G optoelectronic modules have been



Laser welding produces high-yield assembly and packaging

Every product in a fiberoptic network contains a chain of optical components, from lenses and crystals to optoelectronic devices such as laser diodes and photodetectors. All require precision

Machine Platforms and Product Lines - ficonTEC Service

Fully automated, industry-qualified assembly for optoelectronics and singulated photonic devices and PICs. Featuring high-precision 'align-&-attach' bonding

Length:33.5mm
Small-end inner diameter:4.0mm
Large-end inner diameter:6.0mm



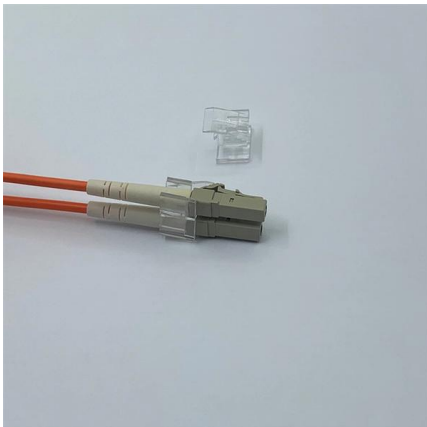
Mathematical modelling: A laser soldering process for an

For sensitive Optoelectronic components, traditional soldering techniques cannot be used because of their inherent sensitivity to thermal stresses. One such component is the Optoelectronic Butterfly



Effect of weld clip design on thermally induced angular misalignment

Thermally-induced angular misalignment of fiber collimators in the laser packaging of optical devices is studied experimentally and numerically in thi



Optimal laser welding assembly sequences for butterfly laser module

In this paper we present the optimized laser welding sequences for butterfly laser module packages, designed to remove the laser hammering procedures for vertical misalignment compensation, by

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