

## Data sheet

### FM-1.3 - Fiber Mount for SAM chips 1.3 mm x 1.3 mm

#### Application of FM-1.3

The fiber mount FM-1.3 is developed for fiber coupling experiments using SAM chips with a size of 1.3 mm x 1.3 mm. With the FM-1.3 a simple and removable fiber butt coupling can be realized. Therefore besides the FM-1.3 accessory only a SAM chip with a 1.3 mm x 1.3 mm chip area and a fiber with a FC/PC connector are needed.

#### Pros and Cons

The fiber mount FM-1.3 has the following advantages:

- The connection between the fiber end of the FC/PC connector and the SAM chip can be easily removed. So the FM-1.3 is ideal for testing SAMs with different parameters in one laser setup.
- After an unwanted local damage of the SAM surface the chip position can be changed slightly, so that a next experiment is possible with the same SAM chip (after cleaning of the fiber end).


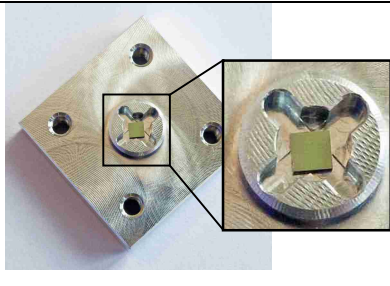
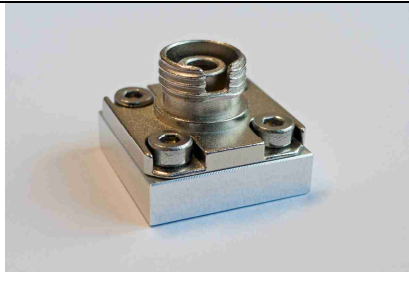



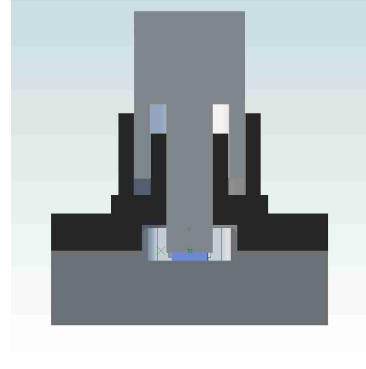
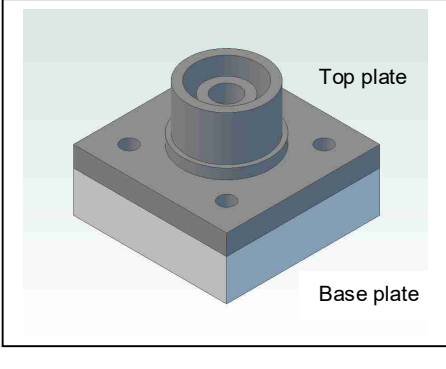
The disadvantage in comparison to a glued SAM on a fiber end is a lower mechanical stability.

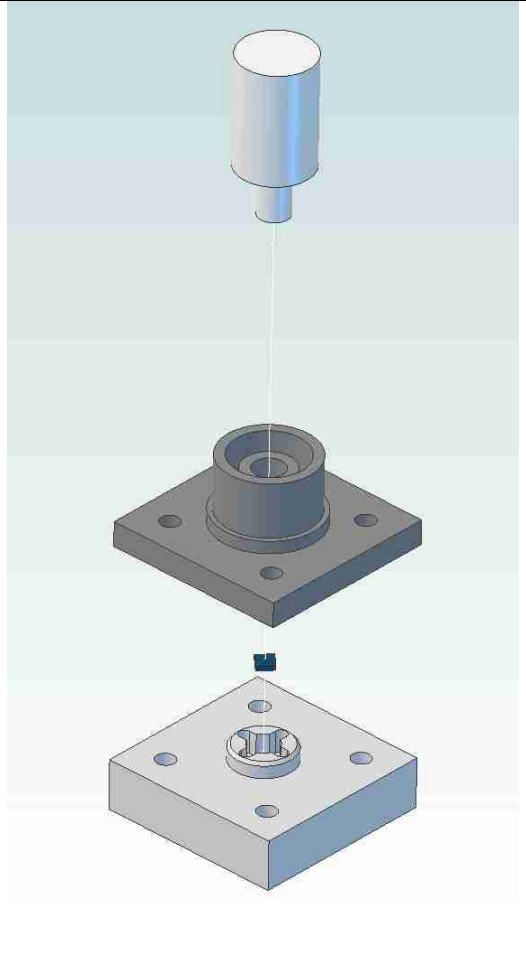
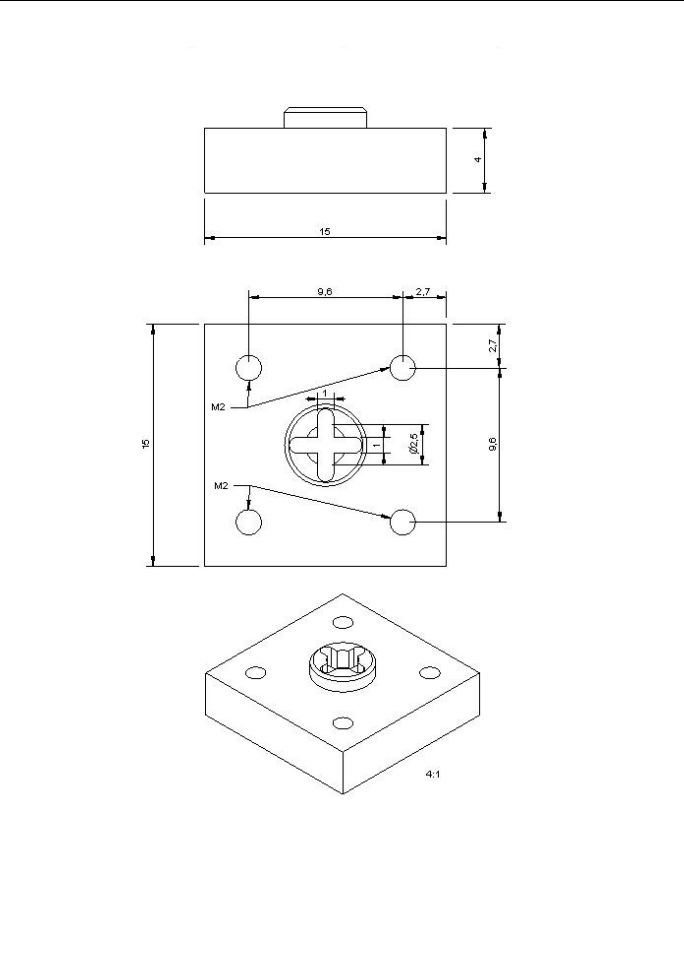
#### How to use the FM-1.3 ?

With the FM-1.3 a SAM chip with an area of 1.3mm x 1.3mm can be butt coupled to a fiber with FC/PC connector. The SAM chip can be exchanged or shifted with respect to the fiber core after a local damage.

Important: Before assembling the FM-1.3 the fiber end must be clean. It is recommended to check the fiber surface using a fiber scope.

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| <p><b>Step 1</b><br/>Disassemble the FM-1.3 so that the base plate is separated</p> | <p><b>Step 2</b><br/>Put a 1.3mm x 1.3mm SAM-chip with face up into the center of the base plate, the chip must be rotated by ~ 45° to be placed in the milled cross</p> | <p><b>Step 3</b><br/>Assemble the FM-1.3 using the top plate and the four M2 screws. The base plate should not be shaken. Otherwise the chip may slip out of place.</p> |

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| <p><b>Step 4</b><br/>Put a fiber cable with FC/PC connector into the FM-1.3 with SAM and fasten locking screw, so that the fiber end contacts the SAM surface</p> | <p>Schematic cross section of the FM-1.3 with fiber connector and SAM chip</p>    | <p>Schematic of FM-1.3</p>   |

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| <p>Explosion schematic of FM-1.3</p>   | <p>Sketch of FM-1.3</p>   |