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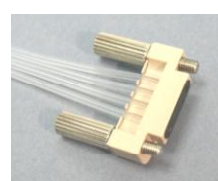
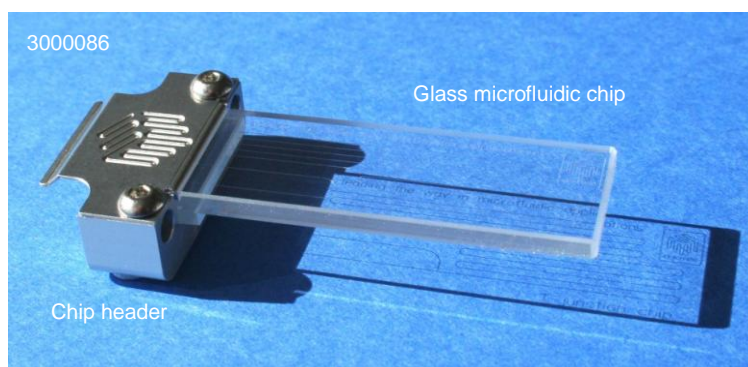
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# INFORMATION SHEET

Part name	Mitos Thin Layer T-Junction Chip with Header	Part number	3000086
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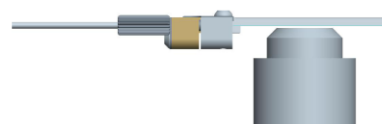
## Description

The Thin Layer T-Junction Chip is a glass microfluidic device designed for a range of applications including mixing fluids, microreactions and droplet formation. Specifically the chip has an ultra thin 150 µm base layer for high magnification microscopy applications. The chip is supplied with a chip header (below). The header allows connection to the Dolomite 4-way Edge Connector (part number 3000024).



Left: Edge Connector (3000024)

Below: Thin layer T-Junction Chip with microscope objective



## Benefits

- Ultra thin design (specifically for high magnification microscopy applications)
- Compact
- Low dead volume
- Quick connect/disconnect
- Extremely smooth channel surface
- Excellent chemical compatibility
- Wide temperature and pressure range

	Chip Specification	Value
1	Number of inputs	2
2	Number of outputs	1
3	Internal channel cross-section	100 µm x 110 µm (depth x width)
4	Channel length after T-junction	278 mm (feed channels = 20 mm and 22 mm)
5	Volume of channel after T-junction	2.5 µl
6	Back pressure with 100µl/min flow (water)	1.5 Bar
7	Surface roughness of channels (R <sub>a</sub> )	5 nm
8	Chip size	45.0 mm x 15.0 mm
9	Chip top layer thickness	2.0 mm
10	Chip base layer thickness	150 µm
11	Operating pressure	30 Bar with edge connector (higher with other connection methods)
12	Operating temperature	250° C with edge connector (higher with other connection methods)
13	Material	Glass
14	Fabrication process	HF etching and thermal bonding

## Channel cross-sectional profile

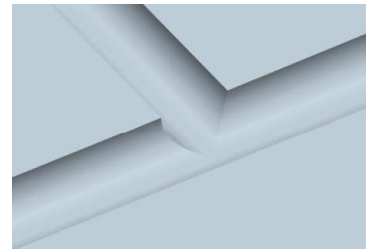
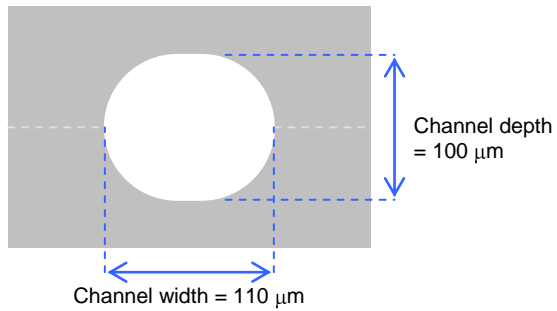


Image of T-junction (base layer only)

## Custom options\*

The channel may be etched to different depths, for example from 50  $\mu\text{m}$  x 60  $\mu\text{m}$  up to 100  $\mu\text{m}$  x 110  $\mu\text{m}$  (depth x width). The top layer or base layer can also be etched giving a near circular channel cross-section.

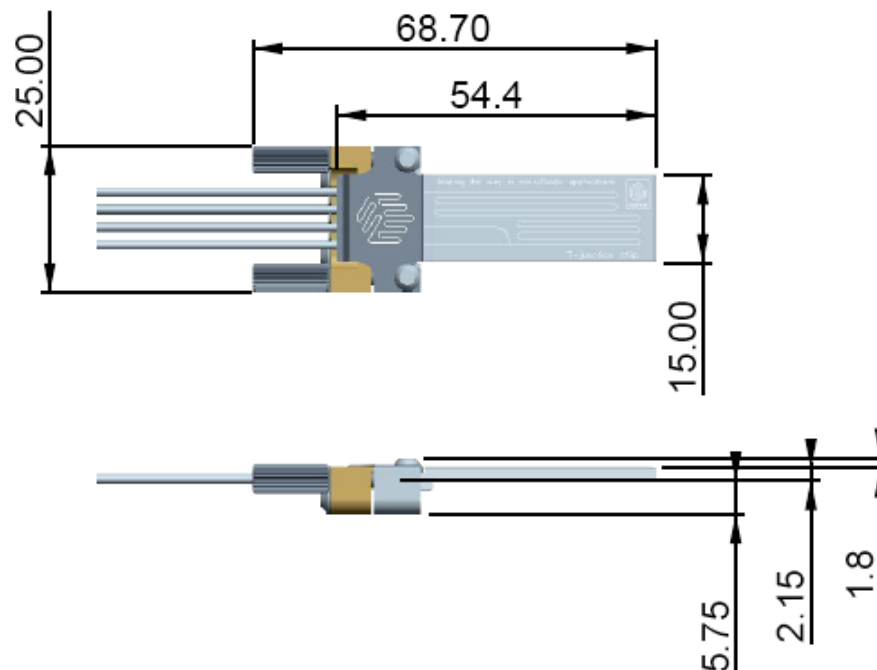
Custom channel layouts can also be specified.

## Custom surface coatings

The channel surface is hydrophilic. The chip can also be supplied with:

- Hydrophobic coating on channel surfaces
- Platinum coating on channel surfaces

## Edge connector geometry



## Optical transmission

