



Lightguides, open perfusion chambers, and closed flow cells for IgTIRFM

TIRF Lightguides for IgTIRFM are rectangular coverslips 22 mm X 40 mm X 0.17 mm. They are made of certified low-fluorescence glass, silica, or sapphire. The base unit is an uncoated super clean TIRFM lightguide, surface of which is highly hydrophilic. TIRF lightguides with chemically modified surfaces are available with alkyl, amine, epoxy, and aldehyde reactive groups. We also offer TIRF lightguides coated with biotin and streptavidin or neutravidin. Highly hydrophobic alkyl-modified surface is designed for immobilization of globular proteins via kinetically irreversible adsorption. For cell culture applications we offer TIRF lightguides coated with poly-L-lysine.

Different **Open Perfusion Chambers** are supplied either attached to TIRF lightguides or separately from lightguides with optical adhesive and instruction for their mounting. Virtually any perfusion chamber or chambers can be adapted to the IgTIRFM, provided that its bottom surface is flat and available for attachment of an adhesion film. The size of perfusion chamber should not exceed 20 mm X 20 mm. Selected open perfusion chambers are shown in Figure 5.

The three most popular **Closed Flow Cells** compatible with IgTIRFM are shown in Figure 6. The volume of the flow cell formed between optical window and the TIRF lightguide ranges from 2 to 20 microliters, depending on thickness of the gasket.

Available as custom-designed are **Micromanufactured Fluidics Blocks** with network of microchannels, manifolds and reservoirs for neuroscience, ion channels and other live cell studies. The fluidics blocks are made of transparent elastomers similar to PDMS. They can be rapidly attached to the surface of TIRF lightguide to obtain on its surface a system of microchannels and reservoirs.

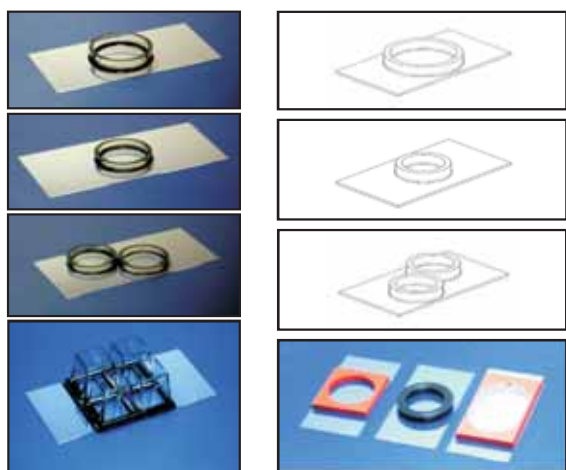


Fig. 5. Open perfusion chambers attached to TIRF lightguides



Fig. 6. Closed Flow Cells for IgTIRF Microscopy