



TIRF Biosensor Instrument Fluorogazer



- Turnkey TIRF biosensor instrument
- Limit of detection - single molecules
- Computer-controlled fluidics and filters
- Fluorescence polarization measurements
- Multicolor LED and laser illuminator
- Photon counting PMT / EMCCD camera
- Optional electrochemical control
- Optional temperature control
- Optional spectrometer (emission spectra)
- Chemically modified TIRF sensor chips
- User friendly software

Analysis of Biomolecular Interactions Molecular Diagnostics

TIRF Biosensor Fluorogazer

Fluorogazer is a turnkey total internal reflection fluorescence (TIRF) fluorometer equipped with a computer-controlled fluidics, multicolor illuminator, filter wheels at the emission channel, and photon counting PMT or EMCCD camera as photodetectors. The limit of detection of Fluorogazer is at the level of single molecules. It is a cost effective, modular, upgradeable system, with automated delivery of up to four bioanalyte solutions and two buffers. Fluorogazer is interfaceable with autosamplers for unattended analyses. Seven bright LEDs equipped with bandpass filters, silica optics, and filter wheels provide excitation and detection of fluorescence in UV, visible, and near IR ranges of spectrum. Optional ElectroChemical (EC) polarization, electric field, and dielectrophoretic control can be used with Fluorogazer for manipulating with biomolecules and live cells directly in the TIRF flow chamber. Different EC programs accelerate mass transfer, stimulate association, lyse cells or electroporate cell membranes, regenerate assays immobilized at the TIRF surface, or discriminate between close homologs. Fluorogazer is supplied with reagent kits for immobilization of biomolecules, chemically modified TIRF sensor chips, and disposable sensor cartridges for biohazardous analytes. User friendly software contains templates for typical TIRF sensogram measurements, wizard for designing custom-defined fluorescence polarization, resonance energy transfer (FRET), and fluorescence recovery after photobleaching (FRAP) experiments.

Data Acquisition and Processing Building of sensograms and calculating rate constants for selected regions of interest (ROI)

