

ZeptoREADER

The Ultra Sensitive High Throughput Microarray Reader



Description

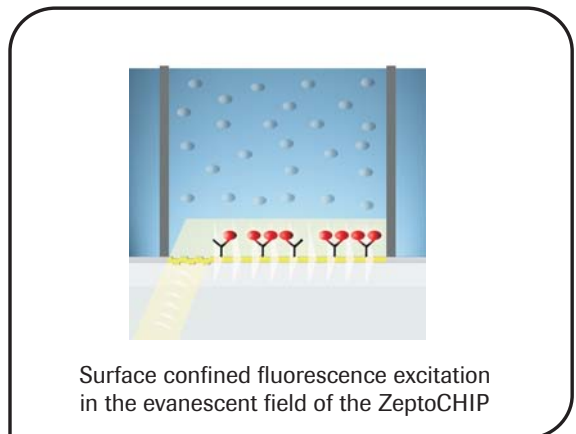
The ZeptoREADER is a dedicated microarray fluorescence readout system for ZeptoCHIPS optimized for high sensitivity DNA and protein arrays. The innovative planar waveguide technology results in a 50-fold higher signal to noise ratio compared to conventional microarray readers. This unprecedented detection sensitivity is realized by a highly sophisticated fluorescence signal generation principle which efficiently separates the excitation from the emission light. Fluorophores in solution are not within the evanescent field and do not significantly contribute to the fluorescence signal resulting in simple assay protocols and fast time-to-result. Measurement in solution allows even the analysis of delicate bioaffinity systems with highest accuracy. The ZeptoREADER provides two fluorescence excitation wavelengths of 532 nm and 635 nm.

Benefits and Features

- **Ultra sensitive** evanescent field fluorescence excitation offers up to 50-fold higher sensitivity than conventional scanners
- **Less sample preparation** surface confined excitation of fluorophores reduces background signals from non-bound fluorophores
- **High throughput** walk-away measurement of 360 microarrays creates over 120'000 data points in 6 hours
- **Precise quantification** Measurement in solution allows for the assay of delicate bioaffinity systems and reduces photo-bleaching
- **Ultimate reliability** Swiss made for highest possible quality and precision



ZeptoREADER F3000



Surface confined fluorescence excitation in the evanescent field of the ZeptoCHIP

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Specifications

Excitation lasers	red 635 nm, green 532 nm
Emission filters	centered at 675 nm (red) and 572 nm (green), exchangeable on request
Detection system	high numerical aperture lens system, Peltier-cooled high performance 12 bit CCD camera
Image resolution	13 μ m
Dynamic range	3 orders of signal magnitude
Microarray chip format	ZeptoCHIP planar waveguide 14 mm x 57 mm, assembled in ZeptoCARRIERS
Sampling area	5 mm x 6.8 mm in object focal plane
Exposure time	0.08 - 30 seconds
Processing time	as fast as 30 seconds per array typically about 30 min for 36 arrays with 10 s exposure time
File format	standard 16-bit TIFF with integrated parameter data in the header. Parameter values can be viewed using ZeptoVIEW or SensiChip View software
Readout	selectable manual or automated microarray readout parameters, readout status monitored and displayed
Experiment tracking	barcode scanner for identification of experiments and readout parameters
Capacity	stacker holds up to 10 ZeptoCARRIERS, each carrier holds up to 6 ZeptoCHIPS with 6 microarrays each
Power requirements	220 - 240 V, 50 Hz, max 450 W 110 - 120 V, 60 Hz, max 150 W
Dimensions	width: 0.70 m / 27.6 in, depth: 0.52 m / 20.5 in, height: 0.55 m / 21.7 in
Weight	50 kg / 110 lbs
Ambient conditions	18°C - 27°C, 64°F - 81°F, <70% humidity, non-condensing

Order Information

info@zeptosens.com

PN	Description
1000	ZeptoREADER F3000 (220 V - 240 V)
1010	ZeptoREADER F3000 (110 V - 120 V)
1055	ZeptoREADER Decode Option