Supplemental Document

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Multiplex optical biosensors based on multi-pinhole interferometry: supplement

JOHANNES BLÄSI* **AND MARTINA GERKEN**

Institute of Electrical Engineering and Information Technology, Kiel University, Kaiserstraße 2, 24143 Kiel, Germany
jbl@tf.uni.kiel.de

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Supplement 1

1. FIGURES

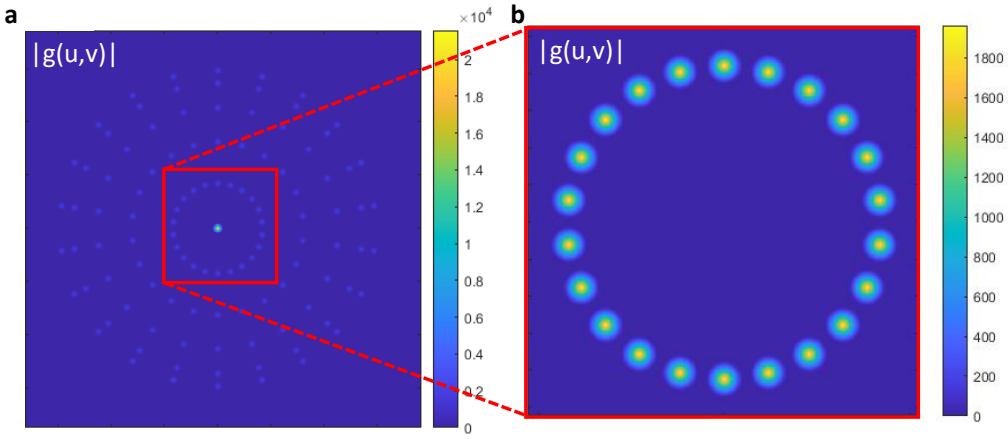

Fig. S1. Fourier transform of a 11-pinhole diffraction pattern. a) Magnitude $|g(u,v)|$ for the circular 11-pinhole pattern with pinhole diameter 50 µm. The center spot is the superposition of all autocorrelation components. b) Magnitude g(u,v) of the inner circle without the center spot for circular 11-pinhole pattern. Each point shows a cone-shape intensity distribution.

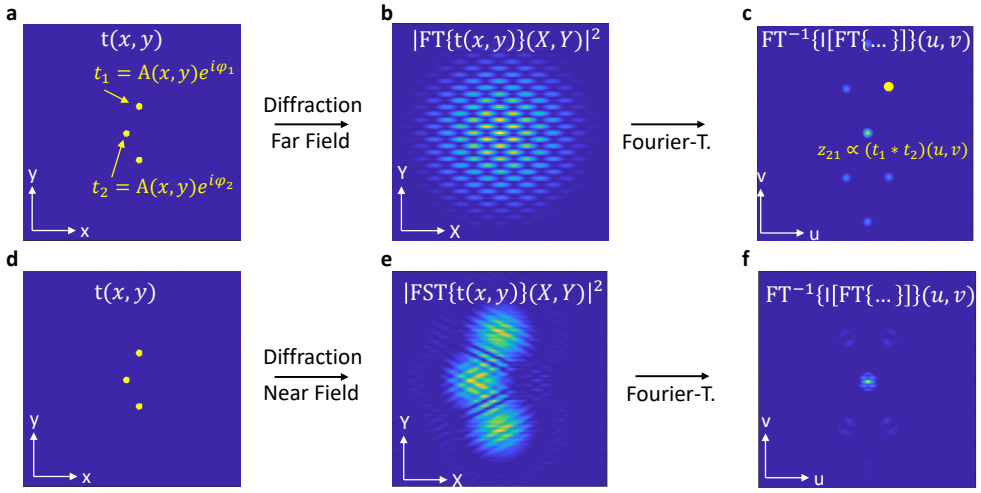

Fig. S2. Diffraction pattern computation. a) Aperture of the 3-pinhole design, b) and its far field diffraction pattern computed by Fourier transform FT, c) and the magnitude of its inverse Fourier transform. The bright spots are the spatial frequencies, proportional to the convolution of the corresponding pinhole pair. d) Aperture of the 3-pinhole design, e) and its computed near field diffraction pattern calculated by the Fresnel transform FST, f) and its inverse Fourier transform.