

Supplementary Information

Digital DNA detection based on compact optofluidic laser with ultra-low sample consumption

Wonsuk Lee,^a Qiushu Chen,^b Xudong Fan,^b and Dong Ki Yoon^{a*}

^aGraduate School of Nanoscience and Technology and KINC, KAIST, Daejeon, 305-701,
Republic of Korea.

^bDepartment of Biomedical Engineering, University of Michigan, 1101 Beal Ave., Ann
Arbor, MI 48109, USA.

*nandk@kaist.ac.kr

Table S1. Sequences of 40 bases long ssDNA samples used in the experiments.

Biotinylated probe ssDNA	5' – Biotin – ACA ACA AAG AAC AAA TAT ACA TAT ATG ATA TAA CAA CAA A – 3'
Target ssDNA	5' – TTT GTT GTT ATA TCA TAT ATG TAT ATT TGT TCT TTG TTG T – 3'
Single-base-mismatched ssDNA	5' – TTT GTT GTT ATA TCA TAT ATT TAT ATT TGT TCT TTG TTG T – 3'

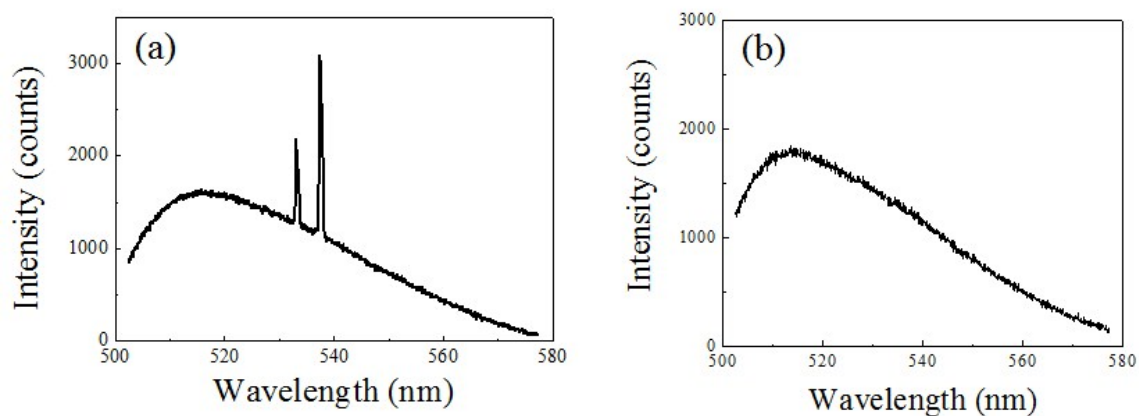


Figure S1. Laser emission spectra from a hollow-core glass capillary OFRR with the dsDNA-intercalating dye solution (250 μM) filling out the entire cavity. Temperature is 55°C and pump intensity is 500 $\mu\text{J}/\text{mm}^2$ for both. (a) Laser emission from the target is superimposed to the fluorescence background. (b) The single-base-mismatched DNA does not show laser emission, while the fluorescence background persists.