

Figure S1: Numerical simulations. Thee types of simulation results are shown: power law with noise (PLN), power law with cutoff (PLC), and power law with cutoff and noise (PLCN). (A) Average PSD for PLN and PLC. (B) Crossover frequencies  $f_c$  vs. realization time. (C) Zero-frequency spectra  $S_t(f)|_{f=0}$  vs. realization time. The data corresponding to simulations with cutoff time are shifted down ten fold for clarity. (D) Average PSD for PLCN. (E) Crossover frequencies  $f_c$  vs. realization time. (F) Zero-frequency spectra  $S_t(f)|_{f=0}$  vs. realization time.

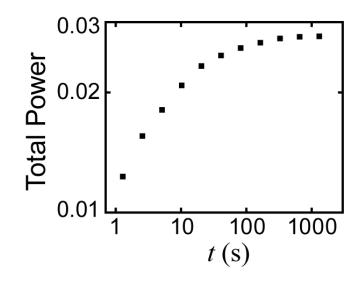


Figure S2: Total power vs. experimental time in blinking QDs. The total power is found by integrating over the power spectrum  $\int_{1/t}^{\infty} S_t(f) df$ . The power increases to a finite value, showing that the total power is bounded.