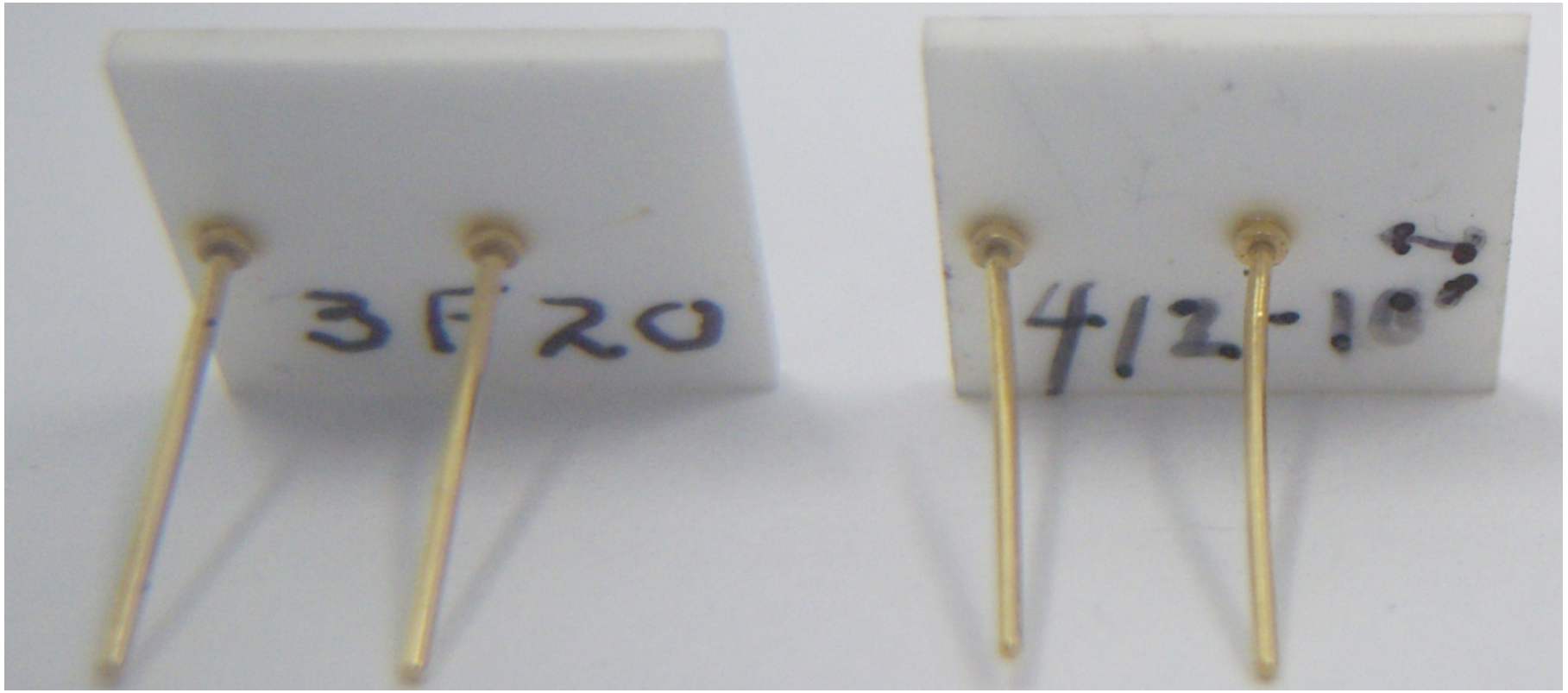

#3F20 is an APD with a very thin (3 micron) drift region grown epitaxially. This is an early prototype and is kind of noisy compared to the standard APD. It is probably best to operate this one at 1650 V where the gain is 50. Noise and current are too high at gain 100 (1710 V).
This device has no n+ diffusion into the back side. The back contact here is electroless gold covered by silver epoxy and is a large area contact

#412-10-1 is a very thin APD made by deep diffusing into 3 Ohm cm Si instead of the standard 30 Ohm cm. At room temperature it breaks down at 620 V and has a gain of 100 at 565 V. This is a low noise device, but has about half the stopping thickness of the standard APD.

980 nm Vcsel, <1ns light pulse, ~15 MIP on APD