

DPN[®] Probes: Type C

Reference: DS-cpen

DPN[®] Probes: Type C passive probe arrays

Silicon nitride Type C Probe Arrays are multi-probe arrays optimized for DPN applications using the NSCRIPTOR™, DPN 5000, and NLP 2000 systems. To provide greater versatility the probes feature two different cantilever configurations.

Side C-1 contains an array of 5-cantilevers with 4-cantilevers designed for multi-patterning, referred to as “Writer” probes. A wider cantilever designed for laser alignment and imaging, is known as a “Reader” probe. Side C-2 consists of 2 different arrays. Probe array C-2a (on the left) is similar to C-1, but is a stiffer array of 10 Writer probes and 1 Reader probe. Probe array C-2b (on the right) is a simple 2-cantilever array.

The Type C probe arrays are designed to be used with NanoInk’s Universal Inkwells (Part # IWL-0009-03) to form a simple and effective method of simultaneously delivering ink to the probe tips.

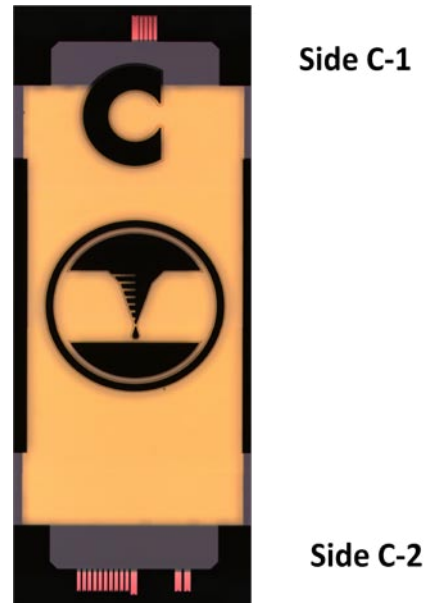


Figure 1: Optical microscope image showing the orientation and cantilever configurations of the Type C Probe Array. Side C-1 is at the top and Side C-2 is at the bottom.

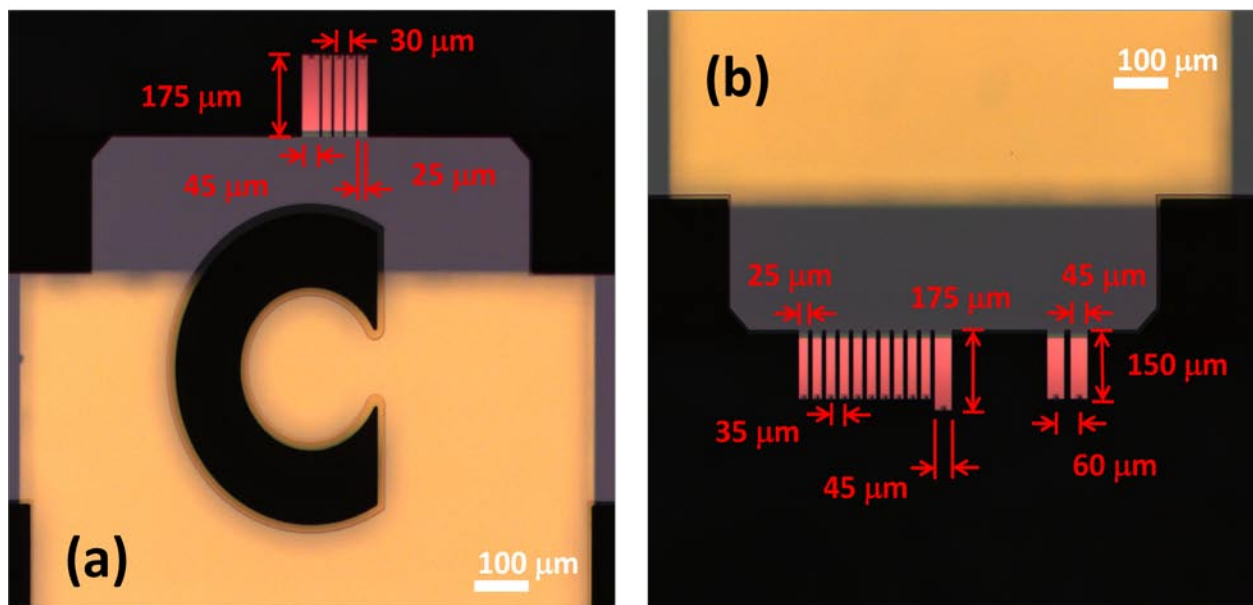


Figure 2: Optical microscope images of Type C Probe Array cantilever configurations and their measurements. (2a) Side C-1 has 4 Writer probes and 1 Reader probe. (2b) Side C-2 has a 2-cantilever array on the right and on the left is an array of 10 Writer probes and 1 Reader probe.

Nominal Dimensions of DPN Type C Probes

Probe Type	Reader k (N/m)	Reader Length (μm)	Reader Width (μm)	# Writer Probes	Writer k (N/m)	Pitch (μm)	Writer Length (μm)	Writer Width (μm)
C-1	0.061	175	45	3	0.034	30	175	25
C-2a				2	0.097	60	150	45
C-2b	0.061	175	45	10	0.054	35	150	25

Note: Tip radius is ~15 nm

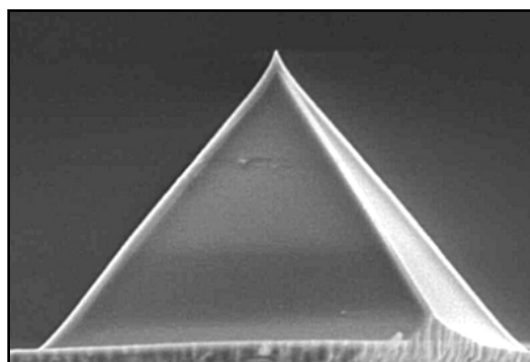


Figure 3: FESEM image of a probe tip showing a pyramidal base and a tip radius of ~15 nm.

NanoInk offers additional probe types, including single probes and multi-probe arrays. For more information about our products and pricing, please visit our web site at: www.nanoink.net or contact NanoInk Sales Department at sales@nanoink.net or 1-847-679-NANO.

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