

Item: Silicon Nitride Trampoline Resonator Prototypes

No.	Item	Required Specifications
1	Silicon Frame	Intrinsic single-crystal silicon with resistivity >10,000 $\Omega\cdot\text{cm}$; lateral dimensions: 5.0 $\times$ 5.0 mm (± 0.2 mm per side); thickness: 200 ± 10 μm .
2	Silicon Nitride Membrane	Membrane area: 1.00 $\times$ 1.00 mm (± 0.03 mm per side); thickness: 100 ± 5 nm; as-deposited tensile stress: 0.9 ± 0.2 GPa.
3	Trampoline Structure	Four tethers connecting the membrane corners to a central pad; tether width: 20.0 ± 1.0 μm ; central pad: 100 $\times$ 100 μm (± 5 μm per side). Rounded junctions shall be provided at the pad and frame connections.
4	Inspection and Reports	All delivered devices shall undergo optical inspection and be free of cracks, broken tethers, and missing structural features. Reports shall include membrane stress, film thickness, structural dimensions, flatness, and device images. Measurement methods and tested samples shall be identified.