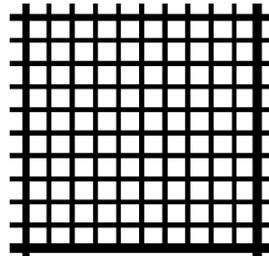
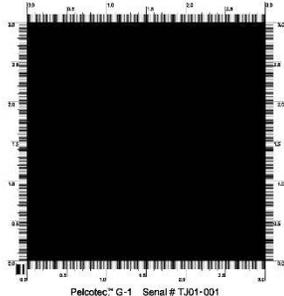


AISthesis Products, Inc.

Advanced Imaging Products for Nanotechnology, Engineering and Life Sciences

Wafer Level Certificate of Traceability Pelcotec™ G-1 Silicon Calibration Standard



Product Number: G-1T

Product Description: 3 x 3mm Pelcotec™ 1µm Grid Calibration Standard

Product Serial Numbers: TJ01-xxx through TJ05-xxx

The accuracy of these products was determined by reference comparison to working standards traceable to the National Institute of Standards and Technology (NIST), Test No. 861/280822-11.

Line	Average pitch	Standard Deviation (1σ)	Total expanded uncertainty (3σ)
Horizontal	100.3µm	±0.5µm	± 1.5 µm
Vertical	100.0µm	±0.5µm	± 1.5 µm
Horizontal	10.03µm	±0.05µm	± 0.15 µm
Vertical	10.00µm	±0.05µm	± 0.15 µm
Horizontal	1.00µm	±0.005µm	± 0.015 µm
Vertical	1.00µm	±0.005µm	± 0.015 µm

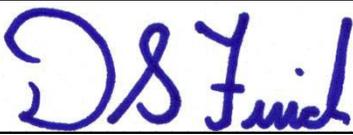
The average pitch was determined using a minimum of ten die sampled at random from a batch of five production wafers (TJ01 through TJ05). A total of 195 horizontal and 225 vertical center-to-center measurements were taken randomly across each of the ten die. The total expanded uncertainty includes both Type A and Type B uncertainties corrected for sample size using an appropriate Student t-factor.

At the narrowest point, the average measured line widths are 200±10nm, 300±15nm and 400±20nm. The etch depth measured by AFM for TJ01 = 370nm±10% and for TJ02 through TJ05 = 270nm±10%.

Equipment used:

Instrument	Model number	Serial #	NIST Certified CD/Recalibration	Resolution	Repeatability
Dual Beam FIB	FEI Helios 600	D0410	CD-PG01-0211/June 2014	0.9nm	0.03%

Dudley S Finch
Certified by


Signature

November 20th 2013
Date

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