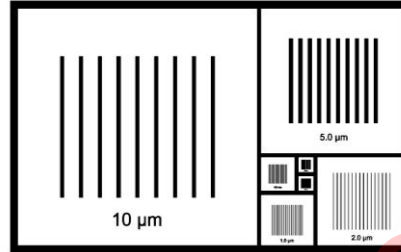
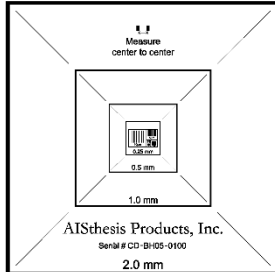




AISThesis Products, Inc.

Advanced Imaging Products for Nanotechnology, Engineering and Life Sciences

Wafer Level Certificate of Traceability for Pelcotec™ Critical Dimension Standard



Product Number: **Pelcotec™** 700-01 CDMS-0.1T-Etched Manufactured for and distributed by:

Product Description: 2.5x2.5mm **Pelcotec™** 2mm-100nm Critical Dimension Magnification Standard



Wafer Identifier: CD-BH05

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 of wafer	Number of lines averaged	Average pitch uniformity (1σ uncertainty)	Total expanded uncertainty (3σ) average pitch for wafer*
2.0mm	2.00 mm	2	± 2μm (±0.10%)	± 7μm (±0.35%)
1.0mm	1.00 mm	2	± 1μm (±0.10%)	± 3.5μm (±0.35%)
0.5mm	0.500 mm	2	± 0.5μm (±0.10%)	± 1.75μm (±0.35%)
0.25mm	0.250 mm	2	± 0.25μm (±0.10%)	± 0.9μm (±0.35%)
10μm	10.00 μm	9	± 0.01μm (±0.10%)	± 0.035μm (±0.35%)
5μm	5.00 μm	12	± 0.01μm (±0.20%)	± 0.035μm (±0.70%)
2μm	2.00 μm	16	± 0.004μm (±0.20%)	± 0.014μm (±0.70%)
1μm	1.00 μm	17	± 0.002μm (±0.20%)	± 0.007μm (±0.70%)
500nm	500.8 nm	20	± 1.00nm (±0.20%)	± 3.5nm (±0.70%)
250nm	250.4 nm	21	± 0.50nm (±0.20%)	± 1.75nm (±0.70%)
100nm	100.3 nm	52	± 0.20nm (±0.20%)	± 0.75nm (±0.70%)

* The 3σ uncertainty (99.73% confidence interval) average pitch is determined using a minimum of nine die per production wafer. Each average pitch is determined using 100+ measurements on each die averaged over the stated number of lines. The total expanded uncertainty includes both Type A and Type B uncertainties corrected for sample size using an appropriate Student t-factor.

Equipment used:

Instrument	Model number	Serial #	NIST Certified CD	Resolution	Repeatability
FE-SEM	FEI Apreo2	9958357	CD-PG01-0211	0.9nm	0.03%

Dudley S. Finch
Certified by

Signature

January 26th, 2024
Date

This certificate shall not be reproduced without the permission of AISThesis Products, Inc.
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