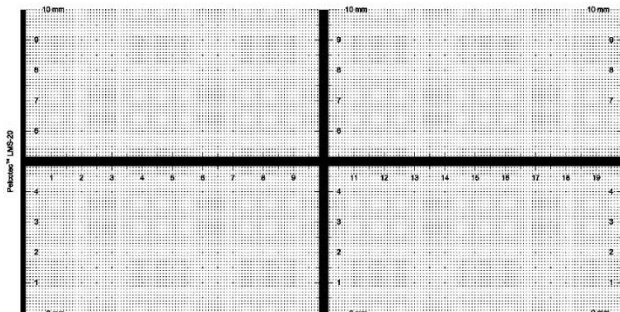


# AISthesis Products, Inc.

Advanced Imaging Products for Nanotechnology, Engineering and Life Sciences

## Wafer Level Certificate of Traceability

### Pelcotec™ LMS-20GT Low Magnification Glass Calibration Standard



Product Number: LMS-20GT

Product Description: 22 x 11mm Pelcotec™ 1mm Low Magnification Calibration Standard

Product Serial Numbers: GTL01-xxx through GTL06-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 (horizontal and vertical)	Standard Deviation (1 $\sigma$ )	Total expanded uncertainty (3 $\sigma$ )
1.0mm	1.00 mm	$\pm 0.002$ mm	$\pm 0.006$ mm
0.5mm	0.50 mm	$\pm 0.002$ mm	$\pm 0.006$ mm
0.1mm	0.10 mm	$\pm 0.0007$ mm	$\pm 0.0025$ mm
0.01mm	0.010 mm	$\pm 0.0007$ mm	$\pm 0.0025$ mm

The average pitch was determined using ten die randomly sampled from a batch of production wafers (GTL01 through GTL05). A total of 80 center-to-center measurements were taken 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.

Equipment used:

Instrument	Manufacturer	Serial #	Objective Lenses	NIST Certified CD/Recalibration	Repeatability
Light Microscope	Motic BA310MET	117000 0170	10x, 0.25N.A, 20x 0.4N.A. & 50X 0.55N.A. Plan Achromat	CD-PG01-0211 / June 2015	0.07%

Dudley S Finch  
Certified by

Signature

April 22<sup>nd</sup> 2015  
Date

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