

## Universal Calibration Standard Slide (SPI # 09748-AB )

Designed for measurement calibration of microscopes and machine vision systems.

Includes Concentric Circles and Squares, Line Gratings, Grid & Dot Arrays, Geometric root2 progression of Dots and Square blocks as well as coarse and variable fine linear Line Scales.

Each glass slide has a unique permanent serial number and can be supplied with full or partial UKAS certificate of accuracy.

Starting from a fixed 'Datum point' mark, each individual pattern or array can be located using X, Y coordinates. See table (over).

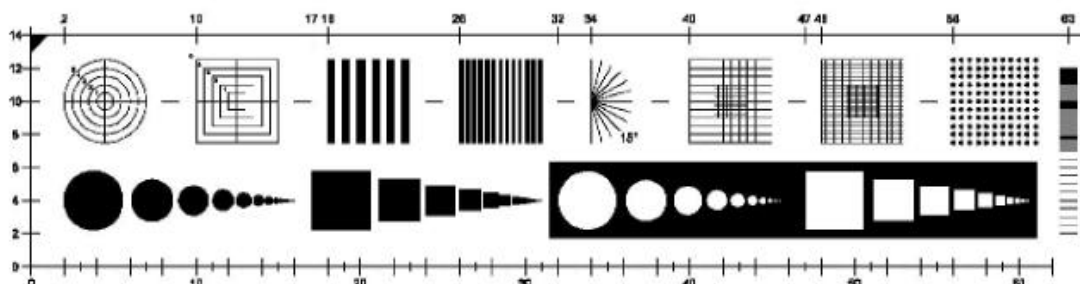


Calibration of microscopes and image analysis systems is becoming more sophisticated, with the requirement being for a variety of image patterns to satisfy the numerous parameters. Pyser-SGI has introduced a new multi-function calibration standard specifically for these applications.

Multiple images on a single slide provide the most cost-effective solution to calibration and resolution checking of microscopes and image analysis systems. The combination of scales, dots, circles, squares, rulings, grids and angles can be supplied with an internationally traceable certificate of calibration for those who require ISO conformity.

### General Specification

General overall accuracy	0.5 $\mu$ m
Coating	Enduring evaporated chrome image
Optical density	>2.5
Substrate	Soda Lime Glass
Size	76mm x 25mm x 1.5mm
Package	Polished wooden case



PS20 Universal Calibration Slide Image Details

ID	Pattern Name	Location	Description
A	Concentric Circles	X=2 Y=10	1, 2, 3, 4, 5mm Circles with Cross Line and circle identifier. Line width 20µm
B	Concentric Squares	X=10 Y=10	1, 2, 3, 4, 5mm Squares with Cross Line and circle identifier. Line width 20µm
C	Line Grating 25 lines /mm	X=18 Y=10	12.5 Line Pairs per mm (40µ line 40µ space)
D	Line Grating 100 lines /mm	X=26 Y=10	50 line pairs per mm (10µ line 10µ space)
E	Half Protractor	X=34 Y=10	15° Spacing Line width 20µ
F	Grid Array Coarse	X=40 Y=10	5mm square array with 0.5mm divisions and central 2mm square with 0.25mm divisions. Line width 20µ
G	Grid Array Fine	X=48 Y=10	5mm square array with 0.1mm divisions and central 2mm square with 0.05mm divisions. Line width 8µ
H	Dot Array	X=56 Y=10	Dot diameter 0.25mm, dot centre to centre spacing 0.50mm — 11x11 grid=121 dots
I	Geometric progression of Opaque Dots	X=2 Y=4	<p>Line array of dot or square shapes, of either clear or opaque. Reducing in size in a Root 2 progression for the purposes of edge threshold detection to enable an image analyser to measure the size correctly, or general shape size comparison.</p> <p>Root 2 progression of 21 dots or square shapes, from 3.5µm to 3.5mm</p> <p>Nominal size in mm Dot/square size — Large to small in mm  <b>3.5833; 2.5338; 1.7917; 1.2669; 0.8959; 0.6335; 0.4479; 0.3167; 0.2240                      0.1584; 0.1120; 0.0792; 0.0560; 0.0396; 0.0280; 0.0198; 0.0140; 0.0099;                      0.0070; 0.0049; 0.0035</b></p>
J	Geometric progression of Opaque Squares	X=17 Y=4	
K	Geometric progression of Clear Dots	X=32 Y=4	
L	Geometric progression of Clear Squares	X=47 Y=4	
M	Vertical Scale Fine Variable	X=63 Y=2	<p>Overall Scale length 10mm.</p> <p>5mm in 0.5mm divisions. Line width 20µ</p> <p>4mm in 0.1mm divisions. Line width 10µ</p> <p>1mm in 0.01mm divisions. Line width 3µ</p>
N	Horizontal Scale Coarse	X=0 Y=0	Scale length 62mm long in 2mm divisions, subdivided in 1mm divisions with a 20µ line width



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