
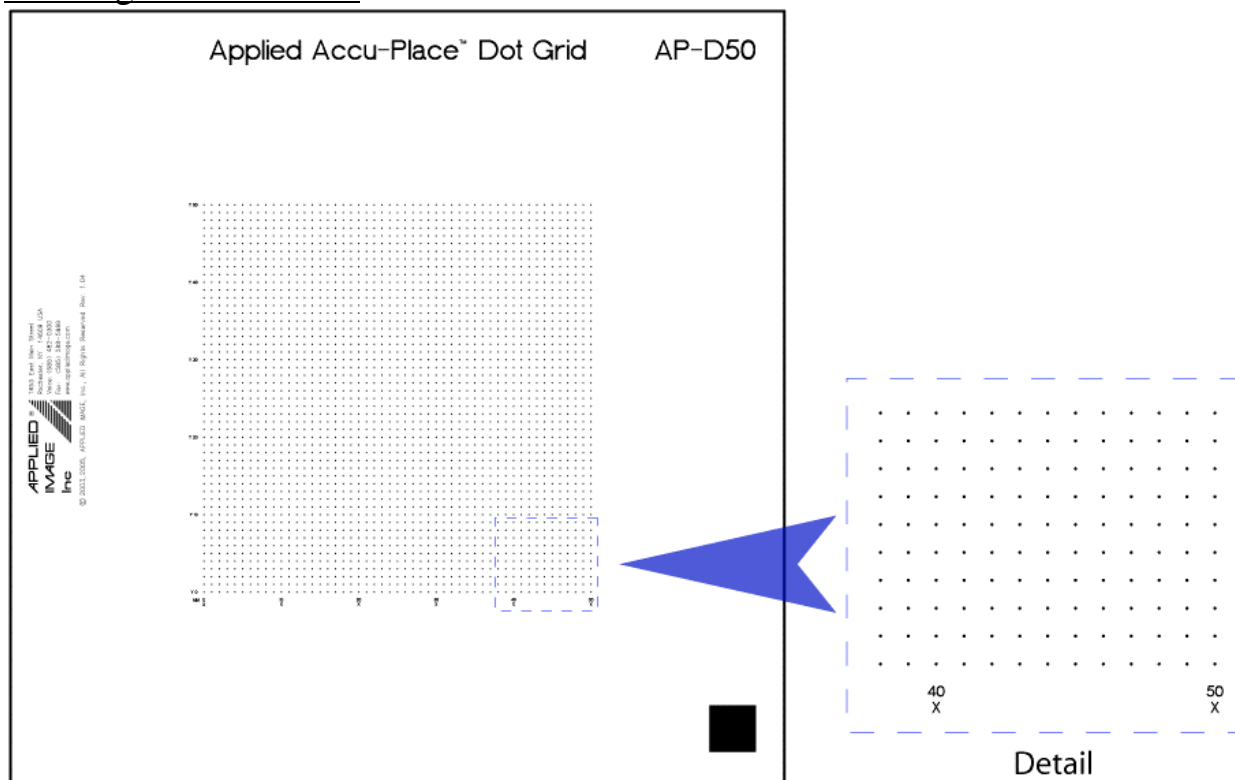


1653 East Main Street Rochester, NY 14609 USA Voice: 585.482.0300 FAX: 585.288.5989 imaging@appliedimage.com	AP-D Accu-Place™ Dot Grid Product Specifications	<b>APPLIED</b> ® <b>IMAGE</b> <b>Inc</b> 
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**Catalog Part No:** AP-D50-P / AP-D100-P / AP-D200-P / AP-D300-P

**Product Name:** Accu-Place™ Dot Grid

**Drawing / Photo of Part:**



The above image is an approximate representation of the actual product.  
Specifications are subject to change without notice.

**Description:** This family consists of four different size parts:  
AP-D50, AP-D100, AP-D200, AP-D300

**Substrate Sizes:** 100x100mm, 125x125mm, 250x200mm, 350x200mm

**Substrate Type:** Soda-lime Glass, Photo-Paper or Opal Glass.

**Note:** White vinyl backing may be applied to back of transparent parts to enhance reflection use. (Extra charge applies.)

**Part Number suffix specifies the material:**

CG = chrome glass; OP = Opal Glass; RM = Reflective Material (photo-paper), TM= Transmission Material (photo film)

**Image Forming Material:** Chromium or Photo-Emulsion

*Please contact Applied Image customer service at the address noted above, for custom images, shapes and materials.*


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Image Description: Precision dot images placed in a grid pattern. Image pattern sizes are as follows.

PN: AP-D50-P-xx

Image Centers: 50x50mm, dot size = 0.1mm diameter, 1mm pitch,  
51x51 array, 50.1x50.1mm overall

PN: AP-D100-P-xx

Image Centers: 100x100mm, dot size = 0.2mm diameter, 2mm pitch,  
51x51 array, 100.2x100.2mm overall

PN: AP-D200-P-xx

Image Centers: 200x150, dot size = 0.5mm diameter, 5mm pitch,  
41x31 array, 200.5x150.5mm overall

PN: AP-D300-P-xx

Image Centers: 300x150mm, dot size = 1mm diameter, 10mm pitch,  
31x16 array, 301x151mm overall

Polarity: Positive (opaque or black dots)

Reading Direction: Right Read Chrome / Emulsion Up (RRCU / RREU)

Image Contrast / Density: high contrast, optical density 2.0 or higher (chrome or film); photo-emulsion reflection optical density 1.0 or higher

History / Typical Use: Checking accuracy of various manual and video measuring instruments. Size and position verification of video analysis systems and auto-measuring instruments.


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Image Placement Accuracy: 0.002 mm per 100 mm at 68 degrees F (20C).  
 (glass based parts only)

Image Placement Linearity (point to adjacent point): 0.001mm distortion  
 max. (glass based parts only)

Note: Accuracy is affected by plate flatness and temperature.

Typical Soda Lime Glass Flatness:

Standard Plates up to 175mm x 175mm; better than 10μ for any 100mm x 100mm area.

Standard Plates larger than 175mm ; better than 10μ for any 100mm x 100mm area and a maximum bow of 200μ.

Material Notes:

-Thermal expansion coefficient of soda-lime glass is 0.0000045- 0.0000052 inch/inch/ deg. F.

-Flatness of Opal material may vary.

-Specifications reflect standard off the shelf materials.

-Improved materials are available on special order.

-Polyester or paper expansion is the major source of change in photo-emulsion versions. Thermal expansion and humidity expansion are greater for paper bases than other substrates.

-Plates are imaged with the back surface held by a flat vacuum platen. This generally causes the plate flatness to be better than when it is in the free state. The point to point length change from a plate in the flattened state compared to a bowed state is approximately:

Typical length change of glass plate due to plate bowing;

<u>Length</u>	<u>10μ</u>	<u>100μ</u>	<u>200μ</u>	<u>400μ</u>	<u>Bow</u>
100mm	0.002μ	0.2μ	0.8μ	3.2μ	
200mm	0.001μ	0.1μ	0.4μ	1.6μ	Length
300mm	0.0007μ	0.07μ	0.27μ	1.1μ	Change