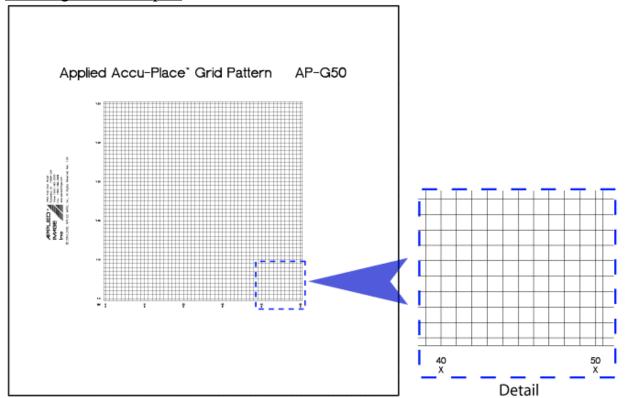
1653 East Main Street Rochester, NY 14609 USA Voice: 585.482.0300 FAX: 585.288.5989 imaging@appliedimage.com AP-G
Accu-Place[™]
Grid Pattern
Product Specifications



Catalog Part No: AP-G50-P / AP-G100-P / AP-G200-P / AP-G300-P

 $\underline{Product\ Name}\colon\ \boldsymbol{Accu-Place}^{^{TM}}\ \boldsymbol{Grid\ Pattern}$

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-G50, AP-G100, AP-G200, AP-G300

<u>Substrate Size</u>: 100x100mm, 125x125mm, 250x200mm, 350x200mm

<u>Substrate Type</u>: Soda-lime Glass, Transparent polyester, Photo-Paper or Opal Glass. Note: White vinyl can be applied to the back of transparent parts to aid in reflection use. (Extra charge applies.)

Part Number suffix specifies material:

CG = chrome glass; TM = Transparent Material (photo-film/polyester);

OP = Opal Glass; RM = Reflective Material (photo-paper)

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

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AP-G Accu-Place[™] Grid Pattern Product Specifications



<u>Image Forming Material</u>: Chromium or Photo Emulsion (Note: photo-emulsion line widths below 0.025mm will be weaker in appearance and low contrast)

Image Description: Precision grid lines are accurately placed in a repeating pattern.

PN: AP-G50-P-xx

Image: 50x50mm, 1mm pitch, 51x51 line count, 0.010mm line width

PN: AP-G100-P-xx

Image: 100x100mm, 2mm pitch, 51x51 line count, 0.010mm line width

PN: AP-G200-P-xx

Image: 200x150, 5mm pitch, 41x31 line count, 0.025mm line width

PN: AP-G300-P-xx

Image: 300x150mm, 10mm pitch, 31x16 line count, 0.050mm line width

<u>Polarity</u>: Positive (opaque or black lines on a clear background)

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

<u>Image Contrast / Density</u>: high contrast, optical density 2.0 or higher (chrome or film); photoemulsion reflection optical density 1.0 or higher. (Note: photo-emulsion line widths below 0.025mm will be weaker in appearance and low contrast)

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

<u>Image Placement Linearity (point to adjacent point):</u> 0.001mm distortion max. Note: Accuracy is affected by plate flatness and temperature. (glass based parts only)

Typical Soda Lime Glass Flatness:

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

Material Notes:

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

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- -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> </u>	tonigen one	T STORES PROCES GROWN TO	31000 C C 11 111 ₂
Length 10µ	100µ	200μ	400μ	Bow
100mm	$0.002\mu \ 0.2\mu$	0.8μ	3.2µ	
200mm	$0.001\mu 0.1\mu$	0.4μ	1.6μ	Length
300mm	0.0007μ	0.07μ	0.27μ 1.1 μ	Change

Transparent Polyester:

Length and width size changes due to temperature and humidity may vary independently by approximately 10%. Thermal changes influence clear polyester by approx. 0.00001/degree F (this would be a size change of 0.001 inch for a 10 degree F change, over a distance of 10 inches). Humidity affects clear polyester much more (because humidity is much less controlled and changes much more). Typical values are 0.000015/percent change in Relative Humidity (RH) (this would be a size change of 0.0045 inch for a 30 percent RH change, over a 10 inch distance).

<u>History / Typical Use</u>: 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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