

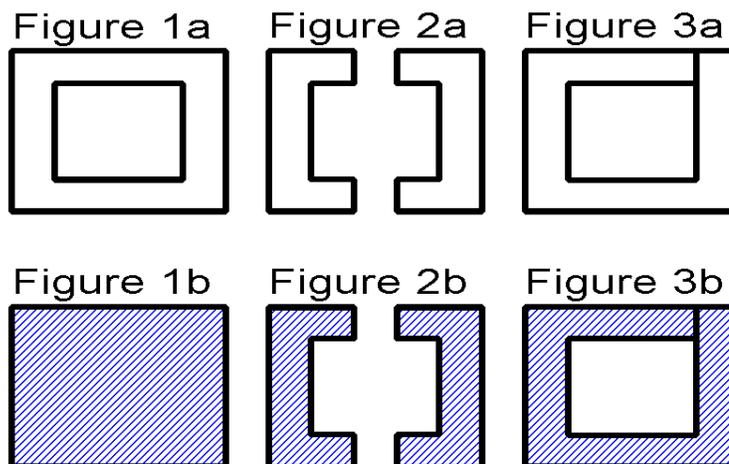
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## AutoCAD Design Requirements

APPLIED IMAGE CAD systems use software based in Stream Format. Since our software does not accept AutoCAD data files directly, a software conversion for DXF to Stream Format must be executed. In order for the conversion to be successful, a series of Design Rules must be adhered to. These rules are listed below.

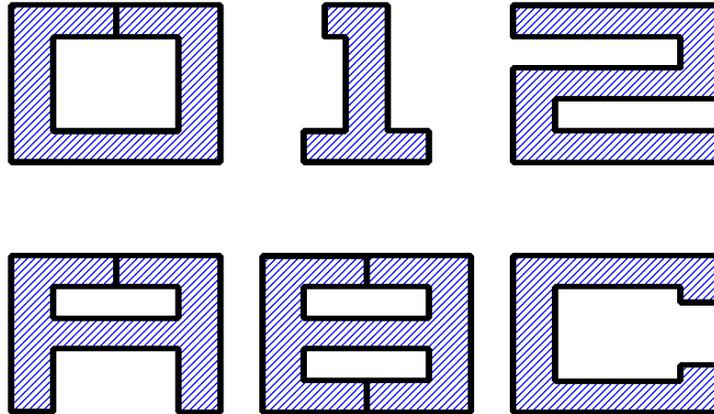
### Design Rules for Successful DXF to Stream Format Conversion

1. Grid & Snap: Prior to initiating a new drawing, the GRID and SNAP resolution should be set. This will insure that each point entered in AutoCAD can be exactly mapped to GDSII. Recommended values are 0.10 and 0.25, representing 0.10 and 0.25 microns.
2. Blocks: The Block / Insert command should be used whenever possible, especially if the entity is repeated throughout the drawing. If possible, Blocks should be inserted at a scale of 1.0.
3. Entity Construction: All entities should be constructed using Closed, Zero-Width Polylines. Entities shall be constructed with at least 3 vertices and limited to 4096 vertices maximum.
4. Detailed Construction: All entities that are contained within the boundaries of a larger entity must be created in a very specific manner. If the entity is created as shown in figure 1a, the result will resemble figure 1b. In order to avoid this outcome, the entities should be constructed using one of the methods detailed in figures 2a and 3a.



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5. Text: Text shall be constructed as detailed in figure 4. The text must be created with boundaries; text created with the AutoCAD Text command will not properly convert into Stream Format

Figure 4



6. Hatching: When possible, erase all hatching
7. Purging: Erase all data that you do not wish to process. Save the drawing file. Open the drawing file and purge all unused layers, blocks, and fonts. This process may have to be repeated several times to remove all unused layers, blocks, and fonts.
8. DXFOUT: When the drawing is ready to be sent, DXFOUT the entire file.

If you have questions, or need design/formatting advice, please contact us and we would be happy to help. Call 585-482-0300, email [photomask@appliedimage.com](mailto:photomask@appliedimage.com), or fill out our RFQ form at [appliedimage.com/custom-designs/photomask/](http://appliedimage.com/custom-designs/photomask/)