Lenticular Digital Art Specifications

APPROVED APPLICATIONS (UP TO CS6)

Adobe Photoshop (.psd / .tif / .pdf / .eps)
Adobe Illustrator* (.ai / .eps)
Adobe After Effects
Adobe InDesign* (.indd)
QuarkXpress* (.qx)

*Be sure to include linked graphics with all files, if applicable.

TRANSFER MEDIA

- **Disk** ..... CD ROM / DVD ROM
- **FTP** ..... Contact for Information
  - Uploading files to the FTP site requires an FTP client such as Fetch, Cyberduck or WS FTP.
  - We prefer that Drop Stuff is used to compress the files before uploading to the FTP site.
  - If you are uploading files to our site, please notify your Project Manager or Salesperson.

HARD COPY REQUIREMENTS

Provide a color copy of each version marked "FINAL," with all trim marks clearly indicated. If the print is not at actual size, please indicate the scaled percentage. Include any special instructions on the "FINAL" hard copy. If the piece has critical color, include an approved contract proof for color referencing. Standard ink-jet or color laser outputs are not acceptable for color matching.

ELECTRONIC FILE IMAGE RESOLUTION

300 ppi (pixels per inch) at full size for any rastered/continuous-tone images.

FONTS

Fonts are subject to copyright and license protection in substantially the same way that software is subject to such restrictions. While we have established a large font library with all the appropriate licenses, occasionally certain fonts used by our customers or their designers are not included in our library.

Since using non-editable files is not always a reasonable alternative for our customers, we ask that you still include the fonts used in your artwork. This will give us the needed information to obtain licenses for the fonts used.

When working with text in Illustrator or In Design, we recommend that if you do convert text to outlines, that you include a non-outlined layer as well since it limits our ability to make corrections at a later time.

NECESSARY IMAGE BLEED

- 1/8" beyond final trim size (all sides). For any files being converted to 3D, please try to supply at least 1/2" on the left and right sides.

AVAILABLE LENSES

Choice of lens should be determined based on the type of lenticular effect desired as well as how it will be viewed and/or used. Please consult with your Project Manager or Salesperson.

- **50 LPI / 23 mil:** Wide-angle lens suitable for up/down and POP side-to-side multi-phase effects.
- **60 LPI / 22 mil:** Medium wide-angle lens suitable for POP side-to-side flips.
- **60 LPI / 34 mil:** Medium-angle lens suitable for POP side-to-side flips as well as deep 3D and up-down hand-held multi-phase.
- **75 LPI / 16 mil:** Medium-angle lens capable of all lenticular effects at most dimensional sizes. We offer this lens for our regular monthly gang run. It can also be used as part of a laminated card (certain restrictions apply).
- **75 LPI / 36 mil:** Deep 3D lens, best suited for Larger POP pieces.
- **100 LPI / 14 mil:** Medium-angle lens capable of all lenticular effects in hand-held sizes. It can be used as part of a laminated card (certain restrictions apply). Also, it is use in versions of our lenticular cups.
- **100 LPI / 20.5 mil:** Deep 3D lens, best suited for hand-held pieces or small posters.

*There are additional lenses available for custom applications. Please contact your project manager or sales person for more information.

PROOFING SIZE

Our high-quality lenticular proofs are created to give you the best possible approximation of how your final printed piece will look. Because of lenticular proofing limitations, art in excess of 20" in any dimension may require a proof that is half-sized. Please consult with your Project Manager or Salesperson.

ADDITIONAL REQUIREMENTS/RECOMMENDATIONS FOR ALL LENTICULAR ART FILES

- We recommend that you e-mail us preliminary art (at the start of art creation) a JPEG or PDF to allow us an opportunity to do a technical review. Getting our input before your art is finalized may save you time and costly creative charges. This technical review is free of charge.
- Save art out in layered format. DO NOT SEND FLATTENED FILES. We often have to manipulate graphics and text for quality.
- Always supply a color printout or PDF of any files you send.
- Prior to sending the final art we recommend that you place a piece of non-printed lens over a full size black and white laser and/or color printout of your art work. This will allow you to review the lens effect on your graphics and type. (Travel Tags™ will supply a free sample.)
- With the lens placed on the printout in the proper orientation (determined by whether the piece will be viewed as an up-down or side-to-side), you will get a good idea of how the lens will affect your art.
- Include a content page which details documents and file names to be used and their purpose.
- If via ftp site, e-mail a content page to your Project Manager or Salesperson.
- Include all screen and printer fonts that were used, in a separate font folder.
- Indicate on your order which way animation is to work, either up-down or side-to-side. (POP and 3D require side-to-side animation.)
- Art that will require die-cutting should include a vector EPS file of the dieline (not Photoshop!).
- You may request a soft proof of the lenticular effect (typically an animated GIF or Quicktime movie) before moving on to hard proof.

2-PHASE: (REQUIREMENTS/RECOMMENDATIONS)

- 2-Phase hand-held products will work well as an up-down or a side-to-side animation. 2- Phase POP products work best when animated side-to-side (lenticules run vertically).
- Save art out in a layered format. DO NOT SEND FLATTENED FILES, as we often have to manipulate graphics and text for quality.
- Small copy and thin rules will tend to break up under the lens. We can supply you with a sample of the lens on which your project will be printed, in order for you to assess the degree of affect that the lens will have on your art. Avoid outlined and Serif fonts on coarser lenses. If they are necessary, point sizes need to be larger.
- Avoid animating two highly contrasting images, or animating over a white or light background. This will result in an undesirable ghosting effect, where the "off" image can still be seen within the "on" image. A light background may be used if the flipping elements stay in one location so that the first phase of animation covers the second phase, and vice versa.
- 2-phase flips may be combined with other lenticular effects on the same piece.
- You may request a soft-proof of the animation (typically an animated GIF or Quicktime movie) before moving on to a hard proof.

ZOOM (REQUIREMENTS/RECOMMENDATIONS)

- Zooms view best as up/down animations (lenticules run horizontally).
- Zoom animations can consist of type and/or graphics that change size, spin, or move in any combination.
- Optimum Zoom animations work better when the background is a cool darker color with the zooming element a lighter and warmer color than the background.
- Avoid animating two highly contrasting images, or animating over a white or light background. This may result in an undesirable ghosting effect, where the "off" images can still be seen within the "on" image. A light background may be used if the zooming elements stay in one location so that each phase of animation covers the prior phase.
- Small copy and thin rules will tend to break up under the lens. We can supply you with a sample of the lens on which your project will be printed, in order for you to assess the degree of affect that the lens will have on your art.
- Save art out in a layered format, with those elements that are zooming on their own layer. DO NOT SEND FLATTENED FILES, as we often have to manipulate graphics and text for quality.
- It is not necessary to supply all of the "in-between" images of a zoom. The beginning and end are often sufficient, unless the animation is complicated. In that case, the number of individual frames available for animation will be determined partially by the lens being used, as well as the desired effect. Please consult with your Project Manager or salesperson. They will seek the recommendations of our Lenticular Department.
- You may request a soft-proof of the animation (typically an animated GIF or Quicktime movie) before moving on to a hard proof.

MORPH (REQUIREMENTS/RECOMMENDATIONS)

- All graphics and text needed to create the morph animation should be incorporated into separate layers in one Photoshop file: the file should have the background on a separate layer; the beginning morph element on a separate layer; the ending morph element on a separate layer. DO NOT SEND FLATTENED FILES
- Supply a color printout of the beginning and ending morph images, including trim marks (or dieline if odd shape). Indicate the scale % on the printouts if not at 100% size.
- Small copy and thin rules will tend to break up under the lens. We can supply you with a sample of the lens on which your project will be printed, in order for you to assess the degree of affect that the lens will have on your art. Avoid outlined and Serif fonts on coarser lenses. If they are necessary, point sizes need to be larger.
- Morphs are best viewed as up/down animations. (lenticules run horizontally)
- The most effective Morphs use images with similar shapes, such as one person changing to another person, although it is possible to morph any two images.
- Morph animations work best when the background is constant and does not change.

- Morph animations work best if the morph effect occurs in a stationary location.
- Sharp, clear images are needed for smooth animations.
- If you would like to supply all of the images in a Morph, please consult with your Project Manager or Salesperson. The lens being used will dictate the number of usable intermediate steps between the beginning and ending of the Morph animation.
- You may request a soft-proof of the animation (typically an animated GIF or Quicktime movie) before moving on to a hard proof.

MULTI-PHASE (REQUIREMENTS/RECOMMENDATIONS)

- Multi-phase lenticular is typically animation with more than 3 images.
- Images should be supplied in a layered Photoshop or Illustrator file. The layers should have all common elements aligned with one another. Optionally, depending on your art, you may want to place all common elements on a single layer, with separate layers dedicated to those elements which will be changing.
- The number of different phases that can be used will be determined by the lens on which the job will be printing as well as the art itself. Please consult with your Project Manager or Salesperson.
- Supply a color printout showing the beginning and ending frames of the animation. Feel free to mark up the copy with any special animation instructions you might have for our Lenticular artists.
- Include trim marks (or dieline if an odd shape). Indicate the scale % on the printouts if not at 100% of actual size.
- Small copy and thin rules will tend to break up under the lens. We can supply you with sample of the lens on which your project will be printed, in order for you to assess the degree of affect that the lens will have on your art. Avoid outlined and Serif fonts on coarser lenses. If they are necessary, point sizes need to be larger
- Multi-phase will only view well as an up-down animation (lenticules run horizontally). The exception is animation which utilizes our 50 LPI wide-angle lens. This lens will also allow multiple phases viewed with a side-to-side lens configuration (lenticules run vertically).
- Photographs and illustrations depicting sequential actions will work extremely well, and often allow the use of more frames than animations using disparate images.
- Multi-phase animations work best if the background is static and action happens without zooming or panning. Simple animations are often-times the most effective. The "keep-it-simple" rule applies.
- Avoid animating highly contrasting images, or animating over a white or light background. This may result in an undesirable ghosting effect, where the "off" images can still be seen within the "on" image. A light background may be used if the animating elements stay in one location so that each phase of animation covers the prior phase.
- You may request a soft-proof of the animation (typically an animated GIF or Quicktime movie) before moving on to a hard proof.

FULL MOTION VIDEO (REQUIREMENTS/RECOMMENDATIONS)

- Full Motion Video is essentially a Multi-phase lenticular with the source art coming from video. Specific lenses are required for FMV lenticular. Please consult with your Project Manager or Salesperson.
- In the past, typical video was supplied on Digital Beta Tape (for best quality) or NTSC/VHS format. This meant that a file might typically be 640 x 480 pixels, quite fine for viewing on a television screen, but severely lacking in terms of printing resolution at sizes any larger than a CR80-sized piece. While Photoshop is able to enlarge captured video frames using interpolation, there is a point at which pixilation cannot be avoided, and video noise, which is not noticeable at small sizes becomes very apparent. The advent of High-Definition Video has vastly improved the ability to show video animation using lenticular lens by providing up to 6 times as many pixels of information, at significantly better quality. We highly recommend shooting your video using High-Definition equipment. (Another option is multi-frame motion capture photography shot using the burst mode on a professional digital camera.)
- Individual frames may be supplied in any of the approved file formats, as well as Quicktime. If video is converted to a Quicktime movie, please use NO COMPRESSION, or if necessary, one of the more recent codecs such as H.264. Leave at the native size, and do not crop.
- Supply additional frame graphics and/or any overprinting text as a digital file in one of the Approved Applications listed at the beginning of this document. Each image must be supplied at size, with proper bleed (if applicable) and

saved at 300ppi (pixels per inch). Save these graphics and/or text in a layered format. DO NOT SEND FLATTENED FILES.

- The number of different video frames that can be used will be determined by the lens on which the job will be printing, as well as the nature of the video itself. Because each FMV lenticular project is unique, we ask that you send us a Quicktime movie of the proposed animation. Our Lenticular artists will then be able to make recommendations.
- Supply color printouts of the beginning, middle and end images, including trim marks (or die line if an odd shape). Indicate the scale % on the printouts if not at 100% size.
- Small copy and thin rules will tend to break up under the lens. We can supply you with a sample of the lens on which your project will be printed, in order for you to assess the degree of affect that the lens will have on your art. Avoid outlined and Serif fonts on coarser lenses. If they are necessary, point sizes need to be larger.
- Multi-phase will only view well as an up-down animation (lenticules run horizontally). The exception is animation which utilizes our 50LPI wide-angle lens. This lens will also allow multiple frames viewed with a side-to-side lens configuration (lenticules run vertically).
- Cartoon sequences work extremely well
- FMV animations work best if the background is static and action happens without zooming or panning. It is best if the motion is centered throughout the series of frames.
- Simple animations are often-times the most effective. The "keep-it-simple" rule applies.
- Avoid animations with a white or light background. This may result in an undesirable ghosting effect, where the previous frame(s) can be seen within the current frame. A light background may be used if the animating elements stay in approximately the same location.
- Color correction and brightness/contrast adjustment is required on almost all video we receive.
- Please remember, if the video frames are not clean to start with, they will not improve with the lenticular treatment.
- We will typically show you a soft-proof of the composite animation (typically an animated GIF or Quicktime movie) before moving on to a hard proof. This will allow you to see the frames we used, as well as any additional special effects requested.

3D (REQUIREMENTS/RECOMMENDATIONS)

- Supply a layered Photoshop file with each layer (or group of layers) representing a plane of depth. In order for us to create 3D, the file must have a minimum of two layers: (1) a focal/foreground plane and (2) a background layer. The background layer must have some texture (as in a photo) or pattern to it. The background cannot be a solid color.
- Having additional intermediate layers helps create a better 3D illusion.
- There is no maximum to the number of layers in your Photoshop file, but make sure everything is properly separated. If Object B is to appear behind Object A, Object B should look complete if you were to remove Object A from the composition. This may mean that you will have to create/clone parts of Object B if they didn't exist before in your original art (as is the case when cutting apart a photo/scene for the various layers in Photoshop). There will be additional charges if our Lenticular artists are required to do this.
- You will need extra bleed on the left and right in order for us to manipulate the file in our process. When building your file, please allow 3/8" bleed left and right and 1/8" bleed top and bottom, past the final trim size.
- Supply a color printout of the composite image, including trim marks (or dieline if an odd shape). Indicate the scale % on the printouts if not at 100% size.
- Small copy and thin rules will tend to break up under the lens. We can supply you with a sample of the lens on which your project will be printed, in order for you to assess the degree of affect that the lens will have on your art. Avoid outlined and Serif fonts on coarser lenses. If they are necessary, point sizes need to be larger.
- 3D Lenticular requires a side-to-side lens orientation (lenticules running vertically).
- Optimum 3D Lenticular works better when the background and back layers are cool colors and the focal and foreground plane elements are warmer colors.
- Sharp, clear images are required for good 3D. Do not artificially blur background images. There will be some blurring already as a result of the 3D process.
- As a rule of thumb, the thicker the lens, the deeper the 3D illusion.
- Logos and important text should be assigned as close to (if not) the focal layer as possible. This will assure crispness and legibility.

