L.Type ®

PRINT FILE GUIDELINES

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The following is a list of the key file preparation requirements for optimal printing of L.Type prints. This is provided to allow you to retain full control of all aspects of file preparation and to understand how to get the very best out of our service. We can undertake all the steps for final print preparation (such as adding borders and re-sampling) but do not adjust customer image files for colour or sharpness or crop.

CENTRAL TO OUR PHILOSOPHY IS THAT WE NEVER ADJUST YOUR PRINT IN ANY WAY, UNLESS YOU SPECIFICALLY REQUEST IT, AND WE CANNOT MAKE CHANGES THAT REQUIRE YOUR ARTISTIC JUDGEMENT - FOR EXAMPLE, TO COLOUR OR SHARPNESS

PRINT RESOLUTION AND IMAGE PIXELS

L.Type prints are printed as 400 pixels/ inch (ppi) true continuous tone images in both dimensions. Because we print at a higher pixel density than other printers, the 'natural size' at which a given image prints – where every pixel in the image file is represented by one pixel on the page – will be smaller than for other printers.

For example, an 18"x12" image will contain 7,200 x 4,800 pixels when printed – allowing it to reproduce every pixel from a 35MP camera image. On the other hand, a 3,000 x 2,000 pixel image (6MP) has a 'natural' print size of 7.5"x5" when printed as an L.Type (calculated by dividing the number of pixels in the image by 400 in each dimension). We can, of course, print this image at larger sizes. If, say, a 15"x10" print is required, then the finished print will contain 6,000 x 4,000 pixels (24MP), or four times the number of pixels in the supplied file. In other words, each pixel in the supplied file will be represented by four pixels on the printed page.

The single most important thing to think about is <u>never</u> to reduce the number of pixels in your original image file unless (a) this is a result of your cropping decisions; or (b) you are absolutely confident that you have more pixels than we can possibly print - e.g. from a 100MP medium format image. Once lost, such information can never be recovered without returning to the original file. If you have cropped down an image so that it only contains a small number of pixels (e.g. 2,000 x 2,000) then please be aware that the natural print size will be quite small and if we blow it up to a larger print there will inevitably be some softening of the image. In general, we try not to print images that will result in fewer than 200 original image pixels per inch at the selected print size unless particularly requested.

It is not obligatory to resize images before sending them to us. We can do the resizing for you, and it may be better for us to do it for you if you are unsure of exact image print dimensions. However, you should be aware that re-sizing an image can negatively impact sharpness (see next section). But if you are unsure about what to do, it is better if we do it as it avoids any 'double re-sizing' – ie by both you and us. The key is to send us as many pixels as possible from your original camera image – the more pixels we have to work with, the better.

For maximum control, you can of course resize your images and resample to 400 px/ inch yourself. However, you should only do this if you are confident of your final printed image dimensions - see below. You should be aware that this is higher than the default for most printers of 300 px/ inch and may have a material impact on sharpening. You should be particularly careful of this if you are used to printing with inkjet - see below.

MAXIMUM OUTPUT/ PRINT SIZE

Our largest standard L.Type print is 430mm x 300mm, although we can produce up to 450mm x 300mm if required.

We can produce thinner L.Type Light prints up to 1000mm x 305mm at maximum. Such prints will be supplied rolled in a tube and should be handled with great care as they will be vulnerable to creasing. Ideally they would be framed immediately.

STANDARD PAPER SIZES & BORDERS

Our web upload and iOS apps are designed to offer paper size and border combinations that fit common aspect ratios/ image crops. Combinations are presented by crop size for easy selection, although an 'all sizes/ all crops' option includes all the standard paper size and border combinations that we offer.

For instance, DSLRs typically capture images with a 3:2 aspect ratio (width:height). 'A'-sized pieces of paper have an aspect ratio of 1.41:1 (approximately 7:5). So if you wish to print a DSLR image on a full A3 sheet of paper, you will inevitably lose some of your image. By adding a 25.5mm/ 1" border, however you will end up with a perfectly-sized image window. At A5, the necessary border is 12mm.

The idea of this is to allow a photographer to order multiple prints on a single size of paper at the same time. All images will be fitted automatically into the image window so that no cropping takes place. **Where images are not of the correct aspect ratio for the paper size/ border combination, then the whole image will be visible, but borders will be uneven. If you want to fill the image window and have even borders, you can simply click/ tap on the image and re-crop it to fill the window in the app.**

'BLEED'

All printing and trimming processes have some positional errors, and ours is no exception. In common with all printers, we therefore require an element of 'bleed' - or over-sizing of the image - whenever an image or design is to be printed right up to the edge of the paper (full-bleed). We will enlarge all images sent to us for printing full-bleed so as to allow 3mm of bleed on each side.

If you have prepared a print-ready file at 400ppi, then we will not enlarge the image but will instead trim 3mm off each edge, which will reduce the size of the image. **If you are following the steps on the following pages, please ensure that you add 6mm to height and width before resampling your files, to allow for this.**

We strongly recommend a strong border, both for aesthetic and for practical reasons. For practical reasons, the minimum border we recommend is 12.0mm (c.1/2") to avoid uneven borders due to trimming. However as paper sizes increase, we recommend using thicker borders to ensure that the aspect ratio of the image window matches that of your image.

PAPER SIZES AND IMAGE DIMENSIONS

The first step in resizing an image is to calculate the correct image dimensions. Do not worry if you are unsure about this - we can easily give you the relevant information - but below is a table showing finished image dimensions for full-bleed and bordered images for most common paper sizes in combinations to fit the most common standard crops.

The table below simply gives you the maximum image window into which your image must fit for a given paper/ border combination: if it is wider and thinner than the window, then width will be the constraint. If it is taller and narrower than the window, then height will be the constraint.

Once you have confirmed the image's printed size, then please use your software to resample it to 400 px/inch.

Full-bleed - no borders

Print paper size	Image Window (mm) L	Image Window (mm) S	Pixel Dimensions L	Pixel Dimensions S	Aspect ratio WITHOUT borders	Matching Common Format
A5	216	154	3,402	2,425	1.42	
8×6"	209	158	3,294	2,494	1.33	4/3
8×8"	209	209	3,294	3,294	1.00	Square
10×8"	260	209	4,094	3,294	1.25	5/4
10×10"	260	260	4,094	4,094	1.00	Square
A4	303	216	4,772	3,402	1.41	
300*300mm (c. 12×12")	306	306	4,819	4,819	1.00	Square
12×8"	311	209	4,894	3,294	1.50	DSLR 3/2
12×9"	311	235	4,894	3,694	1.33	4/3
12×10"	311	260	4,894	4,094	1.20	
14×11"	362	285	5,694	4,494	1.27	
363*300mm	369	306	5,803	4,819	1.21	
375*300mm	381	306	6,000	4,819	1.25	5/4
15×10"	387	260	6,094	4,094	1.50	DSLR 3/2
383*300mm	389	306	6,131	4,819	1.28	5/4
400*300mm(c. 16×12")	406	306	6,394	4,819	1.33	4/3
16×9"	412	235	6,494	3,694	1.78	16/9
A3	426	303	6,709	4,772	1.41	
17×10"	438	260	6,894	4,094	1.70	
450*300mm (c 18×12")	456	306	7,181	4,819	1.50	DSLR 3/2

PAPER SIZES AND IMAGE DIMENSIONS

With borders

Standard Border Width	Image Window (mm)		Pixel Dimensions		Aspect ratio WITHOUT borders	Matching Common Format
	L	S	L	S		
12.0	186	124	2,929	1,953	1.5000	DSLR 3/2
12.0	179	128	2,822	2,022	1.3956	
12.7	178	178	2,800	2,800	1.0000	Square
25.4	203	152	3,200	2,400	1.3333	4/3
18.0	218	218	3,433	3,433	1.0000	Square
18.0	261	174	4,110	2,740	1.5000	DSLR 3/2
25.0	250	250	3,937	3,937	1.0000	Square
17.0	271	169	4,265	2,665	1.6005	
19.0	267	191	4,202	3,002	1.3998	
25.4	254	203	4,000	3,200	1.2500	5/4
25.4	305	229	4,800	3,600	1.3333	4/3
25.0	313	250	4,921	3,937	1.2500	5/4
25.0	325	250	5,118	3,937	1.3000	
25.4	330	203	5,200	3,200	1.6250	
25.0	333	250	5,249	3,937	1.3332	4/3
25.0	350	250	5,512	3,937	1.4000	
12.7	381	203	6,000	3,200	1.8750	
25.5	369	246	5,811	3,874	1.5000	DSLR 3/2
12.7	406	229	6,400	3,600	1.7778	16/9
25.0	400	250	6,299	3,937	1.6000	

Notes:
1. Full-bleed dimensions are 6mm greater than paper size in each dimension to allow for trimming.
2. Image window represents the available space into which an image will be fitted. Images that are wider and not as tall will have larger borders top and bottom. Images that are tall and narrow will have wider borders to the sides.
3. Aspect ratios are for the finished image (after trimming) and are coloured to show where they match a standard crop format.

For any other questions, email support@l-type.com

SHARPENING

We recommend that having re-sampled your image to 400 px/ in, you review and adjust the sharpening as necessary.

There is no single correct amount of global sharpening that we can advise, as each image is different and sharpening is a matter of taste. There is no better alternative to investing time in optimizing each photograph to your requirements. If it looks too soft on-screen, then we will reproduce that, but we will also reproduce the artefacts visible in over-sharpened images.

Some photographers do find that their first L.Type prints can appear softer than they expect in comparison to other photo services and inkjet machines. There are two main reasons for this. First, some such services and machines automatically sharpen images as part of an overall image 'enhancement' process. As stated above, our core philosophy is never to adjust images. Second, if you are familiar with inkjet printing, you should be aware that the halftone micro-dot structure of such printing (where each image pixel is represented on the page by many dots of ink of different colours, and the whole effect relies on an optical illusion) introduces an apparent sharpness into the printed image that is typically greater than the true sharpness in the image. This increased sharpness being an artifact of the halftoning process which suffers from 'error diffusion' and tends to enhance edges of an image making it look sharper. For this reason, many photographers do not apply much, if any, output sharpening to inkjet prints. If you then print the same files with L.Type, you may end up with a 'soft' image, particularly if you have resampled.

L.Type's prints have no such dot structure: each image pixel can be represented by exactly one printed pixel, of the correct colour. At 400 px/ inch, each printed pixel is only 63.5 microns across, and each is positioned precisely next to (but not overlapping) its neighbours. This resolution is designed to be the very finest that the young human eye can resolve at arm's length; if you are older, you may need a loupe to appreciate all the detail in your printed image! The L.Type process is therefore capable of producing extremely sharp images and text.

So, having re-sampled your images, you should aim to check output sharpening on each one and adjust to taste. Depending on which image editing software you use, this can require different steps, but is overall a simple process. The key is to view each image on-screen at 1:1 - where each on-screen pixel represents a single printed pixel. What you see now is what we will print. The amount of sharpening will vary by image type and subject, but broadly you should be adjusting sharpening for printed output that will be viewed at a distance of c. 40 cm (i.e. arm's length).

COLOUR SPACE

We pride ourselves on our colour accuracy and believe that our printers are the most accurate in the world within gamut. Every printer is calibrated at least once a day and every time a new roll of paper is used. We build our own target profiles for each paper we use, and have ICC profiles for each media type. These media-specific ICC profiles are available from www.l-type.com/order if you wish to soft proof using a calibrated colour-managed monitor.

While we recommend soft-proofing using our ICC profiles, you should not, ideally, save your finished files in these profiles. This is because in so doing you will be compressing your image's colour information into a gamut that is slightly smaller in some areas than standard colour spaces such as AdobeRGB or sRGB. Moreover, as each of our papers has a slightly different gamut, you will potentially lose some information that might have been printable on a different paper.

Instead, we recommend that all images should be supplied in AdobeRGB colour space and saved with its colour profile embedded in the image, wherever possible. This ensures that maximum colour fidelity can be maintained. We can also support sRGB, CMYK and other colour spaces as long as the profile is embedded, but use of smaller colour spaces may not maximize the benefit of our process and colour gamut. **It is critical, however, that you do embed a colour profile** because without that profile we have no way of telling what your intentions are for your image, and if we make the wrong assumption it is likely that a colour shift will occur.

If you prefer to work in a larger colourspace, such as Pro Photo, then you should work in the full 16-bit precision throughout your image editing process to avoid loss of colour accuracy, although you are free to convert the final file to 8-bit as a final step. You should be aware that silver halide's colour gamut is not as wide as Pro Photo's.

If there is no embedded profile, then we will attempt to contact you where possible, but if we cannot, we will make a default assumption of sRGB. This is because in our experience the majority of devices and software programmes use a default of sRGB as this is the standard colour profile for screen displays.

For further information on how to use our services in a full colour-managed workflow, please email support@l-type.com. We will gladly explain and discuss the best solution for you to capitalise on our outstanding quality and colour fidelity.

ACCEPTED FILE FORMATS AND IMAGE FILE SIZES

The following file types/formats are accepted: TIFF, JPEG and PDF. Please ensure that PDF files are saved in a high resolution print-ready format, with no compression applied to any of the images and elements. For all formats, please ensure that your working colour profile is embedded.

The best formats for most photographers to send files in are TIFF or JPEG, but these vary widely in size. As a guide, a full-resolution A4 image, saved as a 16-bit TIFF file without compression, is likely to be in excess of 285MB. An 8-bit TIFF file might be c. 50MB, while a top quality (100%) JPEG file might be only 5-25MB.

Which of these you choose is up to you. We would say that in general, 8-bit TIFF files are ideal: they have sufficient colour information to represent all but the most challenging and detailed files perfectly. There are, however, occasions - e.g. specialist car photography - where the extra detail in a 16-bit TIFF may allow an extra subtlety of colour detail to be produced.

Ultimately, we are happy to receive files of any size and you can be confident that we will achieve the best possible results with whatever you send us.

TEXT AND FONTS

The document/files should be supplied with all fonts embedded or with the fonts included, if copyright allows. EPS files should include all fonts converted to outlines wherever possible.

PRODUCING DESIGNS FOR LAY FLAT BOOKS

The largest book size accepted is 300mmx430mm - an A3 landscape (spread size 300mmx860mm). Therefore, any book must be designed within this size range. All page spreads must have a standard bleed of 3mm with crop marks at 3mm offset.

Please note that the cover will need to be somewhat longer than the inside pages to accommodate the book spine. The exact amount will depend upon the number of body pages within the book. We can give you the correct dimensions once we know the number of spreads and media type and whether or not you require stiffening boards between pages.