



LongPack GAMES

Declaration of Pre-production samples confirmation

LongPack Games - Pre-production sample confirmation

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Preface

Dear **Client**,

You may find you are puzzled over the choice of white samples, digitally printed samples or offset printed samples, and whether you should confirm the sample via photographs and videos, or by an actual physical sample.

Our production team have prepared the following document to help you better understand the differences, advantages and disadvantages of each choice.

We hope this enables you to make an informed decision.

LongPack Production Team



Confirmation of Pre-Production Samples

Client Name: _____

Project Name: _____

If/when you decide to submit an order to us, please complete the following form, then scan and send this page only to your account manager.

1 • Please circle your preferred method of Pre-Production Sample :

- No Pre-production sample required
- White Sample
- Digital printed sample (Recommended)
- Offset printed sample

2 • Please circle your preferred of Pre-production sample confirmation

- Confirmation with actual sample (Recommended)
- Confirmation with photographs/videos

By submitting this page to us, you confirm that you have read the below document.

Sign by _____

Date _____



Estimated Cost of Various Pre-Production Samples

To make sure all design files received are fit for producing, all files should be provided in a standardized way and pass through the design verification process.

Components	Size	White Sample	Digital Printed Sample	Offset Printed Sample	Notes
Box	280*280*60mm	USD 65	USD 95	USD 195	1 diecut mold
Rulebook / Instruction	8P 210*285mm	USD 0	USD 30	USD 130	
Card	55 units 63*88mm	USD 0	USD 50	USD 260	
Punchboard	4 sheets 210*280mm	USD 130	USD 195	USD 325	1 diecut mold
Punchboard	560*800mm	USD 0	USD30	USD130	

Notes:

- 1 • The above prices are calculated based on one printing plate. We will re-calculate the cost for any size differences.
- 2 • There are usually different token shapes on each punchboard, and the factory will need to generate a custom die cut mold for this. With this in mind, the white sample will also need a sample cost.
- 3 • Please feel free contact your account manager if you have any questions.

1

No pre-production sample prior to mass production

1.1 • Potential risks

1.1.1 • New projects

There are great potential risks in starting mass production without pre-production samples, provided it is a new project. The potential risks can be as follows:

- 1 • The materials we use may not meet your expectations (such as the hardness, stiffness, toughness, feeling by touch and so on)
- 2 • The design structure and size of the product may not meet your expectations (e.g. the assembly).
- 3 • Inability to evaluate the rationality of the design files.
- 4 • Inability to judge if the colors will meet your expectations.
- 5 • Any mistakes that exist in the files may be missed (such as words, images, designs, die-cut tooling, etc.)
- 6 • The overall effect of the finished product is not seen (such as the effect of lamination, spot UV, stamping foil, position of the patterns, and the effect of design patterns.)

1.1.2 • Repeat orders (without modifications)

There are no risks in starting mass production without pre-production samples in this case.



1.1.3 • Repeat orders (with modifications)

For repeat orders with modifications, the potential risks can be as follows:

- 1 • The modified materials used may not meet your expectations (such as the hardness, stiffness, toughness, feeling by touch and so on)
- 2 • The modified design structure and size of the product may not meet your expectations (e.g. the assembly).
- 3 • Inability to evaluate the rationality of the modified design files.
- 4 • Inability to judge if the modified colors will meet your expectations.
- 5 • Any mistakes in the modified files may be missed (such as words, images, designs, die-cut tooling, etc.)
- 6 • The overall effect of the finished product after modification is not seen (such as the effect of lamination, spot UV, stamping foil, position of the patterns, and the effect of design patterns.)



2

White Sample

2.1 • About The White Sample

White samples will be made in the same materials as the mass production copies. The size and material will be exactly the same as the mass products, except that there will be no printing and finishings. The die cut may not be done for the white samples, as the die cut tool cost is high. This cost will be wasted if the design changes later.

2.2 • Risks of White Samples

2.2.1 • New projects

In the case of new projects, the potential risks to start mass production with white samples can be as follows:

- 1 • Unable to evaluate the rationality of the design files.
- 2 • Inability to judge if the colors will meet your expectations.
- 3 • Any mistakes in the modified files may be missed (such as the words, the images, the designs, the die-cut tooling, etc.)
- 4 • The overall effect of the finished product is not seen (such as the effect of lamination, spot UV, stamping foil, position of the patterns, and the effect of design patterns).

We recommend the production of digital printed samples.



2.2.2 • Repeat orders (without modifications)

There are no risks in starting mass production without white samples in this case.

2.2.3 • Repeat orders (with modifications)

Below are the potential risks in accordance with the corresponding modifications.

- 1 • The modified materials used may not meet your expectations (such as the hardness, stiffness, toughness, feeling by touch and so on)
- 2 • The modified design structure and size of the product may not meet your expectations (e.g. the assembly).
- 3 • Inability to evaluate the rationality of the modified design files.
- 4 • Inability to judge if the modified colors will meet your expectations.
- 5 • Any mistakes in the modified files may be missed (such as words, images, designs, die-cut tooling, etc.)
- 6 • The overall effect of the finished product after modification is not seen (such as the effect of lamination, spot UV, stamping foil, position of the patterns, and the effect of design patterns).

We recommend the production of digital printed samples.



3

Digital printed samples (RECOMMENDED)

3.1 • About digital printed samples

Digital printed samples are produced using digital printing machines. As the printing process (ink) and production process is different for digital printing, the digital printed samples may differ slightly from the mass products.

3.2 • Risks of digital printed samples

3.2.1 • Repeat orders (without modifications)

Digital printed samples prior to mass production are not required, since there has already been mass production.

3.2.2 • Repeat orders (with modifications)

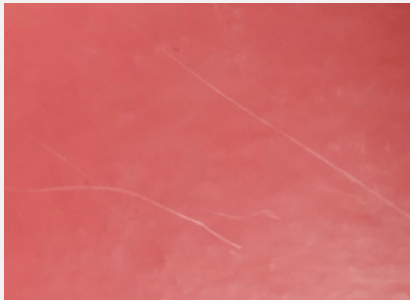
Digital printed samples are suggested for the modifications before mass production. Please refer to 3.2.4 – 3.2.9 for the potential risks.

3.2.3 • New projects

In the case of new projects, please refer to 3.2.4 – 3.2.9 for the potential risks to start mass production with only digital printed samples.



3.2.4 Box



3.2.4.2 • Example of varnish issue

3.2.4.1 • Color issues

- Digital printed samples

The pre-production samples will be printed by a digital printing machine, while the mass products will be printed by a real printing machine. Therefore, the color of the pre-production samples will differ slightly from the mass products. The color similarity is approximately 85% - 90%.

3.2.4.2 • The Varnishing Issue

- The sample surface cannot be protected by varnishing as it is pressed by the digital printer. As such, the surface will get scratched, faded and stained easily. This is inevitable in the digital printing, though it will be avoided in mass production.

3.2.4.3 • The lamination Issue

- The following will occur during the pre-production process if only a small number of samples are produced, as the pressure and temperature can't be adjusted to a stable state in such a short period of time:
- Unfit and bubbling (this cannot be avoided in the sample printing, however it will not occur in mass production.)
- Whiting and blurring (this cannot be avoided in the sample printing, however it will not occur in mass production.)

3.2.4.4 • Spot UV Issue

- In the stage of pre-production samples, as the quantities are small, there will be an over-print position change problem. The tolerance will be +/-1mm. For mass production this is reduced to +/-0.5mm.
- Issues such as bubbling, bad adhesion and peeling off may occur in pre-production samples, as the quantities are small and the spot UV finishing is done manually. For mass production, these will be batch produced by machine, and such problems will be greatly reduced.
- Large areas of spot UV are done manually for pre-production samples, so the issue of "blade marks" may occur. This issue will be greatly reduced in mass production as these are batch produced by machine.

3.2.4.5 • Hot Stamping Issue

- ❑ The hot stamping area will be misaligned. We can only control the tolerance within +/- 1mm during the pre-production sample stage due to the small sample quantity. During the mass production stage, this tolerance will be within +/- 0.3mm.
- ❑ The foil film may not adhere to the surface correctly, making it easy to peel off. This problem will be very common in pre-production samples as they are hand-made in small quantities. This will be improved significantly when the machine is used for mass production.
- ❑ Pre-production samples are hand-made due to the small quantities. This means the laborers touch the foil film area frequently and can possibly lead to scratching. This will be improved significantly when the machine is used for mass production.

3.2.4.6 • Paper Mounted Issue

- ❑ The pre-production sample is hand-made. This can mean it may be misaligned, the finishes on the corners are poor or the mounted paper is not adhered correctly and bubbling. These problems are unavoidable during the pre-production sample stage, but will be improved significantly in future mass production.



3.2.4.6 • Example of paper mounted issue

3.2.4.7 • Magnetic force Issue

- ❑ Pre-production samples may give the impression that the magnetic force is weak. This is caused by:
 - 1 • The short production time and the high humidity in the “cover”, resulting in the product's lack of shape and the increased tension. This tension will counteract some of the magnet's force, which will make the magnet feel weak. During mass production, the humidity inside the cover will be fully reduced and will not create a lot of tension.
 - 2 • Model machines will be used for the engraving of the pre-production samples, which will cause minor errors in the angle, accuracy and depth of slotting. These errors will affect the fit of the cover after folding, and the magnetic force. We will use a special slotting machine for debugging and mass production, which can control the accuracy of slotting so as to avoid this issue.
- ❑ **Sticker for Magnet (magnet must not be exposed)**

The sticker is there to prevent the magnet from falling off. For games aimed at children (those under the age of 14), magnets falling off may result in the failure of the relevant safety testing.

3.2.5 Paper Tray (inlay)



3.2.5.3 • Example of varnish issue

3.2.5.1 • The Material Issue

- CCNB is unfit for digital printing. If this is selected, art paper will be applied instead.
- 300gsm art paper will be applied instead of 350gsm as this exceeds the maximum thickness for the digital printer.

3.2.5.2 • Color Difference Issues

- There will be a color discrepancy as the sample is manufactured using digital printing, while mass production will be completed using a real printing machine. The digital printed sample will be around 85%~90% similar to the mass production version.

3.2.5.3 • The Varnishing Issue

- The sample surface cannot be protected by varnishing as it is pressed by the digital printer. As such, the surface will get scratched, faded and easily stained. This is inevitable in the digital print, however, it will be avoided in mass production.

3.2.5.4 • The Lamination Issue

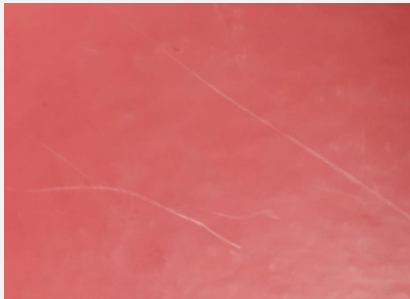
- The following will occur during the pre-production process if only a small number of samples are created, as the pressure and temperature can't be adjusted to a stable state in such a short period of time.
- Unfit and bubbling (this cannot be avoided in the sample printing, however it will not occur in mass production.)
- Whiting and blurring (this cannot be avoided in the sample printing, however it will not occur in mass production.)

3.2.5.5 • The Finishing Issue

- The pre-production sample is manually made which can cause misalignment, incomplete scoring lines, deviation and edge breakage. Die-cut tooling will be used in mass production to avoid these issues.

3.2.6

Leaflet / Booklet / Manual



3.2.6.3 • Example of varnish issue

3.2.6.1 • Color Difference Issue

❑ There will be a color discrepancy as the sample is manufactured using digital printing, while mass production will be completed using a real printing machine. The digital printed sample will be around 85%~90% similar to the mass production version.

3.2.6.2 • The Varnishing Issue

❑ The sample surface cannot be protected by varnishing as it is pressed by the digital printer. As such, the surface will get scratched, faded and easily stained. This is inevitable in the digital printing, however, it will be avoided in mass production.

3.2.6.3 • Binding and Folding Issue

❑ If the unfolded size of the booklet is larger than the maximum printing size, transparent tape splicing will be used on the pre-production sample for your review. The mass production product will use a real printing machine, and the binding will fully conform to the requirements.

❑ In the case of a folded booklet, these will be manually folded due to the small quantity of pre-production samples required. Because of this, minor defects such as irregular fold lines or asymmetric folding will occur. The mass production product is made on a highly automated production line, so these issues will be substantially avoided.

3.2.6.4 • The Lamination Issue

❑ The following will occur during the pre-production process if only a small number of samples are created, as the pressure and temperature can't be adjusted to a stable state in such a short period of time.

❑ Unfit and bubbling (this cannot be avoided in the sample printing, however it will not occur in mass production.)

❑ Whiting and blurring (this cannot be avoided in the sample printing, however it will not occur in mass production.)

3.2.7

Punch Board / Player Board



3.2.7.3 • Example of varnish issue



3.2.7.5 • Example of paper pasting defect

3.2.7.1 • The Material Issue

- CCNB is unfit for digital printing. If this is selected, art paper will be applied instead.
- 300gsm art paper will be applied instead of 350gsm as this exceeds the maximum thickness for the digital printer.

3.2.7.2 • Color Difference Issue

- There will be a color discrepancy as the sample is manufactured using digital printing, while mass production will be completed using a real printing machine. The digital printed sample will be around 85%~90% similar to the mass production version.

3.2.7.3 • The Varnishing Issue

- The sample surface cannot be protected by varnishing as it is pressed by the digital printer. As such, the surface will get scratched, faded and easily stained. This is inevitable in the digital printing; however, it will be avoided in mass production.

3.2.7.4 • The Lamination Issue

- The following will occur during the pre-production process if only a small number of samples are created, as the pressure and temperature can't be adjusted to a stable state in such a short period of time.
- Unfit and bubbling (this cannot be avoided in the sample printing, however it will not occur in mass production.)
- Whiting and blurring (this cannot be avoided in the sample printing, however it will not occur in mass production.)

3.2.7.5 • Paper Pasting (mounted) Defect

- The pattern on the front and back of the punch-board may deviate (it is even worse when linen texture is required). This is caused by the high humidity within the paper during a comparatively short pre-production period, in which the paper can easily be expanded or stretched. This leads to the misalignment of the pattern.

An additional process of dehumidification will be used during mass production (at least a 24 hour dehumidification period). This will reduce such defects by controlling the humidity of the paper.



3.2.7.6 • Example of layering issue

3.2.7.6 • The Layering Issue

❑ When the punch boards are punched out, issues such as layering or rough edges may occur. This is caused by the high humidity of grey board during a comparatively short pre-production period. An additional process of dehumidification will be used during the mass production (at least a 24 hour dehumidification period). This will reduce such defects by controlling the humidity of the paper.

3.2.7.7 • Die Cut Holder Issue

❑ Die cut holders are added to the die cut line as connections between the board and tokens. This prevents the punched tokens from disconnecting veasily, which may embed and damage the diecut mold.

3.2.8 Cards

3.2.8.1 • The Material Issue

- ❑ Black core paper is unfit for digital printing. If this is selected, white core paper stock will be used instead.
- ❑ If 350g paper is required, 300g art paper will be used instead as this exceeds the maximum thickness of digital printer.

Notice #1 The card sample you receive might not be completely flat.

This is mainly due to the humidity of the ink and the large amount applied which damages the internal stress of the paper. This will be avoided in mass production as ink with a lower moisture rate will be used, which will limit the damage.

3.2.8.2 • Color Difference Issue

❑ There will be a color discrepancy as the sample is manufactured using digital printing, while mass production will be completed using a real printing machine. The digital printed sample will be around 85%~90% similar to the mass production version.



3.2.8.3 • Example of varnish issue

3.2.8.3 • The Varnishing Issue

- The sample surface cannot be protected by varnishing as it is pressed by the digital printer. As such, the surface will get scratched, faded and easily stained. This is inevitable in the digital printing, however, it will be avoided in mass production.
- Due to non-varnishing of the sample, the surface will not be smooth. This will not occur in mass production as a special Poker varnish will be applied to the cards.

3.2.8.4 • The Die-cut Issue

- The pattern may not be centered after a die-cut on the playing cards. This is due to the manual process in pre-production. This is even more obvious when the frame width on four sides is less than 3mm. It is strongly recommended that the frame width should not be less than 3mm. Particular die-cut tooling will be used in mass production which will reduce such defects.
- The round edges of the cards will be slightly varied because of the manual process in pre-production. However, a particular die-cut tooling will be applied in mass production which will avoid this issue substantially.

3.2.8.5 • Golden Edges Not Applicable

- For Cards with golden edges, there will be an error of 0.2mm-0.3 mm in terms of card size. This is due to the fact the card edges need to be polished before the gold finishing.
- Golden edges are not workable for black core cards. The edges cannot be polished due to the black core layer.

3.2.9

Game Board

3.2.9.1 • The Material Issue

- CCNB is unfit for digital printing. If this is selected, art paper will be applied instead.
- 300gsm art paper will be applied instead of 350gsm as this exceeds the maximum thickness for the digital printer.

3.2.9.2 • Color Difference Issue

- There will be a color discrepancy as the sample is manufactured using digital printing, while mass production will be completed using a real printing machine. The digital printed sample will be around 85%~90% similar to the mass production version.



3.2.8.3 • Example of varnish issue

3.2.9.3 • The Varnishing Issue

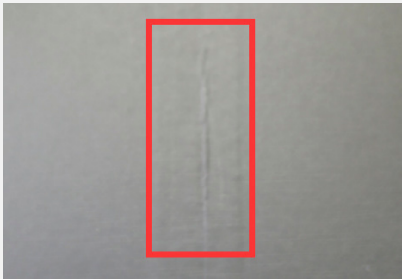
❑ The sample surface cannot be protected by varnishing as it is pressed by the digital printer. As such, the surface will get scratched, faded and easily stained. This is inevitable in the digital printing, however, it will be avoided in mass production.

3.2.9.4 • The Lamination Issue

❑ The following will occur during the pre-production process if only a small number of samples are created, as the pressure and the temperature can't be adjusted to a stable state in such a short period of time.

❑ Unfit and bubbling (this cannot be avoided in the sample printing, however it will not occur in mass production.)

❑ Whiting and blurring (this cannot be avoided in the sample printing, however it will not occur in mass production).



3.2.9.5 • Example of folding defect

3.2.9.5 • Folding Defect

The causes of this issue are:

1 • The folding defect is mainly due to the high humidity within the paper in a comparatively short production period during pre-production. Bubbling and unfit may occur when paper is mounted. During mass production, an additional process of dehumidification will be used (at least a 24 hour dehumidification period). This method will reduce such defects.

2 • As the quantity of pre-production samples is small, and the calibration of the die cutting machine is not specific enough, the depth of the die cutting can be inconsistent, which lead to such folding defects. The die-cutting machine will be fully calibrated for mass production, which will improve the accuracy of the die-cutting depth, so as to avoid this problem.



3.2.9.6 • Example of layering issue

3.2.9.6 • The Layering Issue

❑ Issues such as layering or rough edges may occur around the die-cut lines of the game board. This is caused by the high humidity of grey board during a comparatively short pre-production period. An additional process of dehumidification will be used during mass production (at least a 24 hour dehumidification period). This will reduce such defects by controlling the humidity of the paper.

4

Offset printed Sample

4.1 • About offset printed samples

The offset printed sample is made using the same process and therefore, the quality is very close to that of the bulk goods.

4.2 • Risks of Offset Printed Sample

4.2.1 • Repeat orders (without modifications)

Offset printed samples are not necessary prior to the mass production in this case.

4.2.2 • Repeat orders (with modifications)

In the case of modifications, we suggest producing digital printed samples prior to mass production. If you are more inclined to request an offset printed sample, please refer to **4.2.4 - 4.2.10** for the potential risks.

4.2.3 • New projects

Regarding the differences between offset printed samples and future mass products, please refer to **4.2.4-4.2.10**.

4.2.4 Box

4.2.4.1 • The Material Issue

The material is the same as the mass products.

4.2.4.2 • The Color Issue

The offset printed sample can represent the printing quality of the mass products. However, there may always be a slight color difference among batches (Spot color $\Delta E < 2$, CMYK colors $\Delta E < 5$).

4.2.4.3 • The Varnishing

Same as mass products.

4.2.4.4 • The Lamination

Same as mass products.

4.2.4.5 • Spot UV

In the stage of pre-production samples, as the quantity is small, there will be an overprint position change problem. The tolerance will be +/-1mm. For mass production this is reduced to +/-0.5mm.

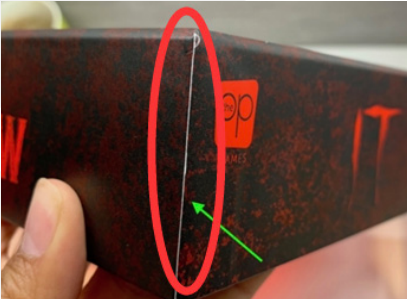
Issues such as bubbling, bad adhesion and peeling off may occur in pre-production samples, as the quantities are small and the spot UV finishing is done manually. For mass production, these will be batch produced by machine, and such problems will be greatly reduced.

Large spot UV areas are done manually on pre-production samples, therefore unexpected "marks" may occur. For mass production, this issue will be greatly reduced as these are batch produced by machine.

4.2.4.6 • Hot Stamping Issue

The hot stamping area will be misaligned. We can only control the tolerance within +/-1mm during the pre-production sample stage due to the small sample quantity. During the mass production stage, the tolerance will be within +/- 0.3mm.

The foil film may not adhere to the surface correctly, making it easy to peel off. This problem will be very common in pre-production samples as they are hand-made in small quantities. This will be improved significantly when the machine is used for mass production.



4.2.4.7 • Example of paper mounted issue

❑ Pre-production samples are hand-made due to the small quantities. This means the laborers touch the foil film area frequently, and can possibly lead to scratching. This will be improved significantly when the machine is used for mass production.

4.2.4.7 • Paper Mounted Issue

❑ The pre-production sample is made manually. This means it may be misaligned, the finishes on the corners are poor or the mounted paper is not adhered correctly and bubbling. These problems are unavoidable during the pre-production sample stage, but will be improved significantly in future mass production.

4.2.4.8 • Magnetic Force Issue

❑ Pre-production samples may give the impression that the magnetic force is weak. The causes are:

1 • This is due to the short production time and the high humidity in the “cover”, resulting in the product's lack of shape and the increased tension. This tension will counteract some of the magnet's force, which will make the magnet feel weak. During mass production, the humidity inside the cover will be fully reduced and will not create a lot of tension.

2 • A model machine will be used for engraving of the pre-production samples, which will cause minor errors in the angle, accuracy and depth of slotting. These errors will affect the fit of the cover after folding and the magnetic force. In the future, we will use special slotting machines for debugging and mass production, which can control the accuracy of slotting, so as to avoid this issue.

❑ Sticker for Magnet (magnet must not be exposed)

The sticker is there to prevent the magnet from falling off. For games aimed at children (those under the age of 14), magnets falling off may result in the failure of relevant safety testing.

4.2.5 Paper Tray (inlay)

4.2.5.1 • The Material Issue

The material is the same as the mass products.

4.2.5.2 • Color Difference Issue

The offset printed sample can represent the printing quality of the mass products. However, there may always be a slight color difference among batches (Spot color $\Delta E < 2$, CMYK colors $\Delta E < 5$).

4.2.5.3 • The Varnishing

Same as mass products.

4.2.5.4 • The lamination

Same as mass products.

4.2.5.5 • The Finishing Issue

The pre-production sample is manually made which can cause misalignment, incomplete scoring lines, deviation and edge breakage. Die-cut tooling will be used in mass production to avoid these issues.

4.2.6 Leaflet/Booklet/ Manual

4.2.6.1 • The material Issue

The material is the same as the mass products.

4.2.6.2 • Color Difference Issue

The offset printed sample can represent the printing quality of the mass products. However, there may always be a slight color difference among batches (Spot color $\Delta E < 2$, CMYK colors $\Delta E < 5$).

4.2.6.3 • The Varnishing

Same as mass products.

4.2.7 Punch Board / Player Board



4.2.7.5 • Example of paper pasting defect

4.2.6.4 • Binding and Folding Issue

In the case of a folded booklet, these will be manually folded due to the small quantity of pre-production samples required. Because of this, minor defects such as irregular fold lines or asymmetric folding will occur. The mass production product is made on a highly automated production line, so these issues will be avoided substantially.

4.2.6.5 • The Lamination

Same as mass products.

4.2.7.1 • The Material Issue

The material is the same as the mass products.

4.2.7.2. Color Difference Issue

The offset printed sample can represent the printing quality of the mass products. However, there may always be a slight color difference among batches (Spot color $\Delta E < 2$, CMYK colors $\Delta E < 5$).

4.2.7.3 • The Varnishing.

Same as mass products.

4.2.7.4 • The lamination

Same as mass products.

4.2.7.5 • Paper Mounted Issue Not Applicable

The pattern on the front and back of the punch-board may deviate (it is even worse when linen texture is required). This is caused by the high humidity within the paper during a comparatively short pre-production period, in which the paper can easily be expanded or stretched. This leads to the misalignment of the pattern.

An additional process of dehumidification will be used during mass production (at least a 24-hour dehumidification period). This will reduce such defects by controlling the humidity of the paper.



4.2.7.6 • Example of layering issue

4.2.7.6 • The Layering Issue Not Applicable

When the punch boards are punched out, issues such as layering or rough edges may occur. This is caused by the high humidity of grey board during a comparatively short pre-production period. An additional process of dehumidification will be used during mass production (at least a 24 hour dehumidification period). This will reduce such defects by controlling the humidity of the paper.

4.2.7.7 • Die Cut Holder Issue

Die cut holders are added to the die cut line as connections between the board and tokens. This prevents the punched tokens from disconnecting easily, which may embed and damage the diecut mold.

4.2.8 Cards

4.2.8.1 • The Material

Same as mass products

4.2.8.2 • Color Difference Issue

The offset printed sample can represent the printing quality of the mass products. However, there may always be a slight color difference among batches (Spot color $\Delta E < 2$, CMYK colors $\Delta E < 5$).

4.2.8.3 • The Varnishing

Same as mass products.

4.2.8.4 • The Die-cut

Same as mass products.

4.2.8.5 • Golden Edges Not applicable

For Cards with golden edges, there will be an error of 0.2mm-0.3 mm in terms of card size. This is because the card edges need to be polished before the golden finishing.

Golden edges are not workable for black core cards. The edges cannot be polished due to the black core layer.

4.2.9 Plastic Card / Plastic Single Sheet

4.2.9.1. The Material Issue

- The material is the same as the mass products.
- The material is not same as the mass products.

- The digital sample will differ from mass production in terms of color, brightness, and transparency if the plastic card thickness is more than 0.3mm. (The factory will use the stocked/existing plastic cards for the digital sample, and is used to check the pictures, languages and shapes. The factory needs to mount cards together if the card thickness is more than 0.3mm, and the maximum of the single plastic card thickness is 0.3mm.)
- There will be a slight difference in the material thickness and brightness between pre-production and mass production, as a different batch of materials will be used between these.

4.2.9.2 • Color Difference Issue

Digital Sample

There will be a color discrepancy as the sample is manufactured using digital printing, while mass production will be completed using a real printing machine. The digital printed sample will be around 85-90% similar to the mass production version.

Offset Printed Sample

The offset printed sample can represent the printing quality of the mass products. However, there may be a slight color difference among batches (CMYK colors $\Delta E < 3.5$).

4.2.9.3 • The Varnishing Issue

- Not Applicable
- The sample surface cannot be protected by varnishing as it is pressed by the digital printer. The surface will inevitably get scratched, faded, and easily stained in the digital printing. It will, however, be avoided in mass production.
- Due to the non-varnishing of the sample, the surface will not be smooth. This will not occur in mass production as a special Poker varnish will be applied to the cards

4.2.10 Game Board

4.2.10.1 • The Material

Same as mass products.

4.2.10.2 • Color Difference Issue

The offset printed sample can represent the printing quality of the mass products. However, there may always be a slight color difference among batches (Spot color $\Delta E < 2$, CMYK colors $\Delta E < 5$).

4.2.10.3 • The Varnishing

Same as mass products.

4.2.10.4 • The Lamination

Same as mass products.

5 Other Components

5.1 Plastic tray

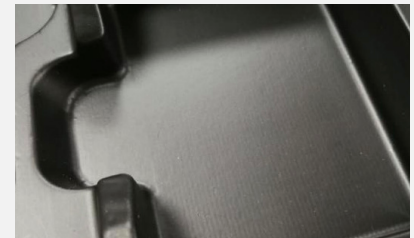
5.1.1 • Thickness

Notice #1. The plastic tray sample is usually thicker than that of mass production because only one mold applies in pre-production. The plastic sheet is not stretched around, which allows the sample to retain a larger thickness. In mass production, more than six molds will be applied at the same time, the adjacent die stretches and consumes the same material between, and its fluidity is quicker than a single mold, which results in the thickness of the plastic tray being thinner than the sample. Please evaluate the durability of the sample if you are demanding about the thickness and stiffness of the finished product. If necessary, you may request to increase the thickness of the raw materials to ensure quality, however, costs will increase accordingly.

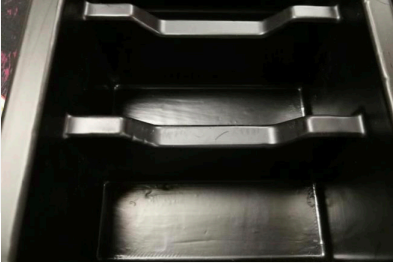
Notice #2. When a small quantity of samples are created in pre-production, the pressure and temperature of the machine cannot be optimized, which will result in a varied thickness of the plastic trays (if you get several samples from us). This issue can be significantly reduced during mass production with the machines under stable operation, although it cannot be completely avoided.

5.1.2 • Surface Quality

When the sample is created in pre-production, a resin mold is applied. The die-cut trace will be left on the mold surface during the CNC process, and this will also be left on the surface of the plastic tray. In mass production a copper-plated or aluminum mold (please refer to the quotation sheet) will be applied, so this issue will be improved or potentially avoided as the mold surfaces will be polished. During pre-production, a plaster mold will be applied to the sample.



5.1.2 • Example of surface quality issue



5.1.2 • Example of surface quality issue



5.1.3 • Example of die-cut precision issue

5.2 Player Mat

- Not applicable

The surface is softer, and its precision is comparatively poor, and as such, a grainy and uneven quality might occur. In mass production a copper-plated or aluminum mold (please refer to the quotation sheet) will be applied, so the issue will be improved or potentially avoided, as those mold surfaces will be polished..

5.1.3 • Die-cut Precision

- During pre-production, scissors or other cutting tools will be used on the plastic trays, which will lead to unevenness on the edges. In the mass production, tailor-made die-cutting tools will be used which will give an even finish. See picture below.

5.2.1 • The Material Issue

The material is the same as the mass products.

5.2.2 • The Color Issue

- The color of pre-production sample is the same as the mass products.
- There will be color difference between pre-production sample and mass products.

The pre-production sample is digitally printed, whereas the mass products are offset printed. This will cause the color difference.

Varied printing methods will be applied for mass production, in accordance with the order quantity, the complexity of patterns, and color quality requirements.

5.2.3 • The Size Issue

- The acceptable size tolerance is $\pm 5\text{mm}$ when its size is smaller than 500mm.
- The acceptable size tolerance is $\pm 10\text{mm}$ when its size is greater than 500mm.

The material itself will be stretched during manufacturing; while heating it will also cause slight shrinkage. Both will cause the size to differ from that estimated.

5.2.4 • Round Edge

- Pre-production samples will have square corners, while mass products will have, at minimum, R2 round Square corners will be naturally formed in the pre-production sample as manual cutting is usually applied. Die-punching will be used during mass production, and a natural round edge will be formed by the blade with a minimum R2 round corner as standard. Square corners cannot be made in this session. Please contact with the account manager if you have special requests for round corners.
- The round corner is the same for the pre-production sample and the mass production product.

5.3 Sand Timer

- Not applicable

The sample is the same as the mass products.

The tolerance of sand timer

5.4 Cloth Bag

- Not applicable

The sample is the same as the mass products.

5.5 Pencils

- Not applicable

The sample is the same as the mass products.

5.6 Markers

Not applicable

5.7 Wooden pieces

Not applicable



5.7.1 • Example of the material issue

The sample is the same as the mass products.

5.7.1 • The Material Issue

Two issues will inevitably occur as the wood is naturally formed:

- 1 • There is a color difference in the wood texture.
- 2 • The wood surface is not completely flat because of the grain, scarring and pores. (Note: due to trees needing to breathe)

The color and texture will remain consistent when using the same material during a small quantity demand of pre-production samples. However, color and texture differences will exist in each package of the products when those pieces are from a different batch of raw materials during mass production (shown on the left).

If the requested color is natural wood, or the painted colors on top of the wood are light colors (yellow, light blue, pink etc.), the color difference can be influenced by the wood color. This defect is inevitable during mass production. If you have a strict request with the color difference our recommendation is:

- 1 • Try to select a darker color, such as black, navy or red, which can cover the color of the wood.
- 2 • Change to other materials, such as plastic.
 - Not the same.

5.7.2 • The Size Issue

There will be +/- 0.5mm size difference.

The differences are mainly due to:

- 1 • Some cutting processes are manually positioned, which causes tolerance;
- 2 • Dehumidification will be applied in the production (to avoid mildew). The size of the wood pieces will change after drying, which can lead to the expansion or offset of this difference.

5.7.3 • Painting Color Issue

- The color difference is acceptable within the tolerance range.

Note: Due to the color differences among the raw wood materials, and that the roll-painted method is used on 95% of the wood pieces (generally 30 to 50 thousand pieces can be loaded into the roll machine in our factory), the color of the pre-production sample will be different from the mass products. The paint thickness of the sample is less than that of the mass products due to the small quantity of the samples. Normally the color difference is $E < 5$.

- The color tolerance is unacceptable under this range.

5.7.4 • Printing Color Issue

- Due to the unevenness on the surface of the raw wood material, a silk screen or heat transfer print cannot fully cover the base color, and to some extent the color difference cannot be avoided.

5.7.5 • Color Difference of Laser Cut (Actually Color difference of Wood material)

- A color difference also occurs if the pattern is laser cut. The reason is the raw wood material itself. The color and texture will remain consistent when using the same material for a small quantity demand of pre-production samples. However, a color and texture difference will exist in each package of the products when those pieces are made from a different batch of raw materials during mass production.

5.7.6 • UV Printing

- UV print is speedy and can be done with no tooling cost, which will finish the sample quicker. However, the print quality is not nice enough in terms of its fineness and color brightness (see picture on the left).
- Heat Transfer Print in mass production
- UV Print in mass production



5.7.4 • Example of the printing color issue



5.7.6 • Example of the UV printing color issue (Left: Heat Transfer printing • Right: UV Print)

5.7.7 • Heat Transfer Printing

- Pre-production sample with heat transfer printing

The sample is the same quality as that of mass production. However, an extra tooling cost will occur if the design is changed later or there are varied designs.

5.7.8 • Deviation of the Printed Pattern

- Maximum 1.8mm deviation in the printed pattern

Main reasons as below:

- 1 • Some cutting processes are manually positioned which causes the tolerance;
- 2 • Dehumidification will be applied in the production (to avoid mildew). The size of the wood pieces will change after drying, which can lead to the expansion or offset of this difference.
- 3 • All print on the wood pieces is positioned manually, thus, deviation of the pattern may occur.

In summary, these issues can be more easily identified in the mass production samples as these are produced in large quantities, whereas the quantity is small for pre-production samples.

5.8 Miniatures

- Not applicable

5.8.1 • The Dimensions

The master sample will be amplified by 4% compared to the original dimensions because the plastic material will shrink when it is removed from the mold and chilled. This is a feature of injection molding. Its shrinkage is approximately 4%, thus, the master sample will be amplified to 1.04 times and the product will be contracted to the original desired dimension once the mold is done.



5.8.2 • The Material Issue

The material of a PU Master sample is different from the mass products.

The material of a PU Master sample is PU. However, the plastic material for injection molding we use will be (PVC ABS HIPS) in mass production.

The material of the Master sample is very brittle which can easily lead to damage. This issue will not occur in mass production when plastic material is used.

Notice: If both PVC and ABS are selected, ABS will be applied for some parts in the mass production.

5.8.3 • Color of the Raw Material

- The Master Sample is not for color confirmation.

The color of the master sample is different from that of the molding sample. This is mainly due to the craftsmanship and raw material of the master sample. If the client strictly requires the consistency of both, it is achievable by spraying color on the master sample. However, it is not recommended to do so as the sample cost will be increased substantially. The master sample is mainly for the client to check the outline and details, and the color will be approved by the client with the mass production sample.

- Spraying color is applied on the master sample.

The spraying color is matched by the PMS color code, which is provided by the client and is for reference only. The color will be different from the mass products which are formed with solid color material by injection molding.

5.8.4 • Disassembly

The parts of the master sample will not be disassembled. This disassembly solution will be decided by the factory.

5.8.5 • Appearance

- Non-filling
- Filling

Some white or yellow filling will be seen on the master sample. This is for process reasons needing some supporting holes. The filling is required on the sample after the sample is made. This will not occur in mass production when injection molding is used.

5.8.6 • Quality of Details

The master sample is duplicated from the 3D printed sample, and has fine details. The production process of the tooling for mass production is as follows:

3D printed sample>>Silicon tooling>>Master sample>>Plaster tooling>>Ceramic tooling>>Steel tooling

Some details can be lost during the process of duplication. This is due to the technical characteristics of PVC miniatures (this applies to the entire industry). We can achieve 95% similarity in terms of the details (compared with 3D printed samples).

5.8.7 • Safety Issues

- Ages above 14

Sharp edges and acute angles are permitted.

- Age 14 and below

Sharp edges and acute angles should be avoided, as otherwise these may not pass the safety testing.

- Non sharp edge or acute angle

Sharp edges or acute angles can be avoided by modifying the designs. If you do not wish to amend the design, reducing the hardness of the raw material can help to pass the tests. Please contact our account manager for more information.

5.8.8 • Functionality

- The base size is regular.
- The base is too small.

The base size of the master sample is smaller than that of the design. This is mainly due to the mold being made by casting first and processed later. In order to shape a perfect sphere, the base of the master sample will be made relatively small (during the process of casting), then processed with EDM after the mold is finished. Finally, the mold will be processed to the accurate size as the fineness can be perfectly achieved by EDM but not casting.

6

Confirming Pre-production Samples

6.1 • Confirmation with actual samples

This method is highly recommended.

6.2 • Confirmation via photos, videos

We understand you may wish to confirm the pre-production samples via photograph or video due to the tight schedule or other factors. However, there are some risks with this, including but not limited to:

6.2.1 • Color

The color you see on photos or videos is affected by the shooting equipment, shooting environment (light), and display equipment, so can deviate from the real color. Please be careful if you have high requirements for color.

6.2.2 • Others

Because you cannot handle the sample, this confirmation method will not allow you to check all details that need to be felt by touch. For example:

- 1 • Visual and tactile effects of silk screen printing, heat transfer printing or UV printing
- 2 • Weight by touch
- 3 • The matching of spare parts (feel of the tightness)
- 4 • The finishing of varnish
- 5 • The finishing and feel of lamination
- 6 • The embossment texture by touch
- 7 • The finishing of spot UV by touch
- 8 • The finishing of hot stamping by touch
- 9 • The finishing of concave/convex
- 10 • The magnetic force by touch
- 11 • The thickness of materials
- 12 • The touch of braille
- 13 • The volume and sound quality of audio components
- 14 • Parts that need to be squeezed or stretched by external force, such as slow rebound PU products or elastic belt products
- 15 • Soft and hard feel of the material by touch
- 16 • Any other details where subjective judgment is made by sight, hearing, smell or touch.

7

Others

7.1 • Modification of Designs

In the case that the design file, size or other details are modified after the pre-production sample is approved, the following risks may remain:

7.1.1 • No sample prior to mass production, please refer to 1.1

7.1.2 • With White sample prior to mass production, please refer to 1.2

7.1.3 • With digital print sample prior to mass production, please refer to 1.3

7.1.4 • With offset print sample prior to mass production, please refer to 1.4



Do you need help?

www.longpackgames.com

info@longpack.com