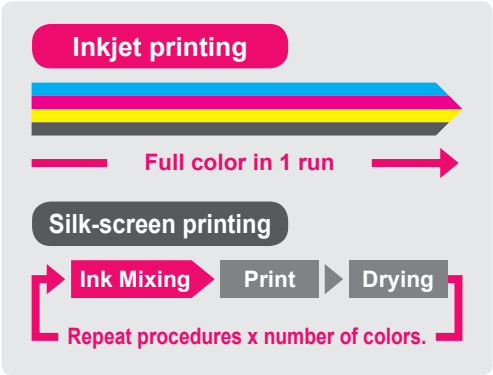
INKJET PRINTING

Full color digitally designed image can be printed in 1 run.
No cost difference regardless of the number of colors used.



Low printing cost

Full color print possible in small quantities

Inkjet printing 1 run only for full color print

Printing cost Full color

Silk-screen printing Printing cost x number of colors

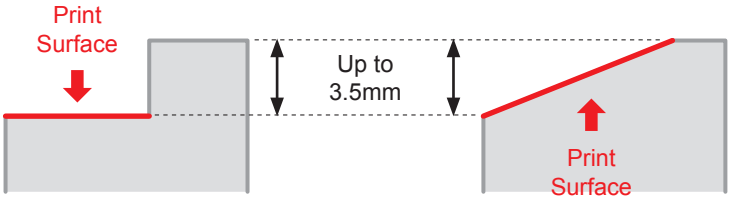
Printing cost Color 1	Printing cost Color 2	Printing cost Color 3	Printing cost Color 4

Maximum printable enclosure dimensions

D 420mm × W 594mm × H 270mm

Printable on irregular surfaces

Printing is possible on recessed, sloped and rounded sections.
Print can also be performed on surfaces with a height difference of up to 3.5mm.



Print example

ATTENTION

The larger the height difference required for printing, the coarser the image quality will become.
Image quality may also vary in the same print lot.
Silkscreen printing or laser marking is recommended for height differences exceeding 3.5mm.

[A] Without height difference

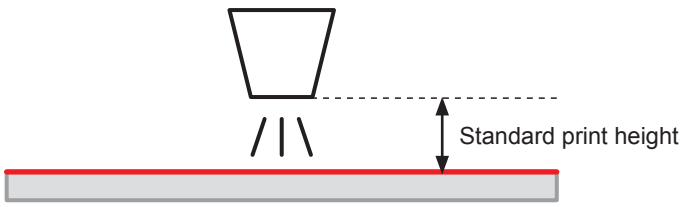
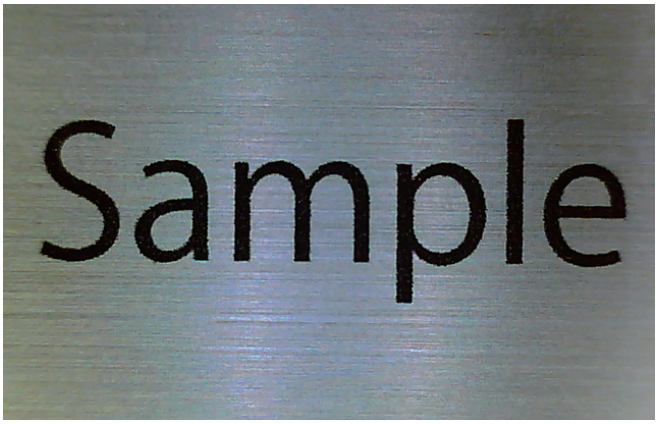
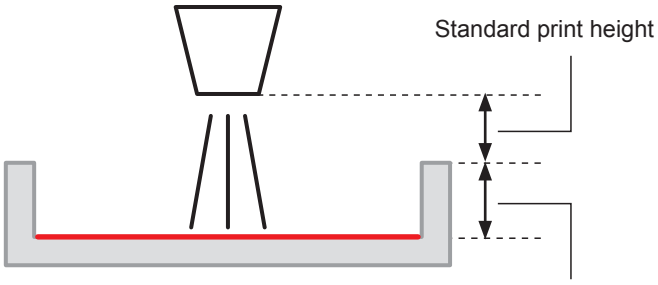


Image quality is maintained.

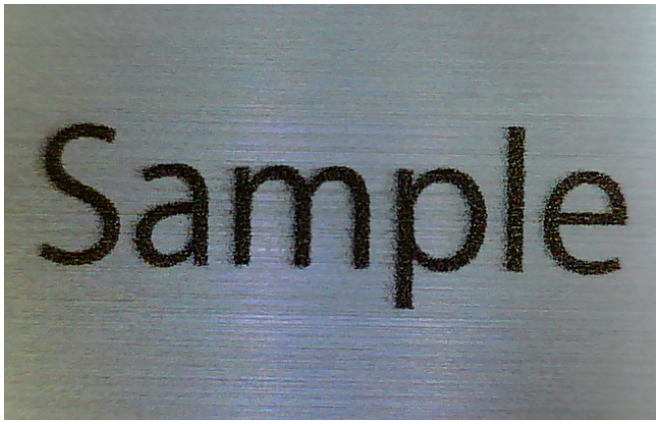


[B] With height difference



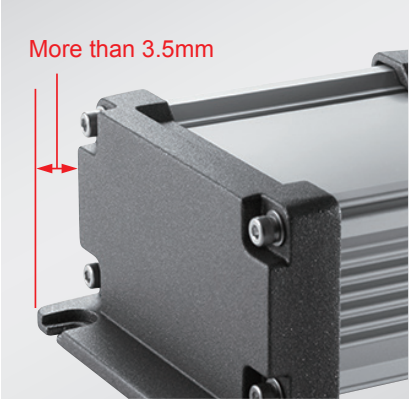
Height difference - [within 3.5mm]

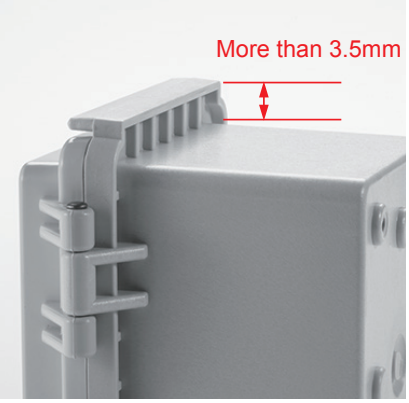
Image quality becomes coarser.

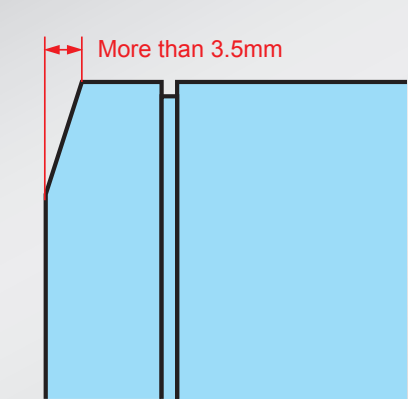


● Non-printable cases

Printing is not possible on silicone covers, rubber products, or with a height difference exceeding 3.5mm.







*Silkscreen printing, laser marking or engraving is recommended for surfaces where the height difference exceeds 3.5mm.

● Print • Marking method comparison chart

Items \ Methods			Inkjet	Laser marking	Silkscreen	Engraving
Design	Color gradation		◎	×	×	×
	Photo image		◎	×	×	×
	Multi color		◎	×	○	△
	Color switch		◎	×	×	×
	Fonts		Regular fonts	Regular fonts	Regular fonts	Regular fonts
	Smallest font size		1mm	1.5mm	1.5mm	2mm
Size • Shape	Recessed		◎	◎	△	◎
	Rounded		◎	◎	×	×
	Sloped		◎	◎	△	◎
	Max print area	3D	W594 × D420 × H270	W750 × D750 × H500	W1000 × D1000 × H1000	W560 × D560 × H180
		2D	W594 × D420	W750 × D750	W1000 × D1000	W1000 × D700
Cost	1 pc		◎	○	△	○
	~ 10 pcs		◎	○	▲	▲
	~ 50 pcs		○	▲	○	▲
	More than 50 pcs	Mono color	▲	△	◎	△
		Multi color	◎	×	▲	△
Quality	Weather resistance		○	○	○	○
	Abrasion resistance		○	○	○	◎
Lead time (Subject to change by quantity/details)			10 business days	10 business days	14 business days (Initial order) 11 business days (Repeat order)	10 business days

◎ : Very good ○ : Good ▲ : Fair △ : Poor × : Not printable

TAKACHI

PRINT FILE REQUIREMENTS

Guidelines for Print File

Recommended data formats

.ai	.eps	.pdf (1:1 scale)

	• All text should be outlined. • Color profile in CMYK mode. • Color should be specified in CMYK mode. • Add enclosure print face outline to specify print position.
	• All text should be outlined. • Color profile in CMYK mode. • Color should be adjusted accordingly. • Add enclosure print face outline to specify print position. • Transparent effects etc cannot be printed. • Adobe Illustrator software is recommended for editing .eps file.
	• All text should be outlined. • Color profile in CMYK mode. • Color should be adjusted accordingly. • Add enclosure print face outline to specify print position. • Ensure that the aspect ratio is correct. • Print data may be distorted if edited using CAD software, or other non-graphics specialized software. • Adobe Illustrator software is recommended for editing .pdf file.

OUTLINING TEXT

"Outlining is a method where normal font/texts are converted to vector graphics.
If a typeface that TAKACHI does not have installed is used, the data may be incorrectly printed.
Ensure that all text are properly outlined; if not, a similar installed typeface will be randomly chosen."

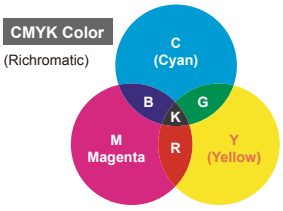
TAKACHI

Text (Not outlined)

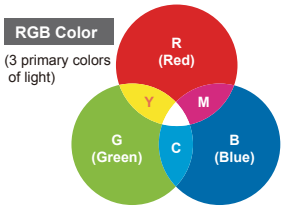
Outlined

CMYK COLOR MODE

Printing is processed in CMYK + W color mode. Create your print file in CMYK color mode.
If RGB color mode is used, print may be darker than actual specified color when converted to CMYK color mode.



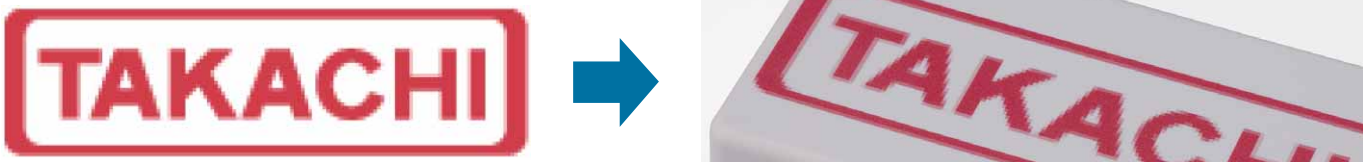
Our Color Mode



Fluorescent colors in RGB color mode cannot be printed.

●LOGO and MARKS

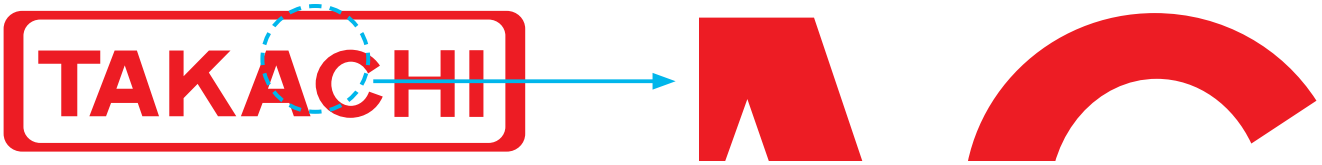
Images which are cut and pasted will be pixelated when magnified, or printed.
To avoid pixelated images, ensure that the data is created with a vector software.
Additional fees for data creation may be required if print data is not suitable to be used for printing.



Coarse image data

Printed image

【Vector Data】Image clarity remains unchanged even when magnified.



【Raster Data】Image clarity worsens (pixels become visible) when magnified.

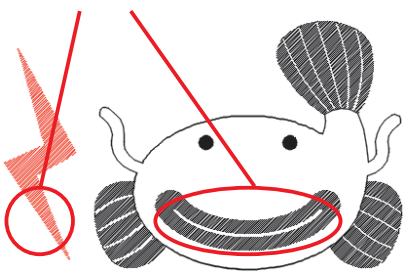
●PDF Data

Images on scanned pdf cannot be used for printing.
Text, shapes etc. have to be embedded in the print file.

If the text has not been embedded properly, the font may be randomly converted.

When converting from a DWG to PDF file, the print quality will be the same as viewing a pdf file on a PC.
Utilizing Adobe Acrobat (or Acrobat Reader) to convert the data will also yield a similar result.

Created as filled areas, but have white lines through-out.



This will be printed as-is based on received pdf file.

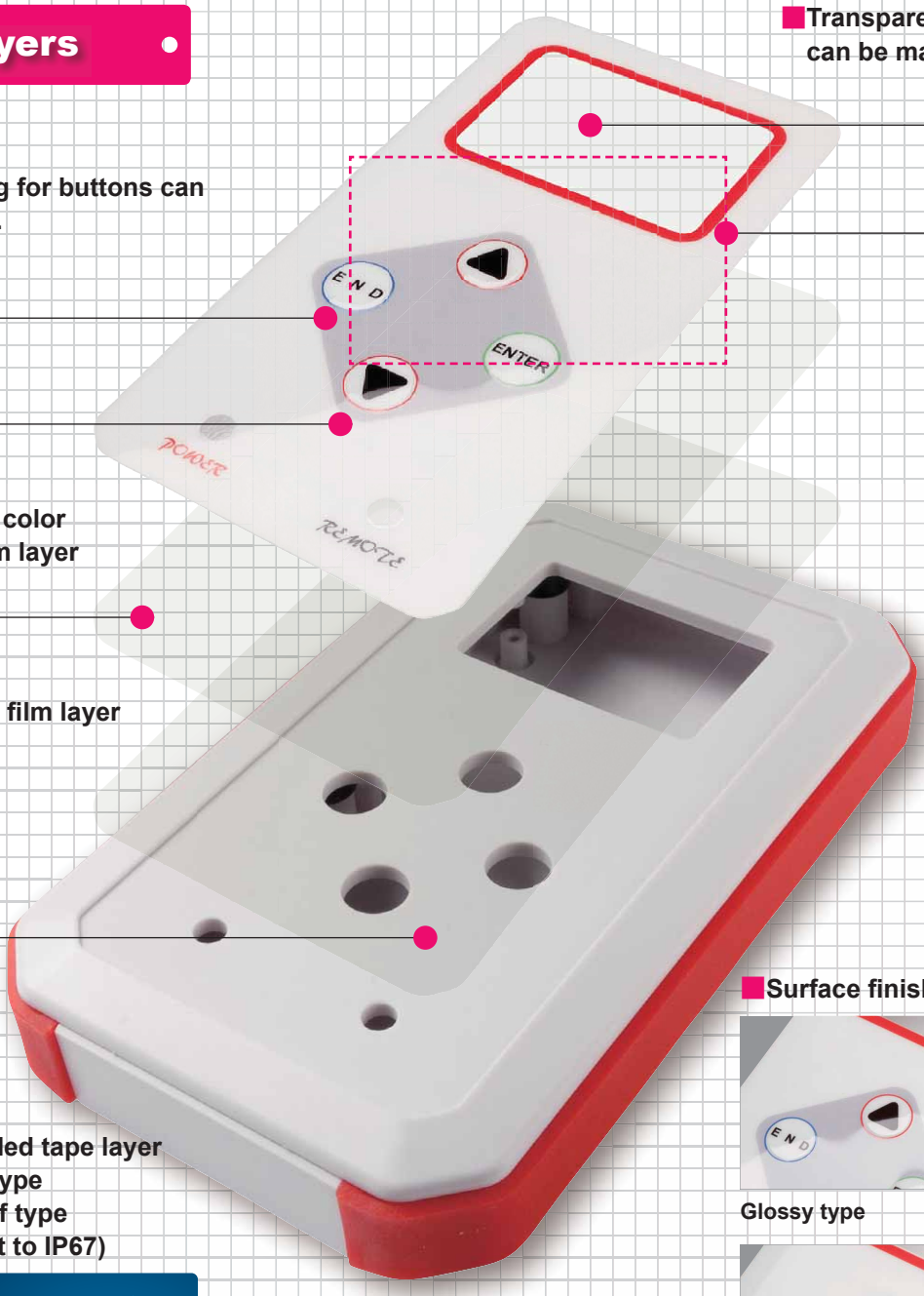
Blurred and jagged contour lines when using acrobat conversion software.

Digital Printed Overlay

Layers

Transparent windows can be made.

Embossing for buttons can be formed.



Digital full color printed film layer

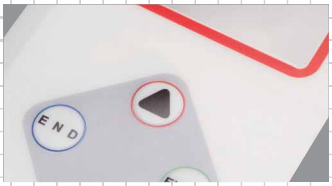
Laminated film layer

Double-sided tape layer
Standard type
Waterproof type
(Equivalent to IP67)

Waterproof type is equivalent to IP67 protection class. IP67

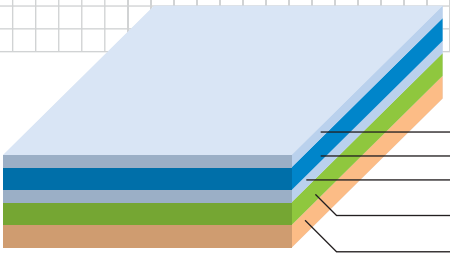
Surface finish

Glossy type



Matte type

Glossy type is recommended if transparent window is required.



Layer details

Layer		Material	Thickness
Protective layer		Polypropylene	0.040mm
Printed film layer		PET	0.198mm
Laminated film layer		PET	0.016mm
Double-sided tape layer	Standard	Acrylic	0.17mm
	Waterproof	Acrylic	0.15mm
Paper liner		Paper	-

Overview

Advantages

Feature 1 Punch die and print plates can be eliminated.

●Comparison of current and previous manufacturing methods

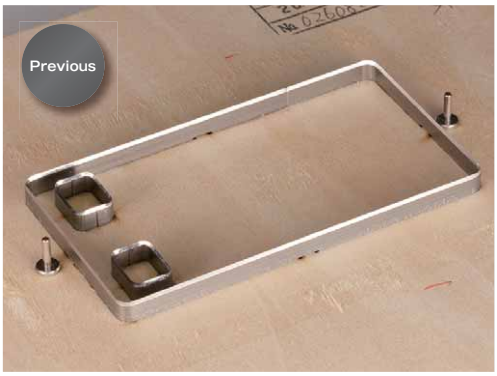
Current

Print data creation → Inkjet printing and laminating process → Cutting data creation → Cutting of double-sided tape, pasting, cutting of individual piece

Previous

Print plate creation → Printing and laminating process → Cutting die manufacture → Punching of double-sided tape, pasting, punching of individual piece

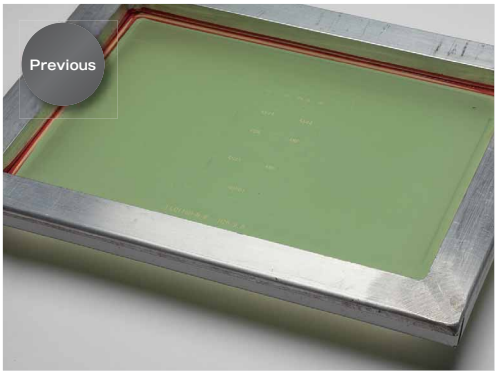
●Digital cutting plotter machine for sheet cutting



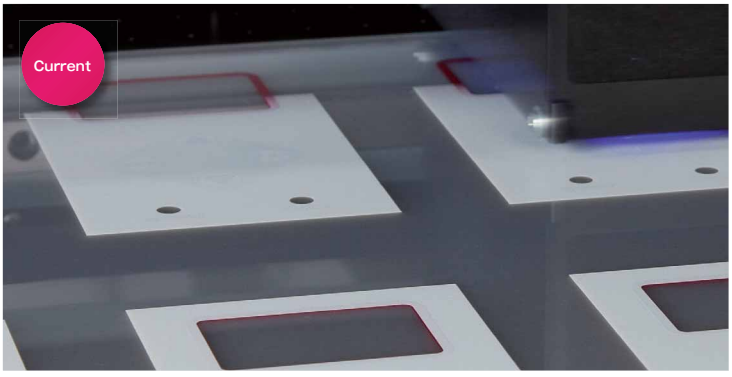
Significant cost is incurred in the preparation and manufacture of the cutting die.

Cutting the sheet to size is made possible via our cutting plotter machine, thus cutting die manufacture process can be eliminated.

●By utilizing inkjet printing, huge initial cost for plate making can be reduced.



Silk-screen plate for each color is required for printing.

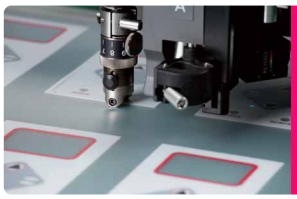


Digital inkjet printer can eliminate the print plate creation.
No cost difference regardless of print being single, or multi color.

Feature 2 Why are the initial costs low?

●3 reasons for low initial costs

Reason ①



Cutting process

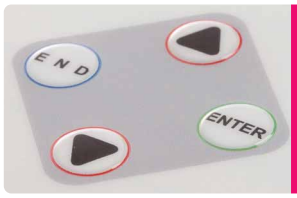
→ Avoiding the cost for cutting die manufacturing via our in-house cutting plotter.

Reason ②

Printing process

→ Saving the cost for print plates via utilization of our in-house digital inkjet printer.

Reason ③

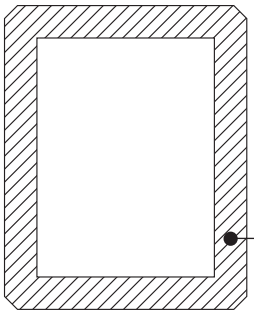


Embossing process

→ Reducing the cost for the embossing die via our new die manufacturing process.

Feature 3 Waterproof type

●Waterproof double-sided tape layer is available.



Conditions : Enclosure must be waterproof type.
Example : WH145-25-N-M2

10mm spacing around the edge is required.

Waterproof type is equivalent to IP67 protection class. **IP67**

Recessed top

Recess machining can be done for overlay sheet fitting.

Flat surface

→

Recess machining

→

Attaching the overlay sheet.

OVERLAY SHEET EXAMPLES

IP67 HAND-HELD ENCLOSURE
WH SERIES

PLASTIC ENCLOSURE with SILICONE PROTECTOR
TWS SERIES

HAND-HELD CASE with SHOCK-PROOF SILICONE COVER
LCT SERIES

IP67 NETWORK PLASTIC BOX
WP SERIES

PORTABLE PLASTIC CASE
PS SERIES

OVERLAY SHEET EXAMPLES

ALUMINIUM PANEL CASE with CORNER GUARD
EXP SERIES

IP67 ALUMINIUM ENCLOSURE with SILICONE PROTECTOR
AWP SERIES

HIGH-END DESIGN ALUMINIUM CASE
HD SERIES

IP67 FLANGED ALUMINIUM ENCLOSURE
AW SERIES

WATERPROOF PORTABLE CASE
NANO SERIES

DESKTOP ENCLOSURE with STAND HANDLE
MSN SERIES