



## Epson printhead application guide

# Package Direct-to-Shape



## Package printing these days

Environmental impact has become an essential packaging consideration in recent years. Excess plastic packaging is being eliminated and traditional plastic packaging is being replaced by biodegradable plastics and non-plastic materials.

Meanwhile, plastic remains indispensable for bottles used for items such as beverages and cosmetics. However, environmental considerations are also finding their way into this field. The amount of plastic used for these items is also being reduced by eliminating plastic film labels and printing information directly on the bottles themselves.

## Advantage of digital printing

Most analog printing assumes printing on a flat surface. In most cases, plate size is predetermined and the shape is flat. This makes it extremely difficult to print directly on three-dimensional objects. Transfer printing can also be used to print on three-dimensional objects, but there are size and color limits, which, in turn, limit package designs.

Conversely, there are no plates used in inkjet printing, and there is no limit to the size of prints. In addition, since inkjet printing is a non-contact method, it can be used to print on curved surfaces.



# Advantage of Epson printhead

Epson's lineup of S3200 and S800 series printheads is being readied to improve printing accuracy on curved surfaces.

The greater the curvature of the object to be printed and the wider the head, the greater the difference will be in the distance between each nozzle and the curved surface.

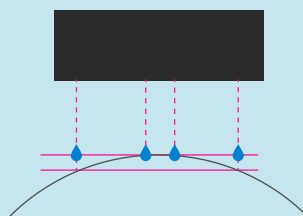
The printheads in the S800 series have a width of only 8.3 mm, enabling high-quality printing even on sharply curved surfaces such as tubes and cables.

Also, the distance between rows is only 1.016mm even though the resolution is 600dpi. The droplets land almost at the same time. It helps to get better print quality on the curved surface.

The printheads in the S3200 series have a width of 30 mm, but due to the S-shaped configuration, the width of the print bar is the same as the width of the head even when multiple heads are used.

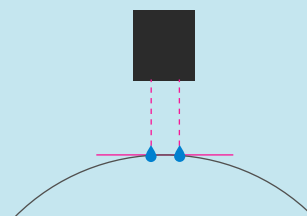
This enables space-saving designs. It also simultaneously enables large print widths and high-quality output on curved surfaces.

printhead A



The flying duration depends on the location of the nozzles. (might affect on print quality)

Epson S800



The droplets land almost at the same time. It helps to get better print quality on the curved surface.

## Printhead recommendation for package printing (DTS)



### S3200 series

UV/Eco-Solvent      AQ

4inch swath helps easy integration



### S800 series

UV/Eco-Solvent      AQ

Solvent

Only 8mm width and fit to curved print surface



Global: <https://inkjet-solution.epson.com>  
 Japan: <https://www.epson.jp/products/inkjethead/>  
 China: <https://www.epson.com.cn/Apps/PH/index.aspx>  
 US: <https://epson.com/inkjet-printheads>

<Notice>

- The product usages are an example, and it's not always applicable for each printing application.  
 - Product specifications and document description are subject to change without notice.