



Card Design Guide

Entrust Sigma DS4 Direct-to-Card Printer

Solid background colors

Just as with any type of printing, solid colors may not print uniformly on dye sublimation ink printing. Small changes in the color may be visible and are the result of minute variation in printing mechanics. These color changes may be more visible in neutral colors. To mitigate small changes in solid colors, add texture, fill the area with an image, or add a drop shadow to make them more distinct and bring the card design to life.

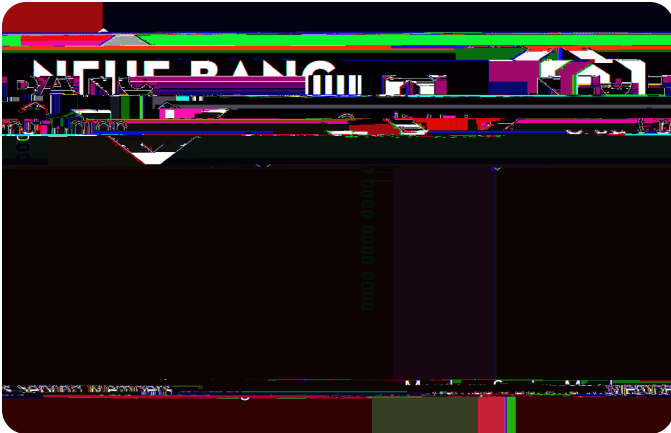


Figure 1: Solid colors may exhibit streaking or variation. Red and blue solid areas may print with different densities from top to bottom.

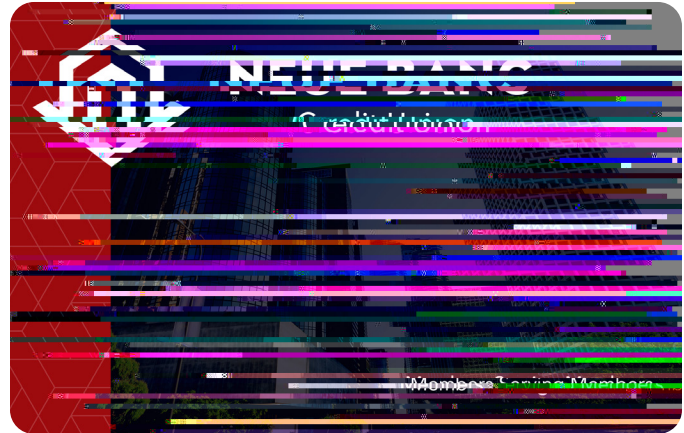


Figure 2: Texture was added to the red area, the blue area was filled with an image, and a drop shadow was added to the text to make it more distinct.

Card surface quality

Because a direct-to-card printer is printing at the card substrate, print quality is affected by the card surface. Best results occur on a smooth glossy surface. Some common issues that can compromise the card surface, and thus the print quality, include:

- Any chemical contamination (oils, grease, cosmetics or other) on the substrate can change the rate of dye transfer to the card surface, which can result in a darker or lighter appearance; oils can also inhibit the transfer of monochrome text printing. The physical irregularities on the card surface prevent an intimate contact between the card surface and ribbon/printhead causing print dropouts.
- Best printing occurs on smooth, glossy surfaces. Any satin/matte surfaces should be tested beforehand for performance. Surface roughness or topography can result from the following:
 - Satin/Matte Finish: Intentionally roughing up the surface
 - Smart Cards: Whether contact or contactless, chips can add topography to the surface of the card
 - Debris: Can originate from the manufacturing process of the cards and could create a void or crater in the outer layer

Solutions for using UV curable ribbons with Light Curing Module:

- Printing CVC/CVV next to signature panel and/or below the white box

Ideal image layout and formats

Image Size

- 2.13 x 3.38 inches, 54.0 x 85.8 mm, 638 x 1013 pixels (at 300 x 300 dpi)
- Light Curing Module needs a 300 x 600 or 300 x 1200 image

Font Size

-

Direct-to-card images FAQs

Q: Why is there a white line around my magnetic stripe?

A: Color backs require additional blocking features to accommodate the preprinted element shifting on the cardstock and use double the ribbon.

Q: Is there a formula to help in color adjusting images?

A: Using ICC Workflow, begin with targeted RGB values, though additional adjustments may be necessary.

Q: Why can't I achieve the color I want?

A: As with all desktop printers, your desired color may be outside of the printer's gamut. A different color mode may result in closer colors.



ABOUT ENTRUST CORPORATION

Entrust keeps the world moving safely by enabling trusted experiences for identities, payments, and digital infrastructure. We offer an unmatched breadth of solutions that are critical to enabling trust for multi-cloud deployments, mobile identities, hybrid work, machine identity, electronic signatures, encryption,