

The Process Metallic Color System by Color-Logic provides a unique solution which enables any designer with the Color-Logic Design Suite and FX-Viewer™ to implement a diverse range of special effects as a first line of defense against counterfeiting. Part 1 of this series describes the basic Color-Logic approach to package and document security. Part 2 of the series describes some of the more sophisticated security elements available in the software. Part 3, the final element of the series, describes how the Color-Logic software creates the fifth printing plate and how Color-Logic can be used to foil counterfeiters when using variable data printing.

### Image-FX™

The Color-Logic Image-FX feature is a photorealistic image separation algorithm that analyzes images and calculates the required metallic effect for the different tonal regions of the image. This plug-in for Adobe Photoshop CC and higher automatically creates an effect printing plate for use with a metallic silver ink. If printing is to be done using metallic substrate, the effect printing plate can be manipulated to output for white ink printing. This automated process eliminates the time consuming, trial and error method of integrating metallics into an image and only places metallic ink where it is required, using an advanced algorithm which also acts as an ink reduction tool.



**Day Time Packaging**  
Shines Metallic



**Night Time Packaging**  
Glows under UV light

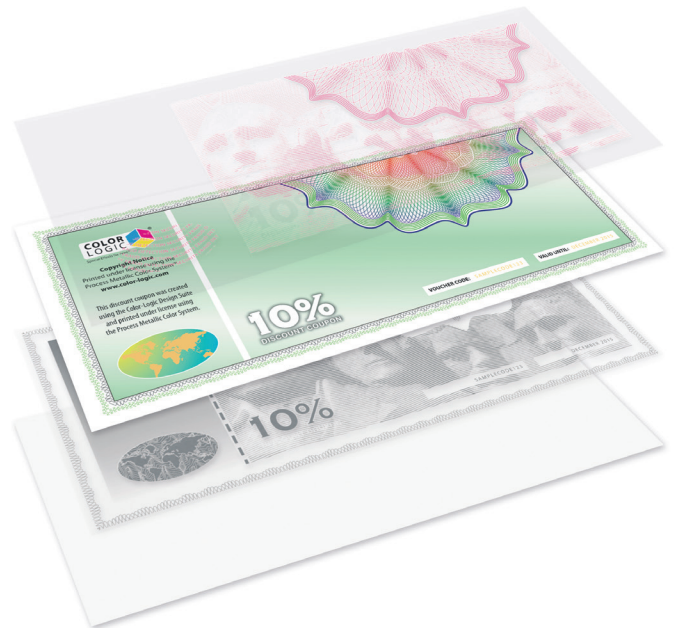
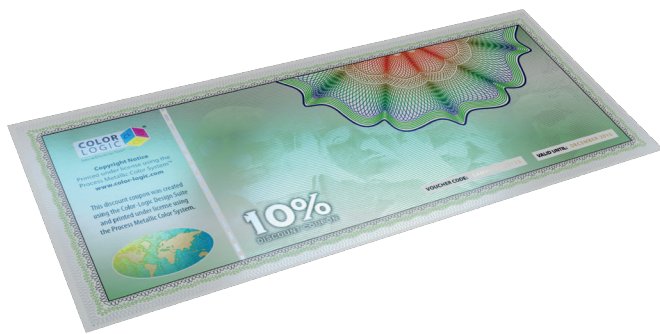
The luxury packaging on the left above was created using a complex white ink mask, generated using the Color-Logic Image-FX plug-in. The package on the right was printed using the same plate to apply light-reactive ink which glows under ultraviolet light. This permits the elegant box package to retain its esthetics during day and night.



## Digital Printing –Variable Data Printing on Colored Foil

When white masks are created manually, it is virtually impossible to incorporate variable data in a foil area to be overprinted CMYK. In such instances, it would be necessary to manually create a separate white ink mask for each data variation. When the Color-Logic system is used in digital printing processes, variable elements may be used throughout the design. Simple personalized text, as well as more complex techniques such as sequential numbering and variable images are possible. With the Color-Logic software, white ink masks are automatically created as the file is processed, eliminating the need for creating white separations during design.

Combined Color-Logic effects can be used with either covertly or to visually embellish a design. The same Color-Logic separation then could also be output as an additional security effect separation, using invisible or thermochromatic ink.



## Combining multiple effects

In the separation visuals shown to the right, the Color-Logic effect plate was output for metallic silver ink printing – An invisible security ink separation was also generated using the same Color-Logic tools.

Without any modifications to the design, the same art file may also be output as a white ink plate for printing on a foil substrate. This technique allows for a design to be output on any device capable of printing either metallic or white inks.