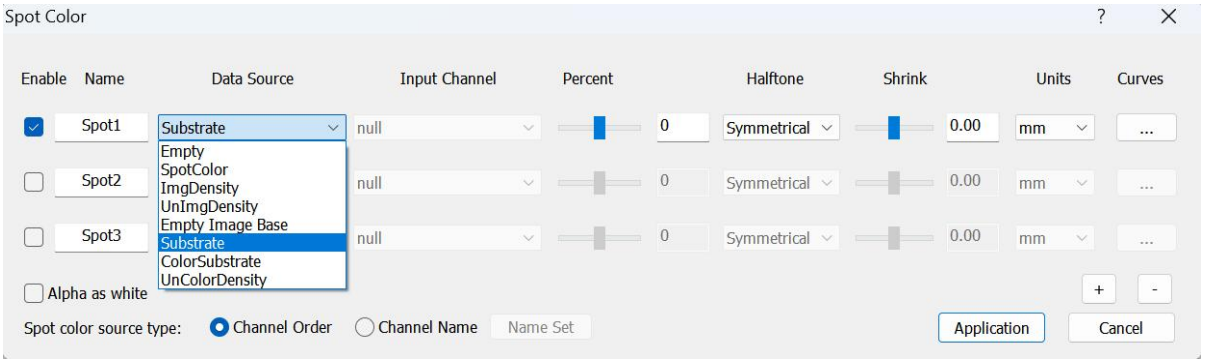
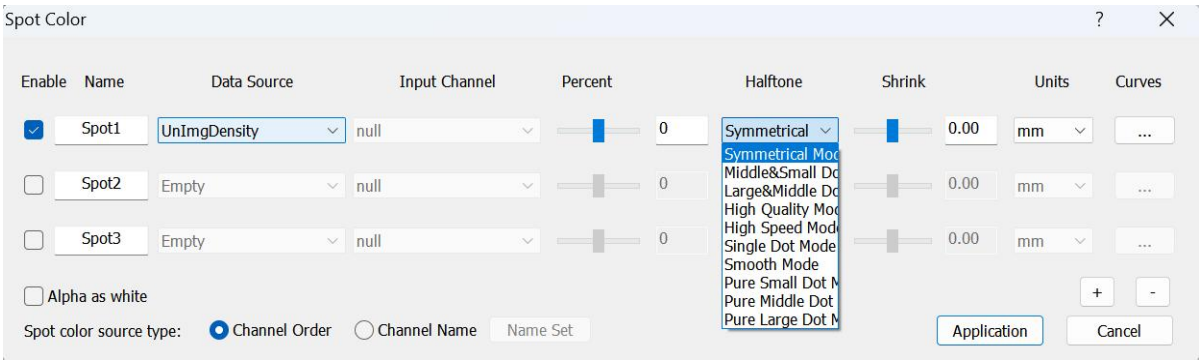
Spot Color Illustration

Description of data generation methods and characteristics of supported screening modes in the spot color setup function.

Data Sources:



Halftone Dot:



Schematic Diagram:

Data Generation Methods:

1.1 Empty

Blank data.

1.2 Spotcolor

Ink output based on the spot color channel.

1.3 Imgdensity

Output based on the grayscale values of the image.

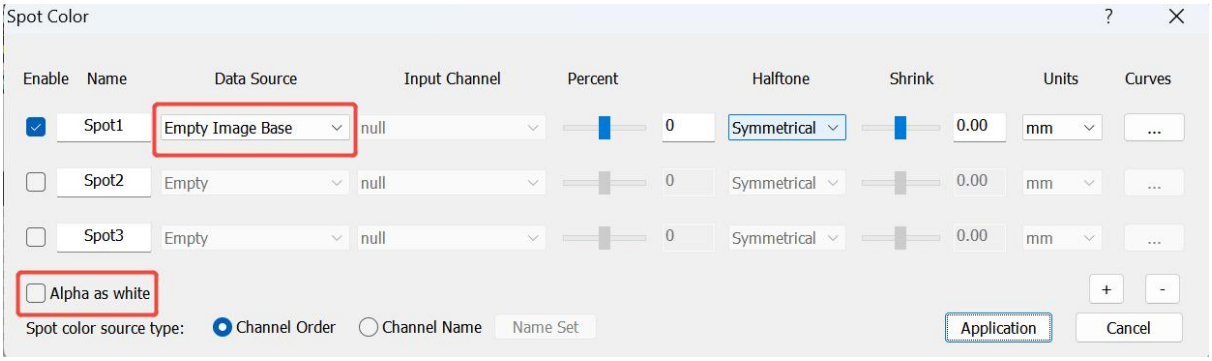
1.4 UnImgdensity

Output based on the inverse grayscale values of the image.

1.5 Empty Image Base

All pixels output with 100% ink volume.

If "Full White Coverage" is selected without enabling Transparent as White, transparent areas will not output white ink, as shown below.



1.6 Substrate

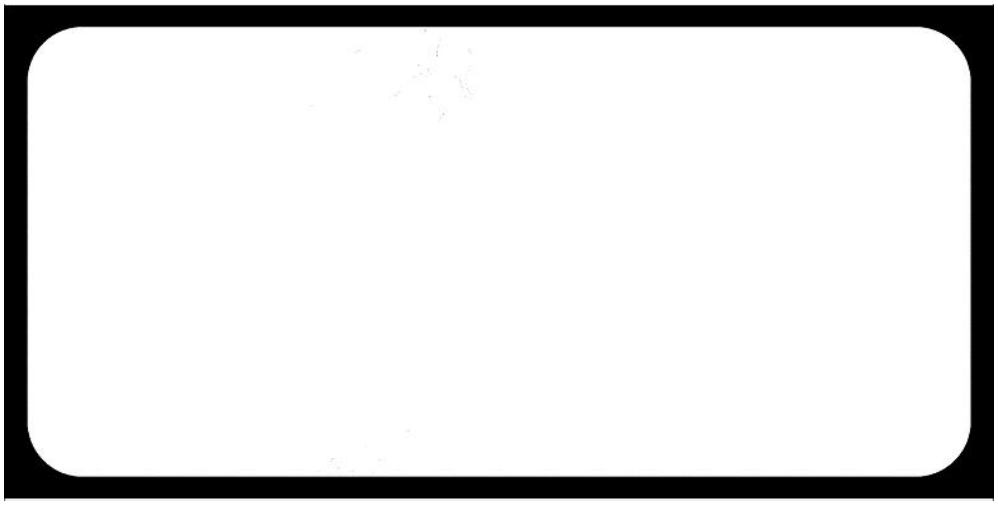
Colored areas output with 100% ink volume; white areas do not output.

1.7 ColorSubstrate

Colored areas output based on the inverse grayscale values; white areas do not output.

1.8 UnColorDensity

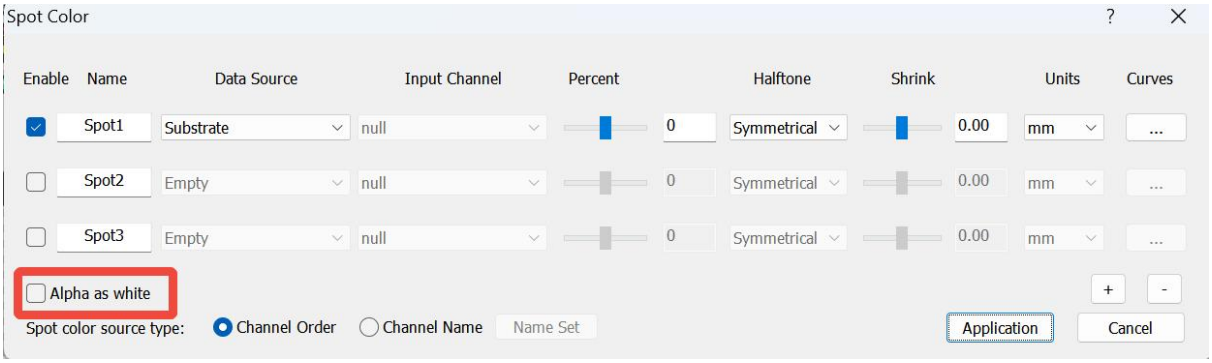
Colored areas do not output; white areas output with full coverage.



Checkbox Options:

Alpha as white -- White ink output rules apply to transparent areas.

Do Not Alpha as white-- Transparent areas never output white ink.



Screening Mode Descriptions:

2.1 Single Dot Mode

Screening Method: 1BIT_DITHER

Features: Must be selected when using a 1-bit printhead.

2.2 High-Speed Mode

Screening Method: 2BIT_EXPRESS

Features: Suitable for 2-bit printheads. Faster speed, slightly lower precision, reduces stringing effect.

2.3 Symmetrical Mode

Screening Method: 2BIT_KMPCS_MIX

Features: Suitable for 2-bit printheads. Balanced precision and speed; reduces stringing effect.

2.4 Symmetrical Mode(Large-Medium Dots)

Screening Method: 2BIT_KMPCS_MIX_LM

Features: For 2-bit printheads supporting large-medium dots. Balanced precision and speed; reduces stringing effect.

2.5 Symmetrical Mode(Medium-Small Dots)

Screening Method: 2BIT_KMPCS_MIX_MS

Features: For 2-bit printheads supporting medium-small dots. Balanced precision and speed; reduces stringing effect.

2.6 High Quailty Mode

Screening Method: 2BIT_KMPCS_UV

Features: For 2-bit printheads. High precision, slower speed.

2.7 Pure Small Dot Mode

Screening Method: 2BIT_SMALLDOT

Features: For 2-bit printheads. Pure small dots; high precision, finer details, but lighter ink coverage.

2.8 Pure Medium Dot Mode

Screening Method: 2BIT_MIDDLEDOT

Features: For 2-bit printheads. Pure medium dots; higher precision, lighter ink coverage.

2.9 Pure Large Dot Mode

Screening Method: 2BIT_LARGEDOT

Features: For 2-bit printheads. Pure large dots; lower precision in light-colored areas.

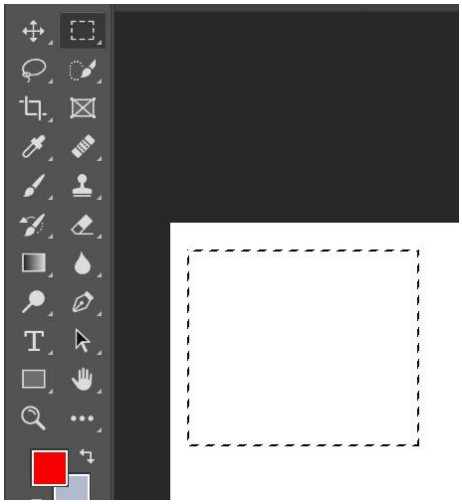
2.10 Smooth Mode

Screening Method: 2BIT_LMPCS

Features: For 2-bit printheads. Three-stage dot pattern; produces delicate printing effects.

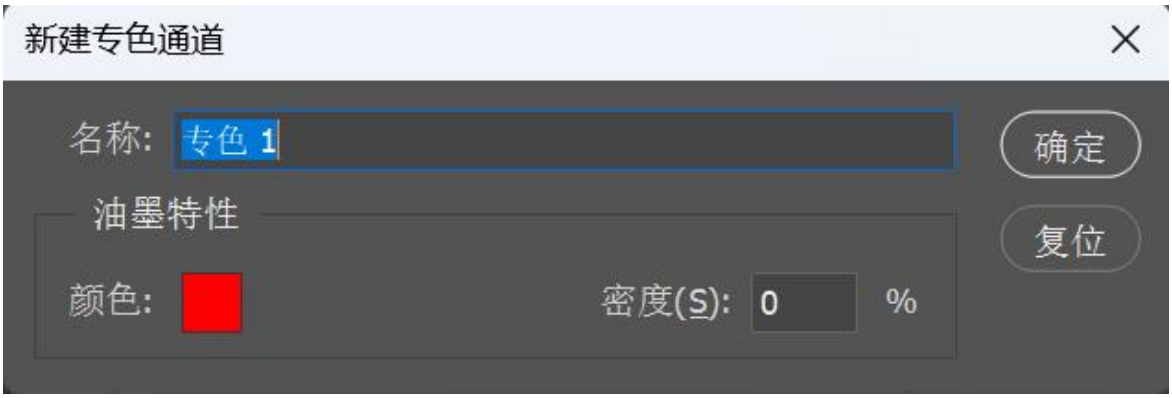
Creating Spot Color Channels:

1. In Photoshop, place the image and use the selection tool to select the area requiring white ink.

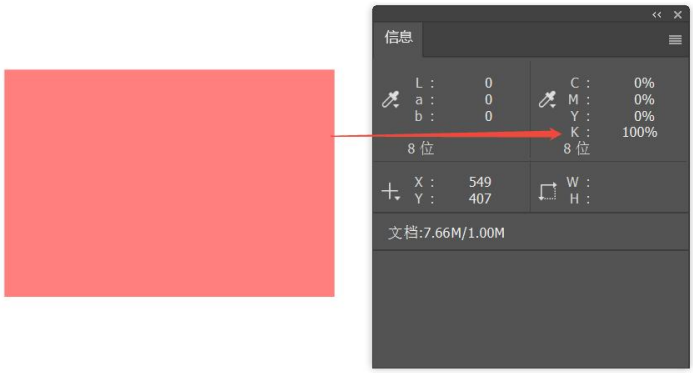


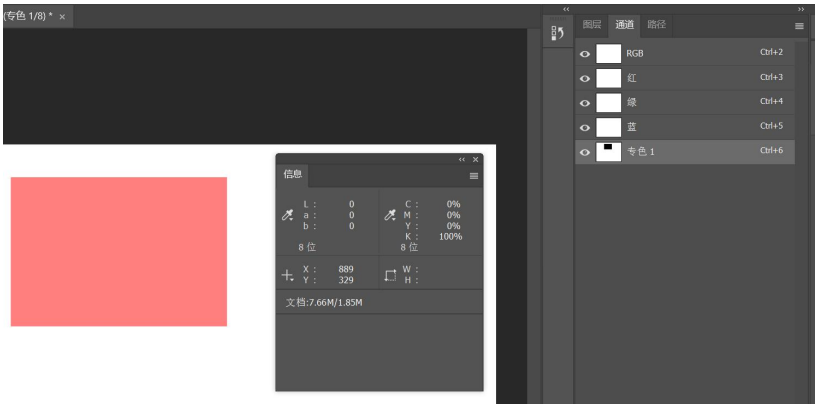
2. Go to Channels, click the extension menu (top-right corner), and select New Spot Channel.

3. Create a new spot channel (color and density settings do not affect actual white ink thickness).



4. Press the F8 key or go to Window > Info to open the Info panel. The K value in the panel represents white ink thickness. A K value of 100% indicates maximum thickness.





5. To adjust white ink thickness:

   Modify the foreground/background color and fill the spot channel using Ctrl/Alt + Delete.

   Verify the adjusted thickness via the Info panel.