

SQUARE SPOT

ACCURACY,
STABILITY, AND
RELIABILITY



When good-looking presswork isn't enough

While all CTP systems can produce plates that result in nice presswork, this is not the only measure of a quality CTP solution—and it may not be the most important. Variation is an expensive, often overlooked issue. Variation in plates, chemistry, exposure, density, and ink/water balance all affect your ability to keep presswork on target. Eliminating variation was the driving force behind Kodak's development of award-winning Kodak SQUAREspot Imaging Technology.

Unique technology eliminates variability

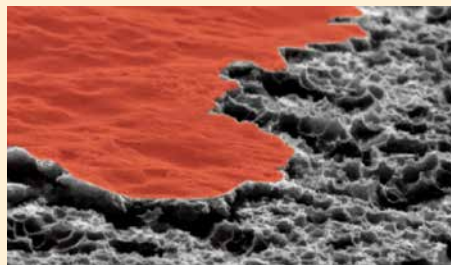
SQUAREspot Technology is a unique, high-resolution laser imaging system that delivers a fine swath of energy at 10,000 dpi. Standard on all Kodak Trendsetter and Magnus Platesetters, SQUAREspot Technology enables a wider operating window for accurate plate imaging.

It provides tonal uniformity across the plate, maintaining imaging accuracy despite normal variations and ultimately extending chemistry lifespan. Combined with intelligent Dynamic Autofocus, SQUAREspot Technology produces an exceptionally robust and accurate dot consistently and reliably, plate after plate.

Kodak Platesetters produce an image on plate that is up to six times more resistant to process variation than competing technologies. These devices can help reduce chemistry usage, plate waste, remakes, makeready times, compromised color, and premature plate wear, while enabling you to tolerate a wider range of prepress and pressroom variables—critical for keeping your operation running smoothly and saving you money.

The difference is clear

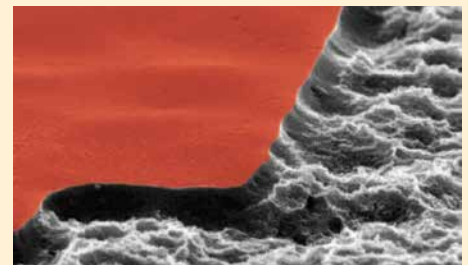
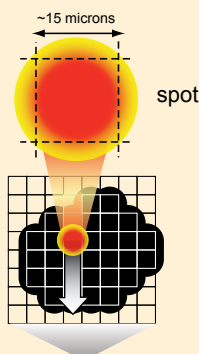
Even after processing, the edges of dots can be weaker than the center, resulting in quicker dot wear on press, longer makereadies, differences between plate readings and press results, and more color variation through the print run. Dots created with SQUAREspot Technology have harder edges, making them more resistant to wear on press than Gaussian or GLV dots. Stable, durable dots improve color consistency on press, reduce makeready time, and increase the useful run length of plates on press.



CONVENTIONAL GAUSSIAN DOT

Photomicrograph of the edge of a single halftone dot from conventional thermal imaging. Note the irregular edge definition that results from variations in the imaging threshold, causing unpredictable tonal reproduction.

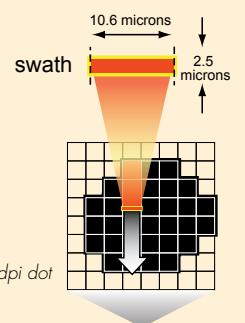
2400 dpi dot



SQUAREspot TECHNOLOGY DOT

Photomicrograph of the edge of a single halftone dot from a Kodak SQUAREspot Thermal Imaging Head. Note the uniform, steep edge definition, providing consistent tonal reproduction on plate, despite typical variation.

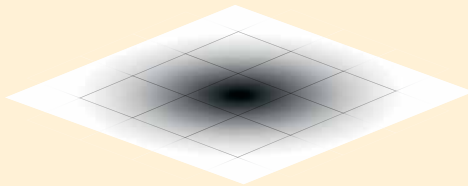
2400 dpi dot



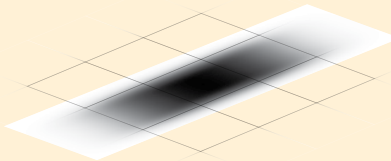
What's the difference?

All CTP lasers expose dots according to a grid of pixels, typically of about 2,400 per inch. Laser systems found on many platesetters use a laser spot with an effective diameter of about 1500 dpi. More importantly, the laser energy tapers off towards the outer diameter in what is called a Gaussian (soft/fuzzy) profile.

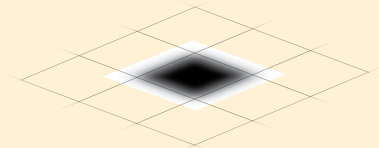
Conventional Gaussian laser energy profile



GLV laser energy profile



SQUAREspot Technology laser energy profile



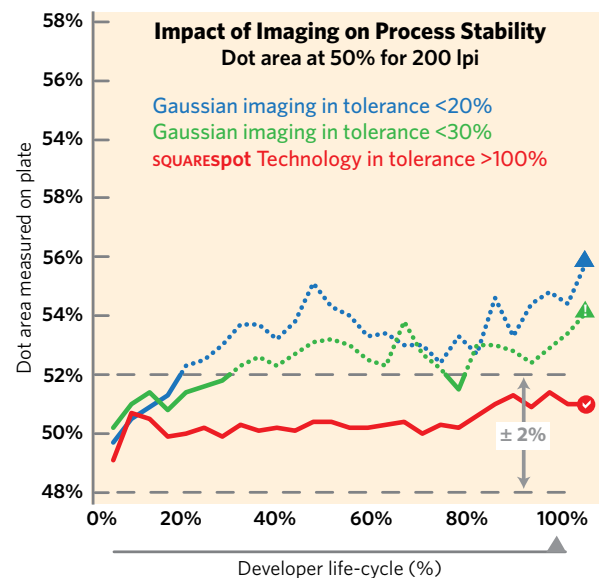
The Gaussian profile creates an area of uncertainty in the laser imaging spot that is highly sensitive to variation. Although more precise on one dimension, grating light valve (GLV) technology produces a similar area of uncertainty on the other dimension. As the developer ages, more and more of these fuzzy areas are developed on the plate, resulting in larger halftone dots and introducing inconsistencies that need to be addressed on press. High-resolution, 10,000 dpi **SQUAREspot Technology** substantially reduces the Gaussian effect, delivering halftone dots with greater immunity to normal process variations in prepress.

Stability with SQUAREspot Imaging Technology

The chart at right shows the results of a test comparing halftones from **SQUAREspot Technology** and two Gaussian imaging technologies as processor chemistry ages. With new developer, the dot area for all three technologies is at 50% after processing with fresh chemistry. However, when the developer is only 20% through its life cycle, the dot area of the first Gaussian technology's dots exceeds the 2% spec for variation. The second one is out of spec at 30% of the developer life cycle. Dots imaged with **SQUAREspot Technology**, however, remain in spec throughout the developer life cycle.

Other elements of Kodak's CTP technology combine to deliver even greater stability:

- Automatic temperature compensation—enables accurate registration even with variations in ambient temperature.
- Geometrical correction—factory calibration provides matching plates from different **Kodak** Platesetters.
- Dynamic autofocus—reduces the chance of hotspots and image artifacts.



SQUAREspot Technology and KODAK SONORA Process Free Plates: the perfect combination

The industry leading pixel sharpness of **SQUAREspot Imaging Technology** unlocks unique benefits that become even more pronounced when imaging **Sonora XP** or **Sonora News** Plates, including:

- Increased laser efficiency: 27% less energy required for comparable press performance
- Plug-and-play color reproduction: no dot gain calibration required when switching from processed plates
- Superior tonal stability: achieve highest screening qualification with the same process free plate

Maximize uptime with reliability you can depend on

With over 20,000 thermal CTP shipments worldwide, we stand by our products with comprehensive service plans and a global network of professional support consultants. Kodak's imaging heads are manufactured and tested under the most stringent conditions. In the unlikely event of laser failure, the redundancy engineered into every thermal head means that you probably won't even know about it. If you do need help, it's just a phone call away.

Produced using **Kodak** Technology.

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