

KineLog3 Technical Specifications – Kinefinity

~3 minutes



KineLog3 Technical Specifications

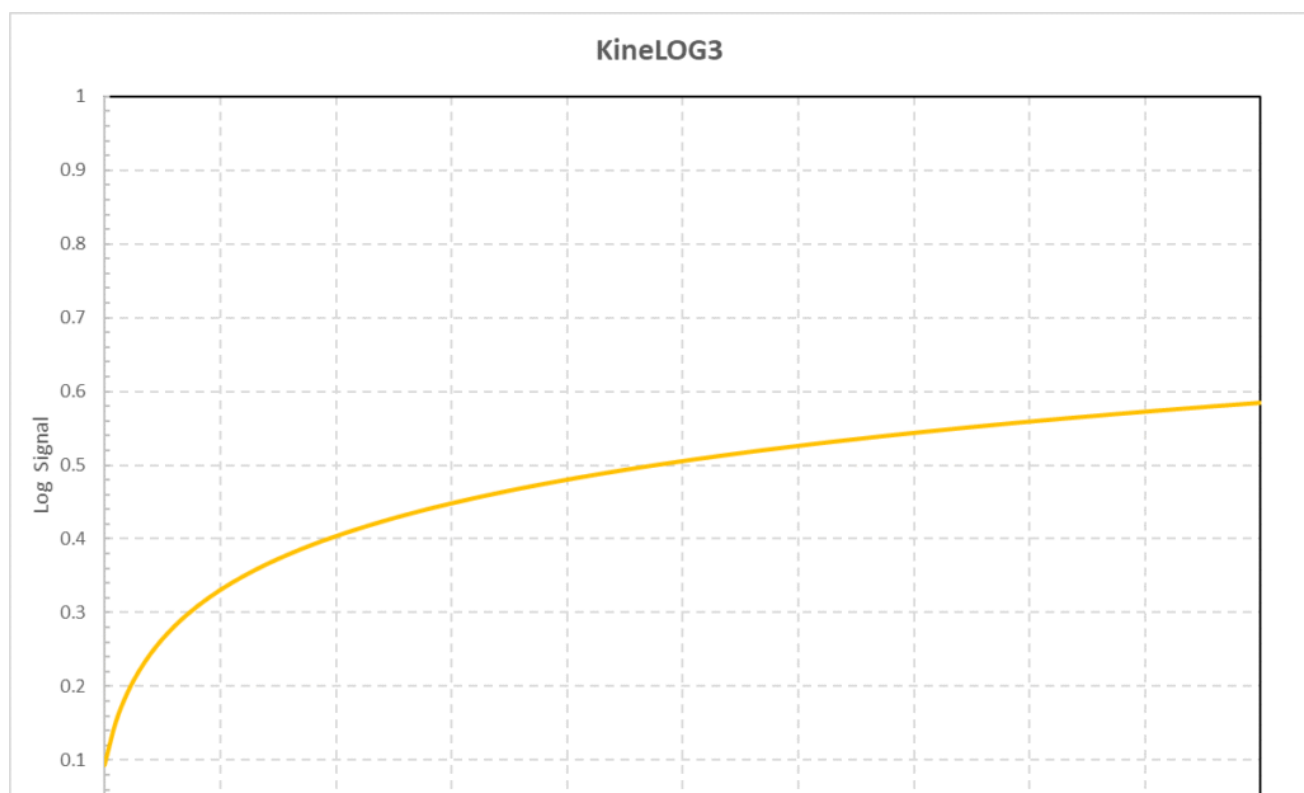
September 24th, 2025, Beijing – Kinefinity is pleased to introduce KineLOG3, a new color curve designed to offer greater flexibility in post-production. KineLOG3 provides an expanded dynamic range, capturing more detail in highlights and shadows, while seamlessly integrating into post-production workflows.

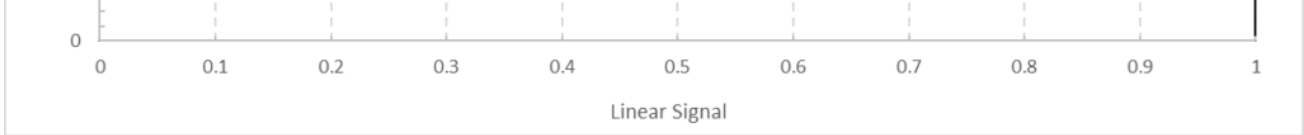
KineLOG3 is a logc curve featuring negative film scanning characteristics, designed to encode the camera's native color space and luminance data, thereby preserving greater dynamic range in footage. In post-production software, this curve enables conversion to SDR, HDR, or other LOG curves.

This article introduces the technical characteristics of KineLOG3. By utilizing the KineLOG curve and color gamut outlined in this document, color restoration and conversion to other color spaces can be achieved in post-production.

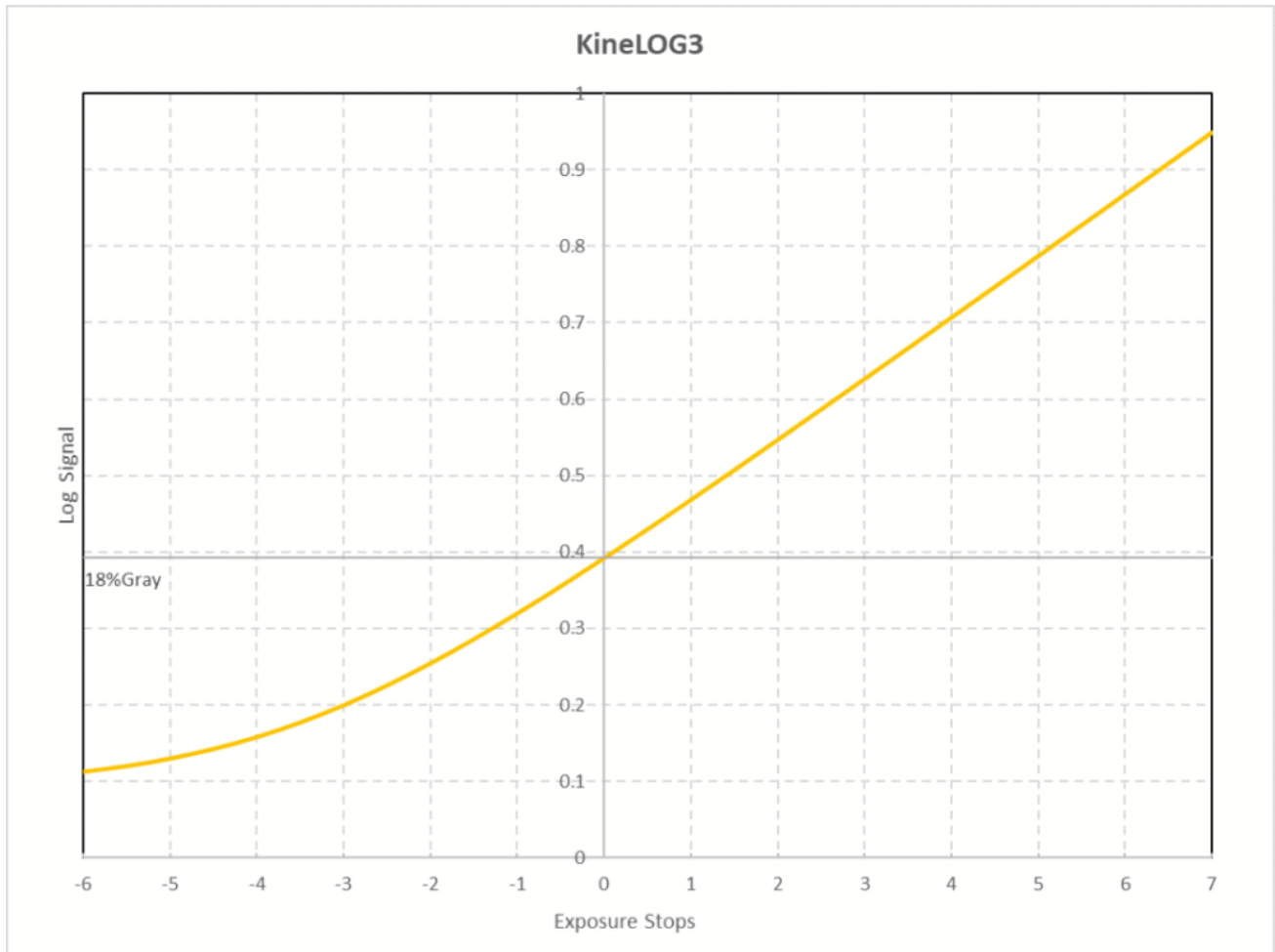
1. KineLOG3 Curve

The figure below illustrates the curve graph of KineLOG3, with the X-axis representing the signal from the camera's CMOS image sensor.





The X-axis of the graph represents exposure stops. The 18% gray reflectance value corresponds to an IRE of 39.2, the 0% reflectance value corresponds to an IRE of 0.09, and the 90% gray reflectance value corresponds to an IRE of 57.2.



2. KineLOG3 Formula

KineLOG3 is defined by three parameters “a”, “b”, “c” and an offset “d”, with the specific formula as follows:

$$a = 66.64, b = 0.296, c = 0.907136, d = 0.092864$$

$$\text{cut} = -0.008239, s = 0.017178$$

Linear to KineLOG3:

$$Y = [\log_{10} (a \times x + 1)] \times b \times c + d \quad (x \geq cut)$$

$$Y = \frac{x - cut}{s} \quad (x < cut)$$

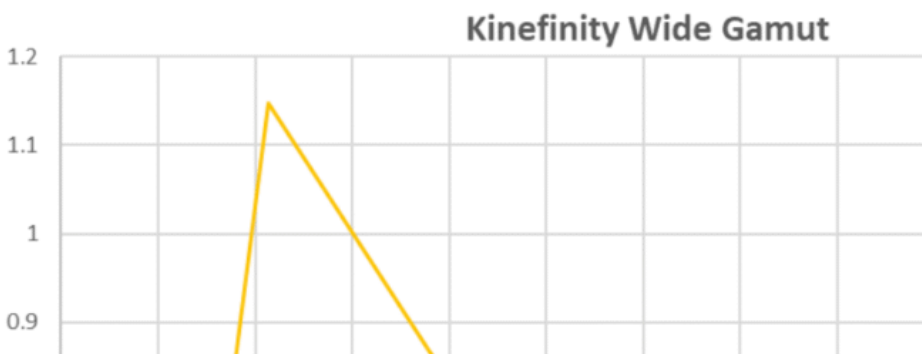
KineLOG3 to Linear:

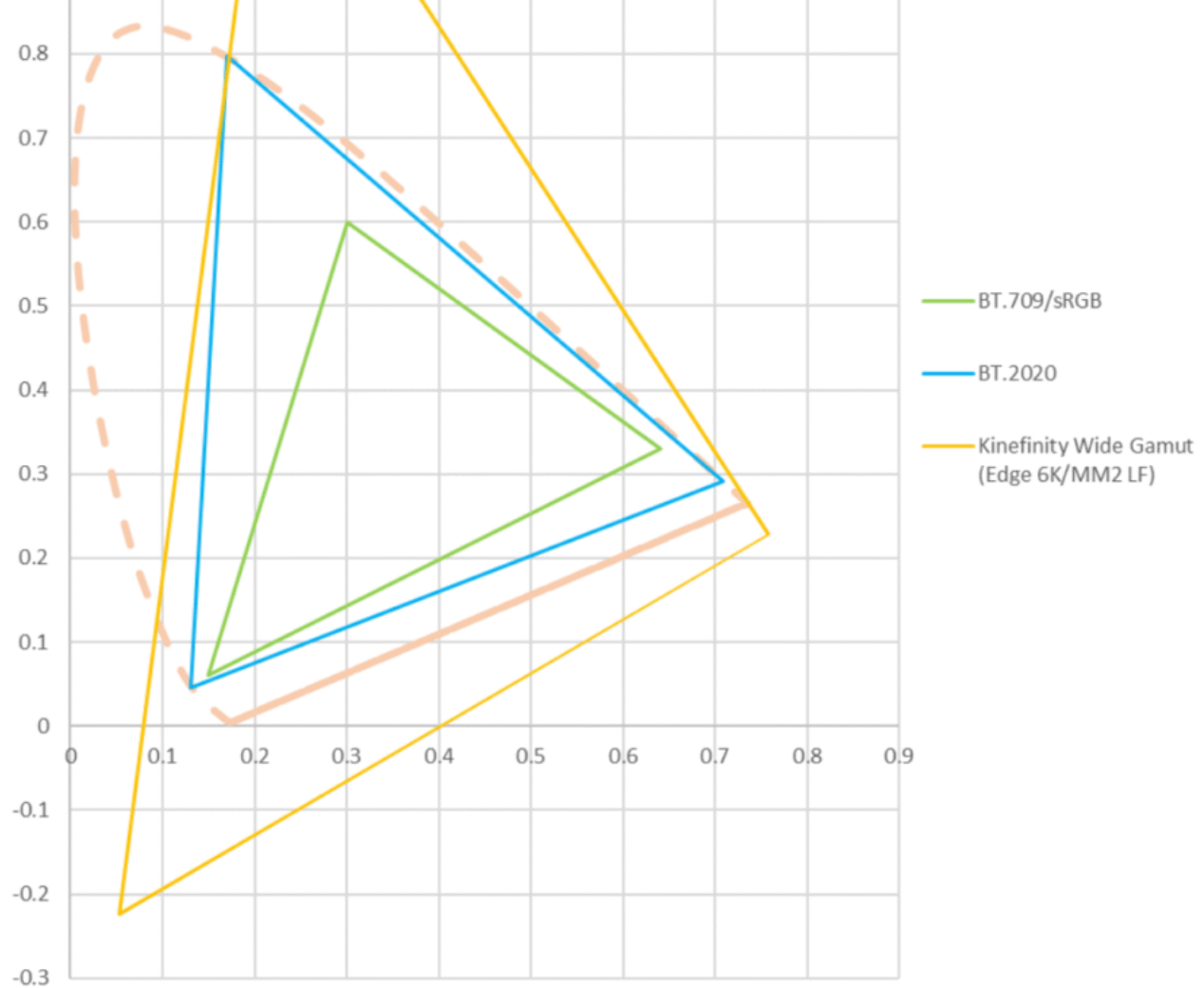
$$Y = \frac{10^{(x-d)/b/c} - 1}{a} \quad (x \geq 0)$$

$$Y = x \times s + cut \quad (x < 0)$$

3. Apendix

Kinefinity Wide Gamut is a wide color gamut, enabling conversion to standard color spaces such as BT.2020 and BT.709. The position of Kinefinity Wide Gamut (MAVO Edge 6K/MM2 LF) in the CIE chromaticity space is illustrated in the figure below.





Color	X	Y
R	0.7571	0.2282
G	0.2139	1.1480
B	0.0536	-0.2282
W(D65)	0.3127	0.3290

Using the following matrices, the camera's native color space (Kinefinity Wide Gamut) can be converted to standard color spaces. To target additional color spaces, the conversion can

be achieved by first converting through the CIE XYZ matrix and then combining it with XYZ-to-target color space matrices to derive the final target color space.

Kinefinity Wide Gamut to BT.2020:

1.1273 0.0479 -0.1526

-0.1259 1.6209 -0.4626

0.0162 -0.3666 1.3597

Kinefinity Wide Gamut to CIE XYZ:

1.5240 -0.3255 -0.1320

-0.3190 1.0445 0.2142

-0.0912 0.2541 0.7523