

## KEY FEATURES

2048 x RGB x 2048 active resolution  
+ 16-pixel orbit on four sides

2080 x RGB x 2080 total resolution

2.88 x 8.64  $\mu\text{m}$  color dot pitch

Ultra-compact (0.99" diagonal)

RGB or YCbCr video inputs

Frame rates up to 120 Hz

Row blanking mode for low persistence support

Color space conversion, contrast, brightness and gamma controls

Bi-directional horizontal and random-access vertical scanner circuits

Built-in ramp and VCOM generator



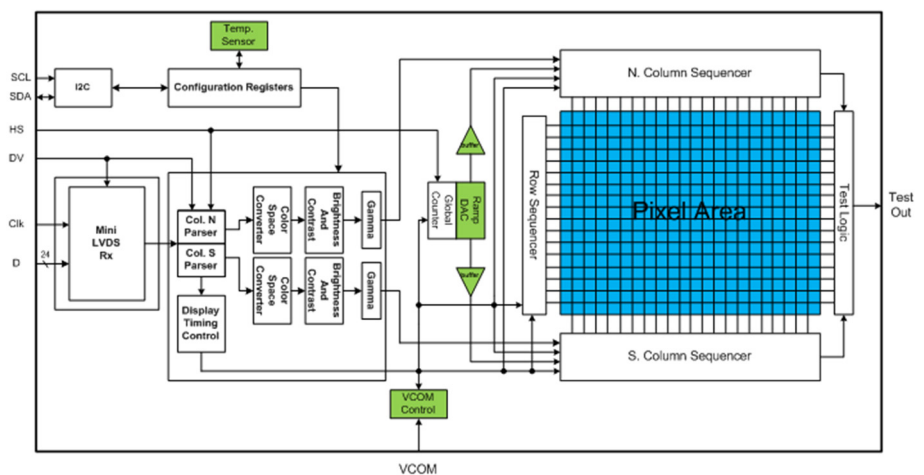
The Lightning<sup>®</sup> 2K OLED is a color-filter active matrix organic light emitting diode (AMOLED) with a resolution of 2048 x 2048. The Lightning 2K utilizes high-performance single crystal silicon transistors and is the smallest (0.99" diagonal) AMOLED for the resolution. The emissive Lightning 2K has the same display architecture as the industry standard LCD monitor or TV. The ultra-compact Lightning 2K is ideal for premium consumer VR devices, such as for VR entertainment, or professional devices, such as for design visualization.

## Functional Description

The Lightning 2K features Kopin's low-voltage architecture for low power consumption and compatibility with CMOS driver ICs. Bidirectional horizontal and unidirectional vertical scanner circuits are integrated along with a sleep mode. The total dot active resolution is 2048 x 2048 x 3 (12,582,912 dots).

The Lightning 2K accepts RGB or YCbCr video inputs up to 120 Hz frame rate via a mini-LVDS interface.

### BLOCK DIAGRAM



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\*Specifications subject to change without notice

Rev. 2

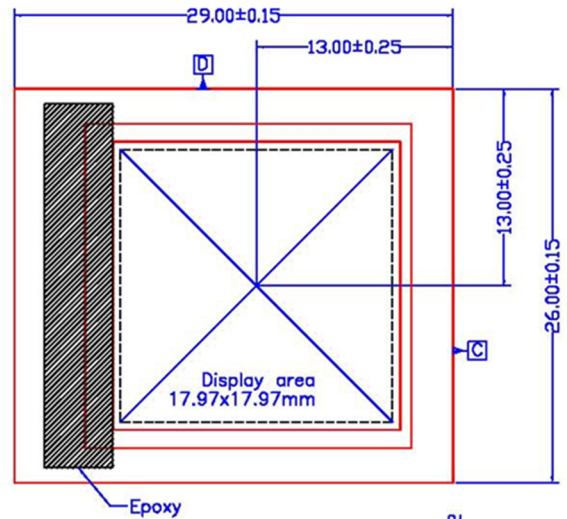


Lightning 2K with a spatial resolution of 2048 x 2048 is ideal for premium consumer VR or professional devices.

MECHANICAL OUTLINE

# Lightning<sup>®</sup> 2K AMOLED

Top View



Side View

