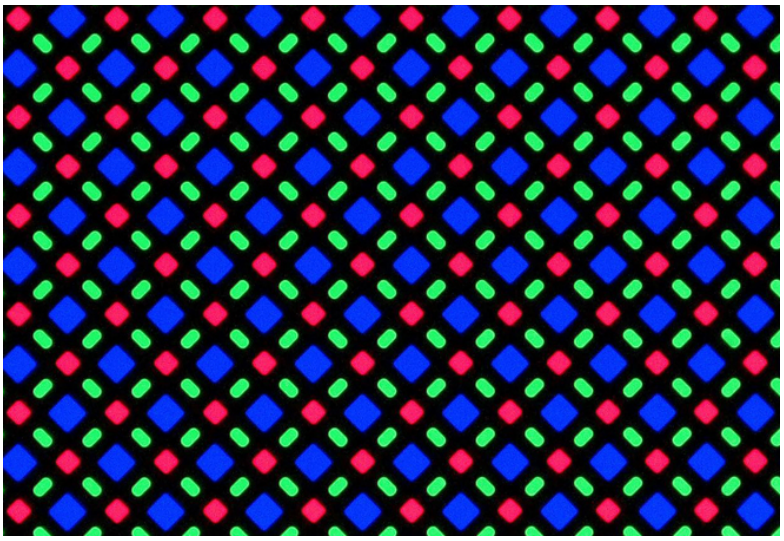
iPhone 13 Pro Max Diamond Pixels



A high resolution screen shot obtained with an optical microscope camera shows a Diamond shaped layout for the Sub-Pixels on the iPhone 13 Pro Max. This Diamond Pixel layout is used on many OLED displays.

First of all, the Red, Green, and Blue sub-pixels have very different sizes -- Blue is by far the largest because it has the lowest light emission efficiency, and Green is by far the smallest because it has the highest efficiency. The alternating Red and Blue sub-pixel arrangement leads to a 45 degree diagonal symmetry in the sub-pixel layout. This allows vertical, horizontal, and particularly diagonal line segments and vectors to be drawn with reduced aliasing and artifacts.

In order to maximize the sub-pixel packing and achieve the highest possible pixels per inch (ppi), that leads to a Diamond rather than Square or Striped arrangment of the Sub-Pixels. It's a form of high-tech display art...

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