Did you know most flatscreen televisions can only display about a third of the color your eye can see? Our QDEF® quantum dot technology creates a visual experience truer to reality by enabling LCDs to display over 90% of the rec.2020 UHD color standard. This means richer, more viscerally alive reds, a deeper palette of greens and vivid blues. With Nanosys quantum dots, browsing through photos on a tablet is now more like holding a stack of high quality, professional prints. Watching a movie on a big screen in the living room is like attending a private screening at a Hollywood studio.
Brighter is Better
Nanosys high efficiency QDEF enables an immersive High Dynamic Range (HDR) viewing experience with peak brightness of over 1,000 nits. That’s more than double the brightness of a typical LED TV without drawing more power.

Best rec.2020 Coverage
No other display technology delivers the same combination of color performance and efficiency. With Nanosys QDEF, LCDs can now cover more than 90% of the rec.2020 4K UHD broadcast standard color gamut standard.

LED Color

QDEF UHD Color
For the past 5 years you’ve heard that adding more pixels matters most. But better, smarter pixels with lifelike color and higher brightness deliver more “wow” than more pixels alone. The difference can be seen from across the room. Only Nanosys Quantum Dots can deliver stunning image quality with lifelike color and high dynamic range while consuming less power.

At Mass Production Today
- Flexible Silicon Valley fab leads the industry with 25 ton per year Quantum Dot material capacity for both Cadmium-based and Cadmium-free materials
- An industry first - US EPA PMN approval, required for high volume production above 10 tons
- Global regulatory compliance: all materials RoHS & REACH approved

QDEF 2.5x
LED 1.0x