

# NANOSYS THE TECHNOLOGY QUANTUM DOT ROADMAP COMPANY

PLATFORM FOR ALL  
FUTURE DISPLAYS

*From LCDs to OLEDs and micro-LED displays to printable electroluminescent displays, Quantum Dots are the technology platform for all future displays.*

## 4 QDEL

Quantum Dot Electro Lumiscent

The future emitter material for emissive displays, QDEL will finally make low-cost, ultra-thin and flexible displays a reality.

## 3 QDCC

Quantum Dot Color Conversion

Printed or photo lithography-patterned Quantum Dot Color Conversion technology improves LCD, microLED and OLED displays. With QDCC, new levels of color volume performance and manufacturing throughput are possible for all three technologies.

## 2 QDOG

Quantum Dot On Glass

QDOG delivers all of the color and brightness benefits of QDEF in an incredibly thin package. This lower cost QD implementation eliminates the need for barrier films and enables 5mm-thin LCD TVs.

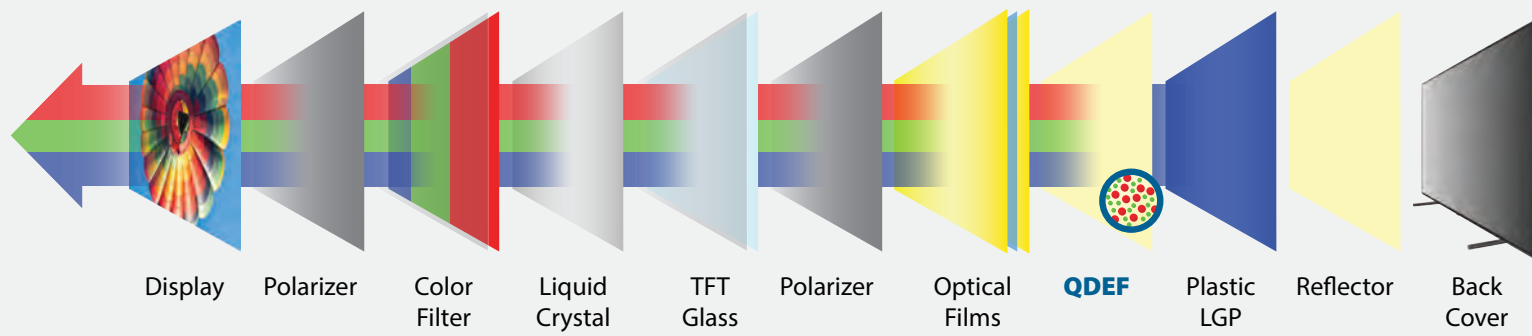
## 1 QDEF

Quantum Dot Enhancement Film

Enabling a new generation of brighter, more efficient displays with lifelike colors, QDEF gives LCD technology an important edge as it battles new entrants such as WOLED.

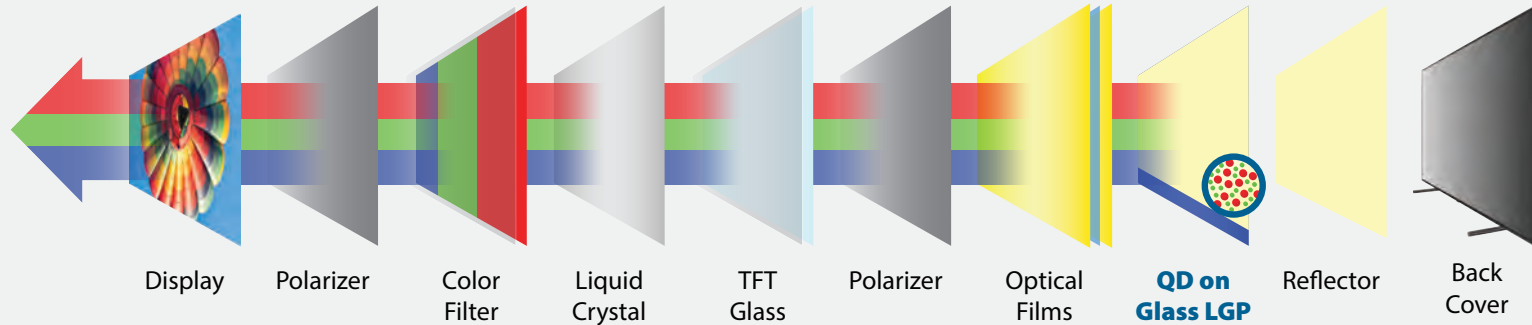
# PHOTO ENHANCED

## Quantum Dot Enhancement Film



- Vivid, lifelike colors: >90% BT.2020 color
- Premium HDR: >2,000 nits peak luminance
- Robust reliability: no burn-in guaranteed
- RoHS compliant: <100ppm Cadmium Hyperion & 100% cadium free solutions shipping today
- Low cost: leverages LCD manufacturing infrastructure

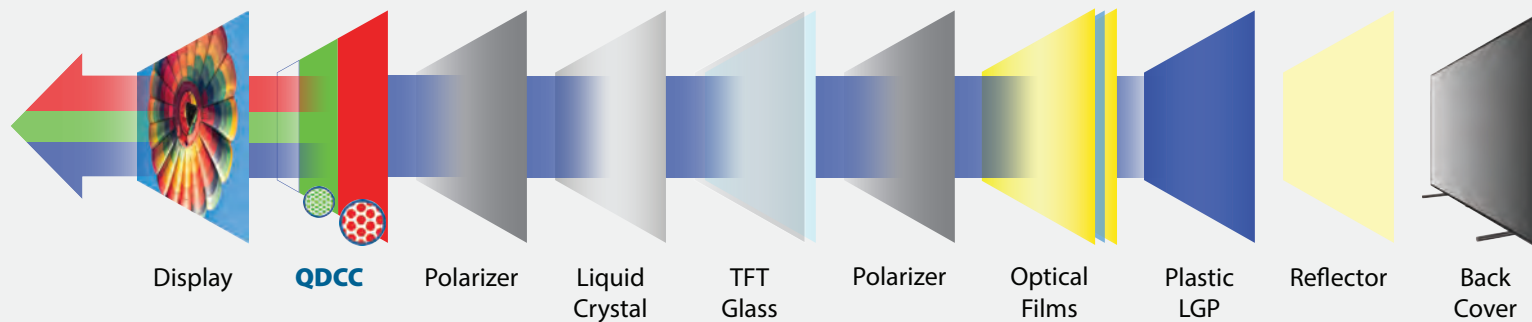
## Quantum Dot On Glass



- Incredibly thin design: <5 millimeters
- Cinema colors: >100% DCI-P3 color
- Premium HDR: >2,000 nits peak luminance
- Robust reliability: no burn-in guaranteed
- RoHS compliant: 100% cadium free
- Low cost: leverages LCD manufacturing infrastructure & eliminates need for barrier film

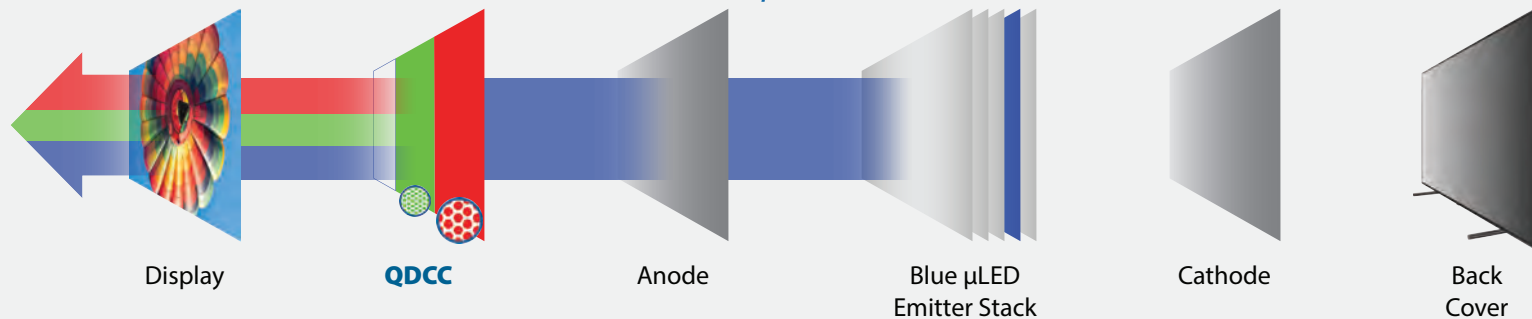
# PHOTO EMISSIVE

## Quantum Dot Color Conversion for LCDs



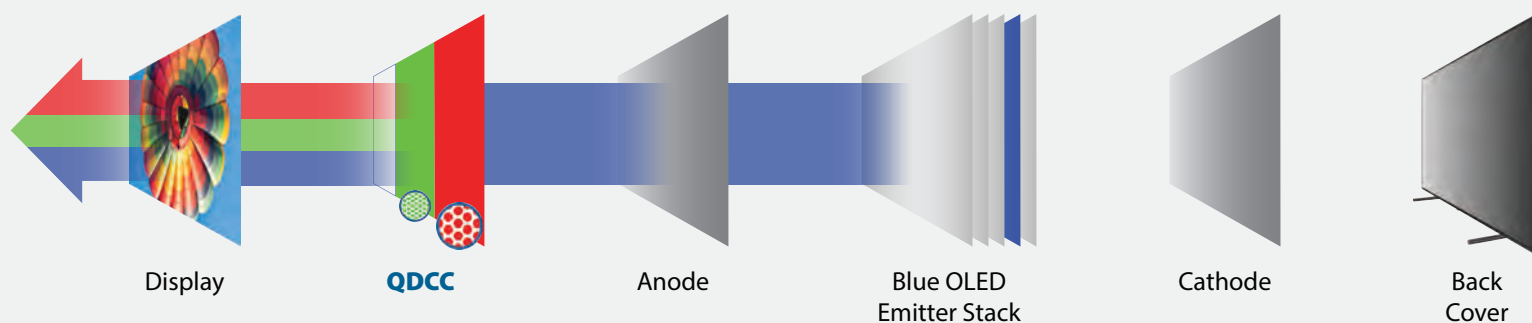
- LCD's passive Color Filter Array replaced by active sub-pixel patterned Quantum Dot emitter layer
- Up to 2X potential improvement in power efficiency or brightness
- Perfect viewing angle: hybrid emissive display
- RoHS compliant: 100% cadium free
- Flexible manufacturing: Nanosys QD compatible with ink jet printing or photo lithography

## Quantum Dot Color Conversion for $\mu$ LEDs



- Quantum Dots patterned directly on top of blue microLED sub pixels
- True emissive display: Perfect black levels and viewing angle
- RoHS compliant: 100% cadium free
- QD patterning simplifies the manufacturing process and dramatically increases manufacturing yield for high resolution RGB microLED displays

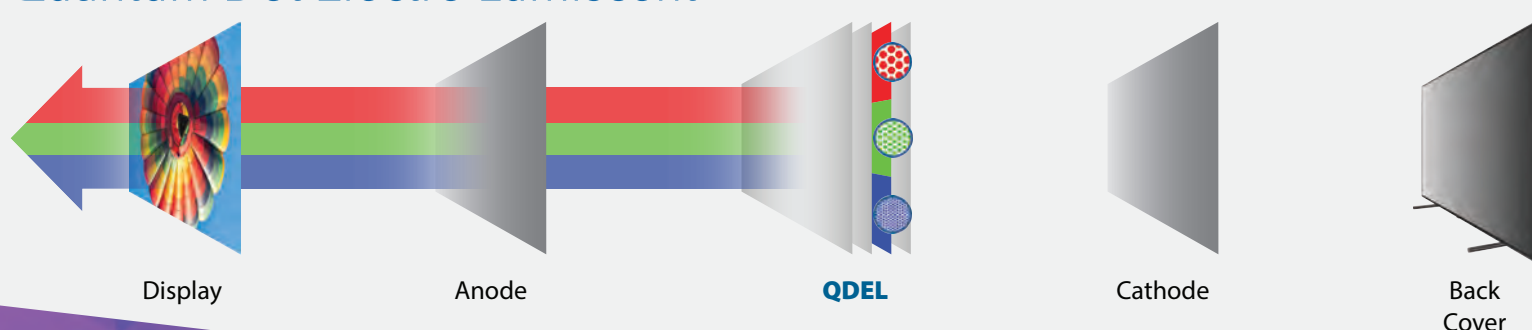
## Quantum Dot Color Conversion for OLEDs



- Quantum Dots patterned directly on top of blue OLED sub pixels
- True emissive display: Perfect black levels and viewing angle
- No Compromised Colors: Pure RGB color, no white subpixel
- Simplifies the Display Structure
- RoHS compliant: 100% cadium free
- Low Cost: Solution processable via ink jet

# ELECTRO EMISSIVE

## Quantum Dot Electro Lumiscent



- Future emitter material for emissive displays delivers on the promises of OLED
- Emissive technology: perfect black levels
- Perfect color and viewing angle: no micro-cavities required
- Rugged, inorganic materials: true HDR luminance and improved reliability
- RoHS compliant: 100% cadium free
- Low cost: solution processable via ink jet, transfer or gravure printing