

SUMMARY INFORMATION PROVIDED BY SELLER
AND PRESENTED BY OCEAN TOMO BID-ASK™ MARKET

BURN-IN PREVENTION OLED DISPLAY AND PIXEL DESIGNS FOR INK-JET PRINTING

WITH DYNAMIC UNIFORMITY CORRECTION



OCEAN TOMO®
BID-ASK™

SUMMARY

Two of the major problems with OLED displays are “image burn-in” and “differential aging.” For solving these two problems, an optical feedback circuit is implemented for each pixel, which compensates for changes in light emitting characteristics of the OLED emitters and for changes in threshold-voltage / carrier-mobility of TFTs.

OVERVIEW

To achieve emission uniformity of all pixels in an OLED display, dynamic uniformity correction techniques are used to compensate the characteristic differences of the pixel, because static uniformity correction (e.g., look-up tables) is not effective for solving the “image burn-in” problem and the “differential aging” problem.

With our dynamic uniformity correction technique, a storage capacitor is discharged (or charged) by a diode detector that receives and samples a portion of the light emitted by the OLED emitter. When the voltage change across the storage capacitor (due to discharge or charge by the diode detector) reaches a predetermined value (which is proportional to the grey level), a comparator circuit will trigger a voltage change on the gate of the driver TFT, which will turn off the OLED emitter.

With our dynamic uniformity correction technique, the display uniformity of the OLED display will be determined by the uniformity of the diode detectors (which can be corrected with static uniformity correction), even if there are changes in the light emitting characteristics of the OLED emitters and changes in threshold-voltage/ carrier mobility of TFTs, from frame to frame (or even within a frame).

LIST OF PATENTS

NO.	PATENT DESCRIPTION AND USPTO LINK
9,439,265	Method of driving pixel element in active matrix display
8,704,737	Method of driving pixel element in active matrix display
8,358,258	Active matrix display having pixel element with light-emitting element
20170162146	Method of Driving Pixel Element in Active Matrix Display

Primary applications for this technology - identify the primary target market

- For solving two of the major problems with OLED displays -- "image burn-in" and "differential aging".
- For making AMOLED more competitive in terms of quality, in comparison to possible future MicroLED display
- Easier to implement than MicroLED. While MicroLED needs to fabricate millions of inorganic light-emitting diodes, **dynamic** corrected AMOLED only needs to fabricate millions of stable diodes (either organic or inorganic) that are not subjected to high current stress.

CONTACT



Outside China Contact:

Layna Guo

+1 312 327 8179

lguo@oceantomo.com

David Ghorbanpoor

+1 414 350 4864

David@OTI.com

Established in 2003, Ocean Tomo, LLC provides industry leading financial products and services related to intellectual property including financial expert testimony, valuation, strategy consulting, investment services, risk management products, innovation management services and transaction brokerage. Ocean Tomo assists clients – corporations, law firms, governments and institutional investors – in realizing Intellectual Capital Equity® value broadly defined.

Our Opinion, Management, and Advisory Services are built upon more than two decades of experience valuing intellectual property in the most rigorous of venues – State, Federal and international courts. Our financial, market and technical experts provide a unique understanding of the contributory value of proprietary innovation. This is the cornerstone of our business. This insight permeates every practice.

Headquartered in Chicago, Ocean Tomo has offices in Greenwich, Houston, San Francisco and Shanghai. Ocean Tomo is creator of the live public open cry auction marketplace for intellectual property.

Collectively, Ocean Tomo professionals have:

- Executed over 1000 engagements involving IP worth in excess of \$10 billion;
- Successfully closed transactions where disruptive technology played a key role, with cumulative value in excess of \$750 million;
- Conducted over 300 valuation engagements and 500 financial damages expert testimony engagements.

Ocean Tomo assists clients – corporations, law firms, governments and institutional investors – in realizing Intellectual Capital Equity® value broadly defined.



OCEAN TOMO®
BID-ASK™

OCEANTOMOBID-ASK.COM