



# OLED TV is a race between countries

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Samsung and LG have positioned OLED as the next generation display technology. Both are poised to launch competing models of big, edgy TVs they hope will jumpstart a stagnant, saturated market. But is OLED magic enough to disrupt a space clogged with cheaper, proven LED technology, now established as the brains behind our must-see TV. Time will definitely tell. Even a Samsung executive admitted any serious OLED market penetration would take several years, while scale and market forces eat away at the proposed \$9,000 sticker price. Sony and Panasonic have something to say about the future of TV, too. But the two Japanese legends are running behind and have yet to say anything meaningful.

After heralded media and trade show previews, Korean rivals Samsung and LG are racing toward a limited OLED debut later this year. LG is targeting the Summer Olympics - a buffet of expensive programming - as a testing ground. Meanwhile, former Japanese greats Sony and Panasonic are slow cooking plans to better embrace OLED technology and eventually bring it to the masses.

OLED (organic light-emitting diode) TV, with its ultra-thin display, bursting pixels, energy efficiency and minimalist design, has TV gurus raving and financial analysts optimistic. OLED is science fiction to the working class. But while the less fortunate decorate bathrooms with affordable flat panels and dabble in 3D, Sony and Panasonic have time to close the OLED gap. Return to former glory and capture enough future market share to remain relevant.

Accusations of stodginess, mismanagement and internal pillow fighting have colored Sony's recent market collapse. The New York Times claimed Sony is just flat out of good ideas. Panasonic, on the other hand, made bad bets on plasma technology and are paying the price. And, while trying to recover, was dealt a few rough macro-economic blows. As the two stoic, decidedly unhip brands reorganize, re-energize and attempt to - in Sony's case - re-enter the OLED race, Samsung and LG will exploit being first to market.

And if Sony and Panasonic continue to rewind the cassettes on their Walkmans and crank down their boom boxes, they are in jeopardy of being run out of the TV market by faster, leaner competitors with a finger on the pulse of today's consumer. OLED could be the ultimate prize in the electronics war between Japan and Korea.

Why is it worth fighting for?

OLED is still a precocious technology for TVs. And with lots of room to grow, all four TV makers will be angling for a breakthrough feature.

OLED generates light differently than LCD and plasma technology. Red, green and blue are what you need to light a TV image. OLED accomplishes this by shooting a current through organic materials, including carbon, that glow RGB. No backlight. And each pixel can go dark for a deep black, meaning OLED boasts an infinite contrast ratio. Together, you get more detail, saturated colors and instant response times. All squeezed into a screen less than 10 millimeters thick, and packing less than 20 pounds. Within the uneasy TV segment - worried everybody is watching a phone - OLED is being lauded as a potential savior. And the biggest thing to hit the market in a decade.

Samsung unveiled its 55-inch OLED TV at the Consumer Electronics Show in January. And the TV pundits were impressed. The applause continued at the more recent Samsung Premium TV Showcase. Accord-

ing to Samsung, the ES9500 model, now ready for mass production, has “unlimited contrast ratio, richer colors and faster response time (that) deliver the ultimate in picture quality.” It is also very smart -- and much thinner than the waif models hired to show it off.

But Samsung’s real parlor trick is allowing two people to watch different channels in full-screen mode at once. In practice, for standard television viewing, the dual view function is unique. Unlike your father’s picture-in-picture, dual function delivers equal formatting and actual sound for both channels. It appears Samsung will showcase dual view as a key differentiator in round one against LG.

Samsung, with fat earnings, design prowess, and interstellar dominance over most things consumer electric, is positioned for a fast OLED start.

LG, however, plans to strike the first OLED blow with a somewhat comparable 55-inch offering. Sensing a dogfight with its longtime foe, LG announced it would put production in overdrive and enter the market first at an approximate \$8,000 price point. Korean news sources even reported Group Chairman Koo Bon-Moo was pushing LG’s research and development crew hard to get ahead of schedule. The ambitious nudge indicates LG is serious about diving in the pre-Olympic TV buying frenzy expected before the London event beginning July 27.

And LG is not cutting corners. In fact, an expert panel voted the LG 55EM9600 over the Samsung model at the January CES. LG’s secret sauce may be including White OLED, or adding an extra white subpixel, as part of their design. Millions of pixels aside, LG maintains White OLED lasts longer than RGB OLED and will ease manufacturing. It also scales better to deliver more screen sizes, more choices.

To hold serve, Sony and Panasonic are discussing plans to join forces in a defensive move to shorten the OLED learning curve and share production costs. Although not confirmed by Panasonic, it would make sense to align strengths and speed development. Both Sony and Panasonic have invested in OLED before. Sony actually released the first OLED TV back in 2007, a diminutive subspecies of today’s pixilated mammoths. With an 11-inch screen and a \$2,500 retail price, it quickly became extinct. But Sony has engineering talent and unbreakable pride on its side. Throw in the OLED pioneer legacy and a bold move into today’s game seems likely.

Panasonic has just been snakebit. Earthquakes, flooding, slumping sales and a global recession led to a massive financial tailspin. Panasonic invested heavily in LCD and plasma production before the bad luck. That business is shrinking and Panasonic is desperate to reverse a 32-year- low share price.

Although a partnership with Sony might wake up investors, Panasonic aims – at least for now – to carve its own OLED path. Still in the laboratory and sizing up the market, the venerable giant is hunting a plant for test producing OLED panels.

Both companies are looking for a winner to inspire a revival in their TV segments.

The OLED TV landscape is still wide open. And by building a viable product using latent ingenuity and familiar branding, Japan could still cripple – or at least challenge - Korea’s momentum. But the tipping point is near.