



Press Information

KYOCERA Introduces New LCD Panels for Automotive Head-Up-Displays

Unique platform structure shortens lead times, allowing samples to be shipped as early as next day

Kyoto/London – April 23rd, 2018. Kyocera International, Inc. today announced a new line of high-performance, high-resolution liquid-crystal display (LCD) panels specifically designed for automotive Head-Up-Displays (HUDs). These LCDs offer high light transmittance, high resolution, and the industry's widest operating temperature range for optimal performance in automotive HUD applications.

Kyocera HUD LCD Specifications

Size (diagonally)	Resolution	Interface	Contrast Ratio	Transmittance
1.12"	300 x 160 (302 ppi)	CMOS	1200:1	7.1 %
1.8"	480 x 240 (298 ppi)	CMOS	1200:1	8.5 %
3.1"	800 x 480 (297 ppi)	LVDS	1700:1	8.5 %

Other display sizes available upon request.

HUD: Extreme Operating Requirements

Developed originally for defense aircraft, HUD technology can improve automotive safety and reduce driver fatigue by projecting vehicle speed, navigation and other data directly onto a car's windshield – where drivers can view it in their line of sight. This requires a display that performs well in lighting conditions ranging from full sunlight to total darkness. Additionally, since data and images are scaled up when projected onto a windshield, HUD technology requires high-resolution imaging to allow enlargement with no perceptible loss of detail or sharpness. Meeting these requirements in the automotive environment requires imaging components that deliver exceptional luminance, contrast and pixel density, with an extremely wide operating temperature range, since vehicles may travel to the coldest and hottest climates on Earth.

Kyocera's Advanced HUD Technology

Kyocera's new HUD LCDs provide light transmittance up to an ultra-high 8.5 %, and typical contrast ratios of up to 1700:1. Their low temperature polysilicon technology delivers pixel density of approximately 300 ppi, about twice that of conventional LCDs – and an 85-degree viewing angle¹ with no color shift, through Kyocera's Advanced Wide Viewing technology

¹ Viewing angle specification: 85 degrees in four directions (above, below, left and right) with contrast ratio not less than 10:1.



(AWVII). Additionally, Kyocera HUD LCDs offer an operating temperature range of -40C to +105C, the broadest currently available among automotive displays.

“Kyocera brings four decades of LCD innovation to the automotive engineer’s unique challenges when integrating HUD technology into any vehicle platform,” said Kazuaki Ohara, manager of Kyocera’s automotive display sales division. “We are partnering with tier-one automotive brands to help bring this exciting new technology into all vehicles.”

Kyocera is a preferred supplier of high-performance LCD displays for automotive, industrial and medical equipment. All Kyocera TFT-LCDs are RoHS compliant to reduce or eliminate potentially hazardous substances.



For more information on KYOCERA: www.kyocera.co.uk

About KYOCERA

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 231 subsidiaries (as of March 31, 2017), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #522 on Forbes magazine's 2017 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 70,000 employees, Kyocera posted net sales of approximately €11.86 billion in fiscal year 2016/2017. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €400,000 per prize category).

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