

iMiD 2024

The 24th International Meeting on Information Display
August 20-23, 2024 / ICC Jeju, Jeju, Korea



Company Name	KOPTI	Company Logo
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Exhibitor Introduction	<p>The Korea Photonics Technology Institute (KOPTI) was established in 2001 by the Ministry of Trade, Industry and Energy. As a leading research institute specializing in optics and photonics, KOPTI has been designated as a new growth driver in South Korea. The institute supports the industry through technology development, production support, and the establishment of industrial foundations for new markets.</p> <p>KOPTI is at the forefront of research in various fields of the optics&photonics industry, including LED, optical communication, laser, and display technologies. By pioneering innovative research and fostering industrial collaboration, KOPTI is positioning itself as a central hub for future-oriented optical&photonics technologies.</p>	
Exhibit Description	<p>PDIC, PKG</p> <ul style="list-style-type: none">• Active drive micro-driver IC• RGB data time-division switching• Type1 : Constant Current Driving, 8 bit Resolution, 400x800um• Type2 : Constant Current Driving, 8 bit Resolution, 300x520um• PDIC + RGB LED Integrated smart pixel• PKG size : 1212• Application Fields: Signage, Transparent Displays <p>Micro-LED Display External Compensation Circuit</p>	

	<ul style="list-style-type: none"> • External compensation verification technology for OTFT backplane • Improvement of image quality uniformity utilizing compensation of the backplane's driving Tr in active drive LED displays • Application Fields: LED Displays, Signage <p>Interactive</p> <ul style="list-style-type: none"> • Implementation of display communication based on CMOS sensors • Application Fields: Display Communication <p>LED Stacked Structure</p> <ul style="list-style-type: none"> • High-quality epi wafer manufacturing technology for RGB stacked structure micro-LEDs • Development of light source manufacturing technology for ultra-fine stacked structure RGB pixels with 360 PPI for sizes above 1 inch • Development of package manufacturing technology for achieving display pixel densities of 360 PPI or more • ALD passivation deposition technology • Application Fields: Micro-LED Displays, Smartwatches, Augmented Reality (AR), Mixed Reality (MR), Virtual Reality (VR), Holograms <p>CMOS</p> <ul style="list-style-type: none"> • Sample of bonded phosphide red micro-LED display and CMOS • Application Fields: Smartwatches, Augmented Reality (AR), Mixed Reality (MR), Virtual Reality (VR) <p>Transfer COC</p> <ul style="list-style-type: none"> • Micro-LED 1st and 2nd transfer materials and process technology • Flexible transfer material technology for 4-inch grade • COC manufacturing technology for 100 PPI using 600μm² RGB micro-LED chips • Application Fields: Micro-LED Displays, Smartwatches, Augmented Reality (AR), Mixed Reality (MR), Virtual Reality (VR)
<p>Exhibit Product</p>	<p>Smart pixel, Multi array AM module, Smart pixel 30x30 array AM system, ToF sensor module, Display communication based on CMOS Sensor, Vertically stacked RGB epi-chip, Phosphor for microLED, etc..</p>