

KOE
JDI Group

Industrial use Display modules



Display Excellence

Contents

Contents	2
Introduction	3
Evolving LCD technology	4
Outdoor readable TFT Displays	5
Higher definition	6
Added Value Display Solutions	7
Rugged+ TFT Displays	9
Wide format TFT Displays	10
STD format TFT Displays	12
Standard STN Displays	14
Product features	15



Introduction

Established in 2012, Kaohsiung Opto-Electronics (KOE), a wholly owned subsidiary of Japan Display Inc (JDI), is a specialist display supplier committed to the development and supply of high performance displays designed for industrial and high reliability applications.

Inheriting a strong LCD heritage from Japanese manufacturers Hitachi, Toshiba and Sony, KOE is able to exploit the extensive technical resource of JDI to aid and assist efforts in display development, ensuring KOE remains at the forefront of evolving LCD technology.

Operating autonomously, KOE maintains a strong relationship and co-operation with its larger, consumer focused parent organisation that empowers technology transfer, material sourcing and manufacturing expertise.

Supplying displays manufactured with the ethos of high quality, effective design and efficient engineering, KOE has its own dedicated manufacturing and production facilities in Taiwan which supports design, development and procurement. Employing these principles has enabled KOE to continually develop and enhance an extensive range of high quality, performance optimised display solutions.

An expanding range of value added services and products such as glass bonding, projected capacitive touch, high brightness backlights, open frame monitors, and custom and semi-custom display development are supported. Strong partnerships with local suppliers endorses KOE's design engineers when sourcing display components, materials and sub-assemblies.

Global customer engagement is supported by JDI Europe, JDI-Display America, JDI Taiwan, JDI Korea and KOE Asia . Each regional business focuses on sales and marketing enterprise, and supports customers with local sales teams, design focused distributors and sales representatives.



Kaohsiung Opto-Electronics Ltd

Evolving LCD technology

Developing cost effective display solutions, enhancing mature technology with new and compatible products, improving LCD optical design, introducing high reliability modules for industrial applications are just some of the challenges that KOE are undertaking to continually evolve and develop LCD technology in the 21st century. KOE's established knowledge and experience of LCD design and development are enabling LCD technologies to progress and migrate to new and exciting display modules.



LTPS Technology

A low temperature poly-silicon (LTPS) TFT LCD, prepared by forming polycrystalline silicon on a glass substrate at relatively low temperatures, achieves high carrier mobility in TFT. Therefore, LTPS TFT LCD realizes a high resolution and high density display that cannot be achieved with A-Si by integrating part of the display drive circuitry on the glass substrate. JDI has developed LTPS displays, and has introduced one of the world's highest density display prototypes.

Pixel Eyes.

Developed an LCD module with integrated capacitive multi-touch functionality - Pixel Eyes, and has started to apply in industrial display and equipment. For the purpose of detecting changes in capacitance following touch operations, conventional touch panels formed the transmitter (Tx) and receiver (Rx) layers on an external touch panel module. In Pixel Eyes, the Rx function is incorporated into the shielding layer on the color filter substrate while the Tx function is incorporated into the common electrode on the TFT substrate. Thus, the touch panel function is integrated in the display. Since it eliminates the need for an external touch panel, thinner and lighter LCD modules are achievable. Furthermore, Pixel Eyes contributes to improvement of visibility by eliminating the discrete touch panel module.

RUGGED+

Developed using automotive display experience, KOE's Rugged⁺ display modules are intended for use in demanding industrial and harsh environmental conditions. KOE Rugged⁺ modules are capable of providing reliable and consistent operation under the severe and rigorous conditions found in some industrial applications while still providing exceptional optical performance. The entire range of Rugged⁺ displays feature industrial environment operating specifications with high brightness, long-life LED backlights and will provide dependable operation between -40°C and +85°C.

In Plane Switching

IPS was the first LCD technology to provide exceptional colour saturation and colour stability, excellent contrast and deep black levels with a 176° wide vertical and horizontal viewing angles. IPS has been further developed and evolved with Advanced-Super IPS, IPS Pro and most recently IPS NEO . IPS NEO has a much higher and more stable image performance over viewing angle than any other TFT technology. KOE will continue to develop and improve IPS technology to provide the best wide angle viewing TFT display solution.

Low Temperature Poly-silicon

- High resolution
- High aperture ratio
- System on glass
- Low power consumption

Pixel Eyes

- Achieve thinner and lighter touch panel
- Multi-touch functionality
- Vertically Integrate supply chain
- Increase transmission rate and visibility
- Improve signal-to-noise ratio (SNR)

Rugged⁺

- Strong optical performance
- Highly resistant to ESD, mechanical shock and vibration
- WTR -40°C to +85°C
- Zero Bright Dot Defect

IPS

- Cutting-edge optical performance
- Exceptional colour stability and saturation
- 176° wide viewing angle



1500 nits	5.7" QVGA, Mono TFT 7" WVGA,TN 8" WVGA, TN 10.4" SVGA, TN
1400 nits	6.4" XGA, IPS (CR 800:1)
1200 nits	7" WVGA, IPS (CR 1000:1) 8" WVGA, IPS (CR 1000:1) 8" WXGA, IPS (CR 1400:1) 10.3" HD, IPS (CR 1000:1) 10.4" XGA, TN
1000 nits	5" WVGA, TN 6.3" HSVGA, IPS (CR 1000:1) 6.5" VGA, TN 7" WXGA, IPS (CR 1000:1) 9" WVGA, IPS (CR 800:1) 10.1" WXGA, IPS (CR 1500:1) 10.2" FHD Pixel Eyes, IPS (CR 1000:1) 12.3" HSXGA, IPS (CR 1000:1) 12.3" HD, IPS (CR 1300:1)
	New development in 2019 & 2020

Outdoor readable TFT Displays

The use of TFT displays in electronic equipment continues to increase. Displays are being used in a wide variety of different environments which can sometimes mean the display image is not always legible.

Outdoor readable TFT are designed specifically for use under high ambient light conditions, this is to ensure a high quality display image is maintained even under direct sunlight. The new display modules also feature an anti-glare (AG) polariser coating which helps to disperse light in multiple directions effectively eliminating reflections and therefore making them perfect for outdoor and direct sunlight applications.

Applications

Applications such as ticketing machine, POS terminals and kiosks are usually found in bright and outdoor environment. The product line-up feature high brightness, long-life LED, high contrast ratio (CR) to provide strong optical performance and display images are still clear, concise and readable under bright ambient light condition.



IPS, high contrast ratio value, +high brightness can provide excellent readability in outdoor application.

Higher Definition TFT Displays

Higher definition display enables highly accurate representation of image detail such as colour gradients and authentic colour reproduction. Excellent optical performance is maintained with high contrast ratio and high brightness specification enabling bright, sharp display images. Exceptional colour performance and image clarity at all viewing angles are particularly important in professional broadcast and medical imaging applications.

High Definition

HD

Size	Resolution	Aspect ratio	Part Number	PPI	LCD Technology	LCD interface	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight	
6.4"	1024 x 768	4:3	TX16D201VM0BAB	200	LTPS	IPS	LVDS	1400	800:1	Built-in	153 x 118 x 8.7	Standard format
7.0"	1280 x 768	5:3	TX18D212VM0BAA	213	A-si	IPS	LVDS	1000	1000:1	Built-in	164.4 x 105 x 8.5	Rugged+
8.0"	1280 x 768	5:3	TX20D201VM2BAB	187	A-si	TN	LVDS	900	500:1	n/a	189.5 x 120 x 7.5	TX20D33 mechanical compatible
8.0"	1280 x 768	5:3	TX20D207VM0AAA	187	LTPS	IPS	LVDS	1200	1000:1	Built-in	189.5 x 119.4 x 11.5	Rugged+
10.1"	1280 x 800	8:5	TX26D207VM0AAA	150	A-si	IPS	LVDS	1000	1500:1	Built-in	231 x 153.5 x 10.7	Rugged+
10.3"	1920 x 720	8:3	TX26D206VM0BAA	200	LTPS	IPS	LVDS	1000	1300:1	Built-in	259 x 111.4 x 14.2	Rugged+
12.3"	1920 x 720	8:3	TX31D203VM0EAB	167	A-si	IPS	LVDS	1000	1300:1	Built-in	333.1 x 150.5 x 20.6	Rugged+

Full HD & 4K2K QFHD

Size	Resolution	Aspect ratio	Part Number	PPI	LCD Technology	LCD interface	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight	
7.0"	1920 x 1080	16:9	TX18D200VM0EAA	315	A-si	IPS	LVDS	700	800:1	Built-in	169 x 104 x 10	FHD
10.1"	1920 x 1200	16:10	TX26D202VM0BAA	224	A-si	IPS	LVDS	800	800:1	Built-in	232 x 153.0 x 4.7	FHD
13.3"	3840 x 2160	16:9	TX34D200VM0BAA	331	LTPS	IPS	eDP	350	1500:1	Built-in	298.46 x 175.69 x 2.0	4K2K QFHD

New for 2020

Size	Resolution	Aspect ratio	Part Number	PPI	LCD Technology	LCD interface	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight	
8.8"	1280 x 720	16:9	TX22D200VM0AAA	167	LTPS	IPS	LVDS	1000	1000:1	Built-in	217.8 x 135.2 x 14.4	Rugged+, Pixel eyes available
10.2"	1920 x 1080	16:9	TX26D208VM0AAA	216	LTPS	IPS	LVDS	1200	1000:1	Built-in	240.94 x 146.38 x 11.62	Rugged+, Pixel eyes available
11.6"	1920 x 1080	16:9	TX29D***	190	A-si	IPS	LVDS	1200	1300:1	Built-in	TBC	Rugged+
12.7"	1920 x 1080	16:9	TX32D***	173	A-si	IPS	LVDS	1000	1000:1	Built-in	TBC	Pixel eyes available



Projected capacitive and Pixel Eyes in-cell capacitive touchscreens

Expand standard touch panel line-up for screen-sizes range from 6.3-inch up to 12.3-inch with resolutions ranging from 800 x 280 pixels up to 1920 x 1200 pixels.

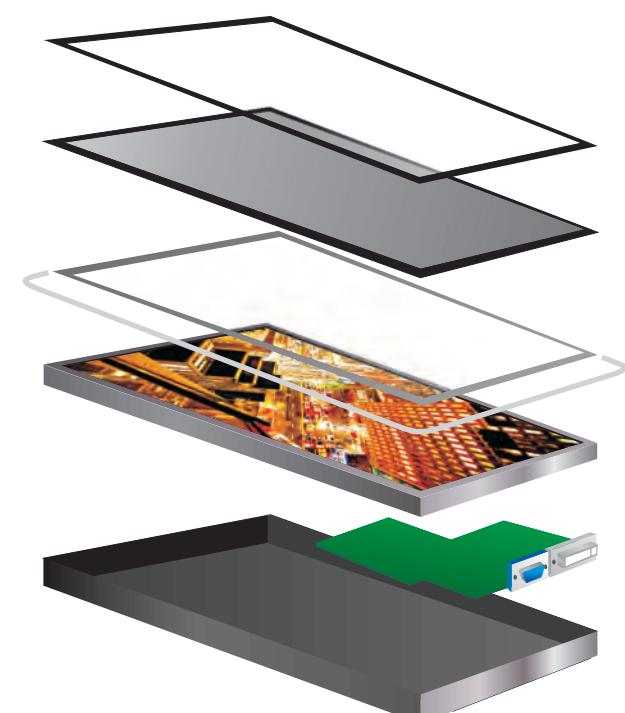
Pixel Eyes in-cell capacitive touchscreen technology features on the new 8.8-inch TX22D200VM0BVA (1280 x 720 pixels) and 10.2-inch TX26D208VM0AVA (1920 x 1080 pixels) display modules.

Pixel Eyes fully integrates projected capacitive touch panel functionality into the LCD cell.

The Rx (receiver) function is incorporated into the shielding layer on the color filter substrate, while the Tx (transmitter) function is incorporated into the common electrode on the TFT substrate which enable thinner and lighter display modules to be designed and manufactured.

The key features include:

- highly accurate and flexible touch interactions
- support for multiple touch points - up to 10
- remains fully functional under up to 8mm protective cover glass
- water and moisture resistance - wet fingers or gloves
- enables enhanced optical performance
- optional optical bonded cover glass



Standard Pcap TP line-up

Size	Resolution	Part Number	Mode	Pcap TP interface	LCM Brightness cd/m ²
6.3"	800 x 280	TX16D204VM0BVA	IPS	I ² C	450
6.3"	800 x 280	TX16D205VM0BVA	IPS	I ² C	900
7.0"	800 x 480	TX18D210VM0BXA/BYA	IPS	I ² C/USB	1000
7.0"	800 x 480	TX18D211VM0BXA/BYA	IPS	I ² C/USB	1000
7.0"	1920 x 1080	TX18D200VM0EVA	IPS	USB	630
7.0"	1920 x 1080	TX18D204VM0BVA	IPS	USB	500
8.0"	800 x 480	TX20D200VM5BPA	TN	I ² C	800
8.0"	800 x 480	TX20D200VM2BVA	TN	I ² C	1300
10.1"	1920 x 1200	TX26D202VM0BYA	IPS	USB	800
10.4"	800 x 600	TX26D200VM5BPA	TN	USB	800
10.4"	800 x 600	TX26D200VM2BVA	TN	USB	1300
12.3"	1280 x 480	TX31D200VM0BXA	IPS	I ² C	900

New for 2020

Size	Resolution	Part Number	Mode	Pcap TP interface	LCM Brightness cd/m ²
7.0"	1280 x 768	TX18D212VM0B*A	IPS	I ² C / USB	900
8.0"	1280 x 768	TX20D207VM0A*B	IPS	I ² C	1000
10.1"	1280 x 800	TX26D207VM0AVA	IPS	USB	800
8.8"	1280 x 720	TX22D200VM0AVA	IPS	Pixel eyes	800
10.2"	1920 x 1080	TX26D208VM0AVA	IPS	Pixel eyes	1000

Added Value Display Solutions

An expanding range of value added services and products including projected capacitive touch screens, glass bonding, analogue to digital video cards, high brightness backlights, and semi-custom and custom display development are supported. With the addition of a touch panel through to the development of a fully integrated open frame monitor, all display solutions can be realised to aid and enhance the user experience.

Analogue to digital boards

KOE's compact, embedded video driver boards enable a cost-effective and easy-to-use display enhancement.

The fully integrated analogue to digital video circuitry supports multiple interface options including VGA, DVI-D, HDMI and DisplayPort.

On-board software provides on-screen display functions for backlight dimming, image scaling and optical adjustments.

Rugged+ TFT Displays for Extreme Environmental Conditions

All of KOE's Rugged+ displays are designed to function in challenging and harsh environmental conditions. The entire range of Rugged+ displays feature industrial environment operating specifications with high brightness, long-life LED backlights and will ensure reliable operation between -40°C and +85°C.

Exceptional optical performance is ensured as many Rugged+ displays utilise KOE's IPS Pro technology, which delivers exceptional colour saturation, colour stability, contrast and black levels with a 176° wide vertical and horizontal viewing angle.

KOE's Rugged+ TFT displays are targeted for use in high reliability industrial, medical, marine, automotive and aerospace applications where consistent and guaranteed operation under extreme temperature, mechanical shock and vibration is a necessity.



Rugged+ TFT displays

Size	Resolution	Aspect ratio	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Top.(°C)	Tst.(°C)	Dimensions
3.5"	320 x 240	4:3	TX09D200VM0BAA	A-si	IPS	CMOS	R-T/P	600	900:1	Built-in	-30 - 85	-40 - 90
4.2"	480 x 272	16:9	TX11D201VM0BAA	A-si	IPS	CMOS	n/a	750	1500:1	Built-in	-40 - 85	-40 - 90
6.3"	800 x 280	20:7	TX16D204VM0BAA	A-si	IPS	CMOS	Pcap T/P	500	1000:1	Built-in	-40 - 85	-40 - 90
6.3"	800 x 280	20:7	TX16D205VM0BAA	A-si	IPS	CMOS	On request	1000	1000:1	Built-in	-40 - 85	-40 - 90
7.0"	800 x 480	5:3	TX18D35VM0AAA	A-si	IPS	CMOS	R-T/P & Pcap T/P	450	600:1	Built-in	-30 - 80	-40 - 90
7.0"	800 x 480	5:3	TX18D35VM0AAB	A-si	IPS	CMOS	R-T/P & Pcap T/P	800	600:1	Built-in	-30 - 80	-40 - 90
7.0"	800 x 480	5:3	TX18D37VM0AAA	A-si	IPS	LVDS	R-T/P & Pcap T/P	450	600:1	Built-in	-30 - 80	-40 - 90
7.0"	800 x 480	5:3	TX18D37VM0AAB	A-si	IPS	LVDS	R-T/P & Pcap T/P	800	600:1	Built-in	-30 - 80	-40 - 90
7.0"	800 x 480	5:3	TX18D205VM0BAA	A-si	IPS	CMOS	On request	800	1000:1	Built-in	-40 - 85	-40 - 90
7.0"	800 x 480	5:3	TX18D206VM0BAA	A-si	IPS	LVDS	On request	800	1000:1	Built-in	-40 - 85	-40 - 90
7.0"	800 x 480	5:3	TX18D210VM0BAA	LTPS	IPS	CMOS	R-T/P & Pcap T/P	1200	1000:1	Built-in	-40 - 85	-40 - 90
7.0"	800 x 480	5:3	TX18D211VM0BAA	LTPS	IPS	LVDS	R-T/P & Pcap T/P	1200	1000:1	Built-in	-40 - 85	-40 - 90
7.0"	1280 x 768	5:3	TX18D212VM0BAA	A-si	IPS	LVDS	Pcap T/P	1000	1000:1	Built-in	-40 - 85	-40 - 90
8.0"	800 x 480	5:3	TX20D203VM0BAA	A-si	IPS	LVDS	n/a	550	700:1	Built-in	-30 - 85	-40 - 90
8.0"	1280 x 768	5:3	TX20D207VM0AAA	LTPS	IPS	LVDS	Pcap T/P	1200	1000:1	Built-in	-40 - 85	-40 - 90
9.0"	800 x 480	5:3	TX23D202VM0BAA	A-si	IPS	LVDS	R-T/P	500	1000:1	Built-in	-30 - 85	-40 - 90
9.0"	800 x 480	5:3	TX23D203VM0BAA	A-si	IPS	LVDS	R-T/P	1000	1000:1	Built-in	-30 - 85	-40 - 90
10.1"	1280 x 800	8:5	TX26D207VM0AAA	A-si	IPS	LVDS	Pcap T/P	1000	1500:1	Built-in	-40 - 85	-40 - 90
10.3"	1920 x 720	8:3	TX26D206VM0BAA	LTPS	IPS	LVDS	n/a	1000	1300:1	Built-in	-40 - 85	-40 - 90
12.3"	1280 x 480	8:3	TX31D200VM0BAA	A-si	IPS	LVDS	Pcap T/P	1000	800:1	Built-in	-30 - 80	-40 - 90
12.3"	1920 x 720	8:3	TX31D203VM0EAB	A-si	IPS	LVDS	n/a	1000	1300:1	Built-in	-40 - 85	-40 - 90

New for 2020

Size	Resolution	Aspect ratio	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Top.(°C)	Tst.(°C)	Dimensions
8.8"	1280 x 720	16:9	TX22D200VM0AAA	LTPS	IPS	LVDS	Pixel eyes available	1000	1000:1	Built-in	-40 - 85	-40 - 90
10.2"	1920 x 1080	16:9	TX26D208VM0AAA	LTPS	IPS	LVDS	Pixel eyes available	1200	1000:1	Built-in	-40 - 85	-40 - 90
11.6"	1920 x 1080	16:9	TX29D***	A-si	IPS	LVDS	n/a	1200	1300:1	Built-in	-40 - 85	-40 - 90
12.7"	1920 x 1080	16:9	TX32D***	A-si	IPS	LVDS	n/a	1000	1000:1	Built-in	-40 - 85	-40 - 90



Wide Format TFT Displays

Traditional TFT technology and the migration of IPS technology to industrial and commercial displays enables KOE to offer an expanding portfolio of wide format aspect ratio TFT display solutions. Market leading optical performance, long term availability and continuity of supply can be ensured.

Applications

Wide format TFT displays will find use in many front panel, instrument console and control system designs and applications. The mechanical footprint of the wide format TFT displays is ideally suited for human machine interface applications. Information, data and graphics can be concisely represented and displayed.

Wide Format TFT Displays

Size	Resolution	Aspect ratio	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight	
4.2"	480 x 272	16:9	TX11D201VM0BAA	A-si	IPS	CMOS	n/a	750	1500:1	Built-in	102.5 x 69 x 9.8	Rugged+
4.3"	480 x 272	16:9	TX11D06VM2AAA	A-si	TN	CMOS	R-T/P	500	500:1	n/a	105.5 x 67.2 x 2.9	24-bit
5.0"	800 x 480	5:3	TX13D06VM2BAA	A-si	TN	CMOS	R-T/P	1000	600:1	n/a	120 x 80.7 x 8	Compact mechanical outline
7.0"	800 x 480	5:3	TX18D44VM2BAA	A-si	TN	CMOS	R-T/P	400	600:1	n/a	165 x 106 x 8	Slim mechanical design
7.0"	800 x 480	5:3	TX18D45VM5BAA	A-si	TN	LVDS	R-T/P	600	350:1	n/a	165 x 106 x 8	IPS-like
7.0"	800 x 480	5:3	TX18D46VM2BAA	A-si	TN	LVDS	R-T/P	400	600:1	n/a	165 x 106 x 8	Slim mechanical design
7.0"	800 x 480	5:3	TX18D203VM2BAA	A-si	TN	CMOS	R-T/P	1500	600:1	Built-in	165 x 113 x 7.5	Outdoor readable
7.0"	800 x 480	5:3	TX18D35VM0AAA	A-si	IPS	CMOS	R-T/P & Pcap T/P	450	600:1	Built-in	165 x 104 x 12.8	Rugged+
7.0"	800 x 480	5:3	TX18D35VM0AAB	A-si	IPS	CMOS	R-T/P & Pcap T/P	800	600:1	Built-in	165 x 104 x 12.8	Rugged+
7.0"	800 x 480	5:3	TX18D37VM0AAA	A-si	IPS	LVDS	R-T/P & Pcap T/P	450	600:1	Built-in	165 x 104 x 12.8	Rugged+
7.0"	800 x 480	5:3	TX18D37VM0AAB	A-si	IPS	LVDS	R-T/P & Pcap T/P	800	600:1	Built-in	165 x 104 x 12.8	Rugged+
7.0"	800 x 480	5:3	TX18D205VM0BAA	A-si	IPS	CMOS	On request	800	1000:1	Built-in	167.7x109.5x9.0	Rugged+
7.0"	800 x 480	5:3	TX18D206VM0BAA	A-si	IPS	LVDS	On request	800	1000:1	Built-in	167.7x109.5x9.0	Rugged+
7.0"	800 x 480	5:3	TX18D210VM0BAA	LTPS	IPS	CMOS	R-T/P & Pcap T/P	1200	1000:1	Built-in	167.7 x 109.5 x 9.0	Rugged+
7.0"	800 x 480	5:3	TX18D211VM0BAA	LTPS	IPS	LVDS	R-T/P & Pcap T/P	1200	1000:1	Built-in	167.7 x 109.5 x 9.0	Rugged+
7.0"	1280 x 768	5:3	TX18D212VM0BAA	A-si	IPS	LVDS	Pcap T/P	1000	1000:1	Built-in	164.4 x 105 x 8.5	Rugged+, HD
7.0"	1920 x 1080	16:9	TX18D200VM0EAA	A-si	IPS	LVDS	Pcap T/P	700	800:1	Built-in	169 x 104 x 10	Full HD
7.0"	1920 x 1080	16:9	TX18D204VM0BAA	A-si	IPS	LVDS	Pcap T/P	600	800:1	Built-in	169 x 103 x 7	Full HD, slim mechanical design
8.0"	800 x 480	5:3	TX20D33VM2BAA	A-si	TN	CMOS	R-T/P	400	600:1	n/a	189 x 120 x 7.5	Slim mechanical design
8.0"	800 x 480	5:3	TX20D200VM5BAA	A-si	TN	LVDS	R-T/P	1000	400:1	Built-in	189 x 120 x 10.2	IPS-like
8.0"	800 x 480	5:3	TX20D200VM2BAB	A-si	TN	LVDS	R-T/P	1500	800:1	Built-in	189 x 122 x 10.2	Outdoor readable
8.0"	800 x 480	5:3	TX20D203VM0BAA	A-si	IPS	LVDS	n/a	550	700:1	Built-in	189.5 x 119.4 x 11.6	Rugged+
8.0"	1280 x 768	5:3	TX20D201VM0BAB	A-si	TN	LVDS	n/a	900	500:1	n/a	189.5 x 120 x 7.5	HD
8.0"	1280 x 768	5:3	TX20D207VM0AAA	LTPS	IPS	LVDS	Pcap T/P	1200	1000:1	Built-in	189.5 x 119.4 x 11.5	Rugged+
9.0"	800 x 480	5:3	TX23D202VM0BAA	A-si	IPS	LVDS	R-T/P	500	1000:1	Built-in	218 x 135 x 11.15	Rugged+
9.0"	800 x 480	5:3	TX23D203VM0BAA	A-si	IPS	LVDS	R-T/P	1000	1000:1	Built-in	218 x 135 x 11.15	Rugged+
10.1"	1920 x 1200	16:10	TX26D202VM0BAA	A-si	IPS	LVDS	n/a	800	800:1	Built-in	232 x 153.0 x 4.7	Full HD
10.1"	1280 x 800	8:5	TX26D207VM0AAA	A-si	IPS	LVDS	Pcap T/P	1000	1500:1	Built-in	231 x 153.5 x 10.7	Rugged+

Ultra Wide Format TFT Displays

Size	Resolution	Aspect ratio	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight	
6.2"	640 x 240	8:3	TX16D20VM5BAA	A-si	TN	CMOS	TX16D20VM5BQA	400	400:1	n/a	173 x 70 x 7	IPS-like
6.2"	640 x 240	8:3	TX16D21VM5BAA	A-si	TN	LVDS	On request	400	400:1	n/a	173 x 70 x 7	IPS-like
6.3"	800 x 280	20:7	TX16D204VM0BAA	A-si	IPS	CMOS	n/a	500	1000	Built-in	167 x 69 x 9	Rugged+
6.3"	800 x 280	20:7	TX16D205VM0BAA	A-si	IPS	CMOS	n/a	1000	1000	Built-in	167 x 69 x 9	Rugged+, outdoor readable
10.2"	800 x 256	3:1	TX26D25VM2BAA	A-si	TN	CMOS	n/a	350	500:1	n/a	260.2 x 96.2 x 10.55	Slim mechanical design
10.3"	1920 x 720	8:3	TX26D206VM0BAA	LTPS	IPS	LVDS	n/a	1200	1300:1	Built-in	235 x 180 x 9.5	Rugged+, HD
12.3"	1280 x 480	8:3	TX31D200VM0BAA	A-si	IPS	LVDS	Pcap T/P	1000	800:1	Built-in	320 x 130 x 12.1	Rugged+
12.3"	1920 x 720	8:3	TX31D203VM0EAB	A-si	IPS	LVDS	n/a	1000	1300:1	Built-in	333.1 x 150.5 x 20.6	Rugged+, HD
14.9"	1280 x 242	14:3	TX38D25VM0CAA	A-si	IPS	CMOS	n/a	450	800:1	Built-in	386.82 x 85.57 x 13.06	IPS

New for 2020

Size	Resolution	Aspect ratio	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight	
6.2"	640 x 240	8:3	TX16D206VM0BAA	A-si	IPS	CMOS	R-T/P & Pcap T/P	800	1200:1	n/a	173 x 70 x 7	IPS
8.8"	1280 x 720	16:9	TX22D200VM0AAA	LTPS	IPS	LVDS	Pixel eyes available	800	1000:1	Built-in	167.7 x 109.5 x 9.0	Rugged+, HD
10.2"	1920 x 1080	16:9	TX26D208VM0AAA	LTPS	IPS	LVDS	Pixel eyes available	1000	1000:1	Built-in	189.5 x 119.4 x 11.5	Rugged+, FHD
11.6"	1920 x 1080	16:9	TX29D***	A-si	IPS	LVDS	n/a	1200	1300:1	Built-in	TBC	Planning
12.7"	1920 x 1080	16:9	TX32D***	A-si	IPS	LVDS	n/a	1000	1000:1	Built-in	TBC	Planning



Standard Format TFT Displays

As a proven TFT technology leader KOE has been a major developer and manufacturer of colour TFT displays for almost 20 years. A wide range of standard colour TFTs from 3.5" to 10.4" provide inherent quality and exceptional optical performance. Specifications and interfaces are optimised for industrial markets and ease of integration.

A vast and wide range of applications are particularly suited to the use of KOE colour TFT displays. Small, low power displays are particularly suitable for compact, portable, battery powered equipment, media players and mobile navigation systems. Medium size colour TFTs provide ideal choices for security monitoring, portable terminals and process control while larger sizes are particularly suited for online terminals, monitors and epos applications.

Applications

- navigation systems
- portable terminals
- home automation
- security systems
- online terminals
- process control
- feature phones
- media players
- epos

Standard format (4:3) TFT displays

Size	Resolution	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight
3.5"	240 x 320	TX09D40VM3CBA	A-Si	TN	CMOS	R-T/P	430	300:1	n/a	64 x 86 x 3.12
3.5"	240 x 320	TX09D30VM1CDA	A-Si	TN	CMOS	R-T/P	320	300:1	Built-in	64 x 86 x 6.7
3.5"	320 x 240	TX09D200VM0BAA	A-Si	IPS	CMOS	R-T/P	600	900:1	Built-in	65.68 x 88.8 x 9.95
5.0"	640 x 480	TX13D200VM5BAA	A-Si	TN	CMOS	R-T/P	600	370:1	Built-in	119.4 x 89.1 x 9.3
5.0"	640 x 480	TX13D202VM5BAA	A-Si	TN	LVDS	R-T/P	600	370:1	Built-in	119.4 x 89.1 x 9.3
5.7"	320 x 240	TX14D24VM1BAA	A-Si	TN	CMOS	R-T/P	450	600:1	n/a	167 x 109 x 9.2
5.7"	320 x 240	TX14D25VM1BAA	A-Si	TN	CMOS	R-T/P	400	600:1	n/a	131 x 102.2 x 10.9
5.7"	320 x 240	TX14D26VM1BAA	A-Si	TN	CMOS	R-T/P	800	800:1	n/a	131 x 102 x 7.1
5.7"	640 x 480	TX14D23VM5BAA	A-Si	TN	CMOS	R-T/P	800	400:1	n/a	131 x 102.2 x 7.6
5.7"	640 x 480	TX14D23VM5BAB	A-Si	TN	CMOS	R-T/P	800	400:1	Built-in	131 x 102.2 x 7.6
5.7"	640 x 480	TX14D28VM5BAA	A-Si	TN	LVDS	R-T/P	800	400:1	n/a	131 x 102.2 x 7.6
5.7"	320x240	TX14D201MM2BAA	A-Si	Mono TFT	SPI	n/a	1500	1200:1	Built-in	131x104.2x7.8
6.4"	1024 x 768	TX16D201VM0BAB	LTPS	IPS	LVDS	n/a	1400	800:1	Built-in	153 x 118 x 8.7
6.5"	640 x 480	TX17D01VM2CAA	A-Si	TN	CMOS	R-T/P	600	600:1	Built-in	153 x 118 x 9.1
6.5"	640 x 480	TX17D01VM2EAB	A-Si	TN	CMOS	R-T/P	1000	600:1	Built-in	153 x 118 x 9.1
6.5"	640 x 480	TX17D01VM5BAA	A-Si	TN	CMOS	R-T/P	800	350:1	Built-in	153 x 118 x 9.1
10.4"	800 x 600	TX26D19VM2BAA	A-Si	TN	LVDS	R-T/P	550	800:1	n/a	243 x 185.1 x 10
10.4"	800 x 600	TX26D200VM5BAA	A-Si	TN	LVDS	R-T/P	1000	400:1	Built-in	243 x 185.1 x 10.1
10.4"	800 x 600	TX26D200VM2BAB	A-Si	TN	LVDS	R-T/P & Pcap T/P	1500	800:1	Built-in	230 x 180.2 x 10.1
10.4"	1024 x 768	TX26D203VM2BAA	A-Si	TN	LVDS	n/a	1200	800:1	n/a	235 x 180.2 x 9.5
										18/24-bit

New for 2020

Size	Resolution	Part Number	LCD Technology	LCD interface	Touchscreen Version	Brightness cd/m ²	Contrast	LED driver	Dimensions	Features highlight
5.7"	640 x 480	TX14D203VM0BAA	A-Si	IPS	CMOS	R-T/P	800	1000:1	Built-in	131 x 102.2 x 7.6

TX16D201VM0BAB

- 6.4" XGA 1024 x 768
- 1400 cd/m²
- LTPS, IPS

TX14D203VM0BAA

- 5.7" VGA 640 x 480
- 800 cd/m²
- IPS, 1000:1 contrast

TX17D01VM2EAB

- 6.5" VGA 640 x 480
- 70K Hour LED backlight
- 1000 cd/m²
- AR polarizer

TX26D200VM2BAB

- 10.4" SVGA 800 x 600
- 1500 cd/m²
- 70K hour LED backlight

Standard Industrial STN Products

KOE's LCD heritage has been established on the foundations of providing displays that provide high quality, exceptional reliability and longevity. These traditional values are as true today as they were 35 years ago when the first STN displays were designed and manufactured. Today, KOE STN LCDs provide simple, easy to use and cost effective display solutions.

Standard STN Displays

Size	Resolution	Part Number	Technology	Mode	Dimensions	Backlight	Touchscreen Version	Brightness cd/m ²	Contrast	Features
5.1"	2240 x 128	SP14N02L6ALCZ	Black/White Film STN	Transmissive	159.4 x 101 x 11	LED	n/a	150	20:1	RAIO RA6963, 50Khr LED, LMG7420 replacement
5.1"	240 x 128	SP14N01L6ALCZ	Black/White Film STN	Transmissive	159.4 x 101 x 11	LED	On request	150	20:1	RAIO RA6963, LMG7420PLFC-X compatible
5.1"	240 x 128	SP14N01L6VLCZ	Black/White Film STN	Transmissive	159.4 x 101 x 11	LED	SP14N01L6VLCA	150	20:1	RAIO RA6963, DC/DC

Applications

The KOE range of standard STN displays is effective and simple to use. Simple graphical user interfaces for instrumentation, process control, security systems and measurement equipment can be designed and implemented. Some displays feature integrated display controllers and memory which allow 8-bit microcontrollers to be used to enable cost effective user interfaces and systems to be designed.

Product features

Screen size	Product type	Resolution	LTPS	Pixel Eye	IPS	IPS Like	TN TFT	Rugged +	Standard format (4:3)	Wide format	LED Driver built-in	Outdoor readable	CMOS interface	LVDS interface	6-bit	8-bit	Operating Temp. (-40~85°C)	Resistant Touchpanel option	Capacitive Touchpanel option
3.5"	TX09D200	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
	TX09D30	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
	TX09D40	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
4.2"	TX11D201	480 x 272		•			•	•	•	•	•	•	•	•	•	•	•	•	
	TX11D06	480 x 272			•			•	•	•	•	•	•	•	•	•	•	•	
5.0"	TX13D06	800 x 480			•			•	•	•	•	•	•	•	•	•	•	•	
	TX13D200	640 x 480			•			•	•	•	•	•	•	•	•	•	•	•	
	TX13D202	640 x 480			•			•	•	•	•	•	•	•	•	•	•	•	
5.7"	TX14D201	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
	TX14D24	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
	TX14D25	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
	TX14D26	320 x 240			•			•	•	•	•	•	•	•	•	•	•	•	
	TX14D23	640 x 480			•			•	•	•	•	•	•	•	•	•	•	•	
	TX14D203	640 x 480			•			•	•	•	•	•	•	•	•	•	•	•	
6.2"	TX16D20	640 x 240					•	•	•	•	•	•	•	•	•	•	•	•	
	TX16D206	640 x 240					•	•	•	•	•	•	•	•	•	•	•	•	
6.3"	TX16D204	800 x 280					•	•	•	•	•	•	•	•	•	•	•	•	
	TX16D205	800 x 280					•	•	•	•	•	•	•	•	•	•	•	•	
6.4"	TX16D201	1024 x 768	•				•	•	•	•	•	•	•	•	•	•	•	•	
6.5"	TX17D01	640 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX17D01	640 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
7.0"	TX18D200	1920 x 1080					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D204	1920 x 1080					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D203	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D205	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D206	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D210	800 x 480	•				•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D211	800 x 480	•				•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D212	1280 x 768					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D35	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D37	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D44	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D45	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX18D46	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
8.0"	TX20D200	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX20D200	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX20D201	1280 x 768					•	•	•	•	•	•	•	•	•	•	•	•	
	TX20D203	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
	TX20D207	1280 x 768	•				•	•	•	•	•	•	•	•	•	•	•	•	
	TX20D33	800 x 480					•	•	•	•	•	•	•	•	•	•	•	•	
8.8"	TX22D200	1280 x 720	•				•	•	•	•	•	•	•	•	•	•	•	•	
9.0"	TX23D203	800 x 480	•				•	•	•	•	•	•	•	•	•	•	•	•	
10.1"	TX26D202	1920 x 1200	•				•	•	•	•	•	•	•	•	•	•	•	•	
10.2"	TX26D207	1280 x 800	•				•	•	•	•	•	•	•	•	•	•	•	•	
10.3"	TX26D206	1920 x 1080	•	•			•	•	•	•	•	•	•	•	•	•	•	•	
10.4"	TX26D19	800 x 600					•	•	•	•	•	•	•	•	•	•	•	•	
	TX26D200	800 x 600					•	•	•	•	•	•	•	•	•	•	•	•	
	TX26D200	800 x 600					•	•	•	•	•	•	•	•	•	•	•	•	
	TX26D203	1024 x 768					•	•	•	•	•	•	•	•	•	•	•	•	
11.6"	TX29D**	1920 x 1080	</																

Just between you | and the world

Headquarter

Kaohsiung Optp-Electronics Inc.
2, East 13th Street, Kaohsiung city, Kaohsiung
Export Processing Zone, Taiwan

T: +886-7-8211101

Asia and Oceania

KOE Asia Pte Ltd.
7 Tampines Grande
Unit 02-03 Hitachi Square Singapore 528736

T: +65-6636-2374

JDI Korea

JDI Korea Inc.
#807, ILSHIN Bldg., 38 Mapo-daero,
Mapo-gu, Seoul, 04174, Korea

T: +82-2-788-5600

Americas

JDI Display America, Inc.
1740 Technology Drive,
Suite 460, San Jose, CA 95110, USA

T: +1-408-501-3720

Europe

JDI Europe GmbH
Newton, Ridlerstr. 57,
D-80339 Munchen, Germany

T: +49-891-890-840

JDI Taiwan

7F, No.36, Ruihu St., Neihu Dist.,
Taipei 114, Taiwan

T: 886-2-2659-6808



: koe.hqwebsuport.zz@j-display.com



: www.koe.j-display.com

Version of 2020