Liquid Crystal Displays

AND® Displays

AND Displays
• Offers almost 100 standard displays
• Specialize in designing custom flat panel LCD display solutions
• Meets the unique needs of our OEM customers
• Offers a broad assortment of color and monochrome LCD displays, from the original seven segment (Panel) displays to the recently-introduced, low-temperature, poly-silicon thin film transistor (TFT) color displays

Value-Added Services:
•Specialize in value-added services to deliver a custom display assembly to meet your application-specific requirements, e.g. Custom Backlights, Touch Panels, Controller Cards

Color LCD Prototyping Kits

Plug and Play Prototyping Kits - To aid in the prototyping process, AND / Purdy Electronics Corporation has assembled all of the components that you will need to light up your display the day that you get it. The kits generally include: the display, LCD controller circuitry, power supply, CCFL DC-AC inverter, and cabling. Also included is full documentionat, including component specifications, system diagram and cable maps.
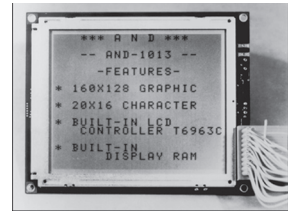
Stock Number	Part Number	Screen Diagonal (inches)	Pixel Count W x H	Brightness Nits (cd/m²)	Pixel Pitch (mm) W x H	Active Area (mm) W x H	Driving Voltage (V)	Input Signal
	ANDpSi020TD-LED-KIT	2.0	320 x 240	250	0.053 x 0.159	40.67 x 30.48	12.0	NTSC, PAL
	ANDpSi025TH-LED-KIT	2.5	320 x 240	250	0.053 x 0.159	50.91 x 38.16	12.0	NTSC, PAL
	AND-TFT-25XS-LED-KIT	2.5	160 x 234	250	0.125 x 0.163	49.68 x 37.44	12.0	NTSC, PAL
	AND-TFT-35VX-UHB-LED-KIT	3.5	640 x 480	1,500	0.1125 x 0.1095	72 x 52.56	5.0	VGA, NTSC, PAL
	AND-TFT-35VX-KIT	3.5	640 x 480	210	0.1125 x 0.1095	72 x 52.56	5.0	VGA, NTSC, PAL
	AND-TFT-35XS-LED-KIT	3.5	320 x 234	250	0.074 x 0.225	71.6 x 52.65	12.0	NTSC, PAL
	AND-TFT-5PA-KIT	5.0	320 x 234	400	0.107 x 0.319	102.7 x 74.5	12.0*	NTSC, PAL
	AND-TFT-5PA-DHB-KIT	5.0	320 x 234	500	0.32 x 0.32	102.7 x 74.5	12.0*	NTSC, PAL
	AND-TFT-5VX-KIT	5.0	640 x 480	400	0.156 x 0.159	74.88 x 101.76	12.0	VGA, NTSC, PAL
	AND-TFT-5VX-4HB-KIT	5.0	640 x 480	1,000	0.156 x 0.159	74.88 x 101.76	12.0	VGA, NTSC, PAL
	AND-TFT-64PA-KIT	6.4	320 x 234	330	0.135 x 0.416	129.6 x 97.3	12.0*	NTSC, PAL
	AND-TFT-64PA-DHB-KIT	6.4	320 x 234	500	0.135 x 0.416	129.6 x 97.3	12.0*	NTSC, PAL
	AND-TFT-7WX-KIT	7.0	480 x 234	400	0.190 x 0.190	152.4 x 91.44	12.0	NTSC, PAL

Color TFT LCD Modules —
We offer TFT display modules that range from 3.5" to 15" diagonal in an assortment of poly-silicon (p-Si) & amorphous-silicon (a-Si) with VGA, SVGA, & XGA pixel resolution. The input signal is a 6-/8-bit RGB digital data or LVDS data for the p-Si displays. These displays have high-bright CCFL backlights that generally provide 250-1000 nits of light output through the front of the display.

Stock Number	Part Number	Screen Diagonal (inches)	Pixel Count[1] W x H	Brightness Nits (cd/m²)	Pixel Pitch (mm) W x H	Active Area (mm) W x H	Driving Voltage (V)	Input Signal[2]
	AND-TFT-35VXTS	3.5	620 x 480	210	0.1125 x 0.1095	72 x 52.56	5.0	VGA, NTSC, PAL
	AND050VL-LED	5.0	640 x 480	450	0.159 x 0.156	101.76 x 74.88	5.0	LVDS 6-bit interface
	ANDpSi056ET0S-HB	5.6	1024 x 600	250	0.120 x 0.120	122.88 x 72	3.3	LVDS 6-bit interface
	ANDpSi056ET0S-LED	5.6	1024 x 600	400	0.120 x 0.120	122.88 x 72	5.0	LVDS 6-bit interface
	ANDpSi064VT8-HB-LED	6.4	640 x 480	400	0.203 x 0.203	129.6 x 97.44	5.0	LVDS 6-bit interface
	AND065A041F-HB2	6.5	640 x 480	400	0.207 x 0.207	132.48 x 99.36	5.0	Digital 6-bit interface
	AND-TFT-070WL3	7.0	800 x 480	400	0.1905 x 0.1905	152.4 x 91.44	3.3	Digital 6-bit interface
	ANDpSi08C351-HB	8.4	800 x 600	350	0.213 x 0.213	170.4 x 127.8	12.0	Digital 6-bit interface
	ANDpSi084C270F-HB	8.4	800 x 600	400	0.213 x 0.213	170.x x 127.8	3.3	LVDS 6-bit interface
	ANDpSi089C362S	8.9	1024 x 600	250	0.1905 x 0.1890	195.07 x 113.4	3.3	Digital 6-bit interface
	ANDpSi089C362S-4HB	8.9	1024 x 600	800	0.1905 x 0.1890	195.07 x 113.4	3.3	LVDS 6-bit interface
	ANDpSi104EA5S-HB	10.4	1024 x 768	180	0.2055 x 0.2055	210.4 x 157.8	3.3	LVDS 6-bit interface
	ANDpSi104EA5S-LED	10.4	1024 x 768	1,000	0.2055 x 0.2055	210.4 x 157.8	3.3	LVDS 6-bit interface
	AND12C285-DHB	12.1	800 x 600	500	0.3075 x 0.3075	246.0 x 184.5	5.0	Digital 6-bit interface
	AND12C285-4HB	12.1	800 x 600	850	0.3075 x 0.3075	246.0 x 184.5	5.0	Digital 6-bit interface
	ANDpSi121C250F-HB	12.1	1024 x 768	400	0.24 x 0.24	246.7 x 184.32	3.3	LVDS 6-bit interface

Liquid Crystal Displays

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Monochrome Intelligent Graphic Displays —
We offer a broad assortment of intelligent graphic displays with built-in controller circuitry. Resolutions range from 120x64 pixels to QVGA (320x240 pixels) format in an assortment of STN, FSTN, & BSTN technologies. These high contrast displays have high bright backlight systems including transflective reflectors, electroluminescent panels, and CCFL tube lighting, most featuring the versitile T6963C controller. We have provided solutions for medical instruments, thermal imagine, factory automation, high-speed cameras, movie cameras, vehicular controls, robotics, and scientific, test and measurement instruments.

Stock Number	Part Number	Pixel Count W x H	Pixel Pitch (mm) W x H	Viewing Area (mm) W x H	Driving Voltage(V)	Built-in Controller	Backlight -30	-EL	Contrast Ratio
	AND1264GST-LED	128 x 64	0.56 x 0.52	72 x 40	+5	T6963C	LED		7:1
	AND1264WGST-LED	128 x 64	0.56 x 0.52	72 x 40	+5	T6963C	LED		7:1
	AND1391ST	128 x 128	0.43 x 0.43	62 x 62	+5/-14.5	T6963C			4:1
	AND1391ST-EO	128 x 128	0.43 x 0.43	62 x 62	+5/-14.5	T6963C		EL	4:1
	AND1013ST-30	160 x 128	0.60 x 0.60	101 x 82	+5/-8.5	T6963C	-30		4:1
	AND1013ST-EO	160 x 128	0.60 x 0.60	101 x 82	+5/-8.5	T6963C		EL	4:1
	AND711AST-30	240 x 64	0.53 x 0.53	132 x 39	+5/-8.5	T6963C	-30		4:1
	AND711AST-EO	240 x 64	0.53 x 0.53	132 x 39	+5/-8.5	T6963C		EL	4:1
	AND1781BST	240 x 64	0.53 x 0.53	127.2 x 33.9	+5/-12.2	T6963C	CCFL		6:1
	AND1781BST-LED	240 x 64	0.53 x 0.53	134 x 40.4	+5	T6963C	LED		6:1
	AND1781MST-LED	240 x 64	0.53 x 0.53	127.2 x 33.9	+5	T6963C	LED		12:1
	AND1743MST-LED	240 x 64	0.50 x 0.50	132 x 76	+5	T6963C	LED		6:1
	AND1743FST-LED	240 x 128	0.50 x 0.50	132 x 76	+5	T6963C	LED		6:1
	AND1742MST2	240 x 128	0.51 x 0.51	134 x 76	+5	RAIO	CCFL		6:1
	AND322MST2	320 x 240	0.36 x 0.36	120 x 92	+5/-22.0	SED1335	CCFL		6:1
	AND322MST2-LEDW(1)	320 x 240	0.36 x 0.36	120.14 x 92.14	+5	SED1335	LED White		6:1

• "30" means that the LCD has a transflective reflector. Part would be ordered with a "-30" suffix (i.e. AND1013ST-30) ª "EO" means that an electroluminescent panel is installed int he LCD. Order with the "EO" suffix (i.e. AND1013ST-EO) • CCFL means that a cold cathode fluorescent lamp is installed int eh module. • "MST" means Film Super Twist Nematic (FSTN) • "BST" means Blue Mode Super Twist Nematic LCD

Monochrome Intelligent Alphanumeric Character Display Modules —
We offer a broad assortment of STN intelligent alphanumeric displays with built-in control circuitry, featuring the versitile HD44780 controller. Standard formats range from 1 line by 16 characters up to 4 lines by 40 characters. High bright backlight systems that we offer include transflective reflectors and LED arrays, with electro-luminescent panels available on a special order basis. All AND Displays products are covered by a one-year warranty.

Stock Number	Part Number	Lines x Characters	Character Size (mm) W x H	Viewing Area (mm) W x H	Driving Voltage (V)	Built-in Controller	Backlight
	AND081GST	1 x 8	4.45 x 8.35	48.0 x 13.0	5	HD44780	-
	AND081GST-LED	1 x 8	4.45 x 8.35	48.0 x 13.0	5	HD44780	LED
	AND082GST	2 x 8	2.96 x 5.56	38.0 x 16.0	5	HD44780	-
	AND082GST-LED	2 x 8	2.96 x 5.56	38.0 x 16.0	5	HD44780	LED
	AND671GST	1 x 16	3.07 x 6.56	64.5 x 13.8	5	HD44780	-
	AND671GST-LED	1 x 16	3.07 x 6.56	64.5 x 13.8	5	HD44780	LED
	AND471GST	2 x 16	4.84 x 9.66	99 x 24	5	HD44780	-
	AND471GST-LED	2 x 16	4.84 x 9.66	99 x 24	5	HD44780	LED
	AND481GST	2 x 16	2.78 x 4.89	62 x 16	5	HD44780	-
	AND481GST-LED	2 x 16	2.78 x 4.89	62 x 16	5	HD44780	LED
	AND491GST	2 x 16	2.95 x 4.35	64.5 x 13.8	5	HD44780	-
	AND491GST-LED	2 x 16	2.95 x 4.35	64.5 x 13.8	5	HD44780	LED
	AND731GST	4 x 16	2.95 x 4.75	62 x 25.6	5	HD44780	-
	AND731GST-LED	4 x 16	2.95 x 4.75	62 x 25.6	5	HD44780	LED
	AND501GST	2 x 20	3.2 x 5.55	83 x 18.6	5	HD44780	-
	AND501GST-LED	2 x 20	3.2 x 5.55	83 x 18.6	5	HD44780	LED
	AND501WGST	2 x 20	3.2 x 5.55	83 x 18.6	5	HD44780	-
	AND501WGST-LED	2 x 20	3.2 x 5.55	83 x 18.6	5	HD44780	LED
	AND721GST	4 x 20	2.95 x 4.75	76 x 25.2	5	HD44780	-
	AND721GST-LED	4 x 20	2.95 x 4.75	76 x 25.2	5	HD44780	LED
	AND771GST	2 x 24	3.2 x 5.50	94.5 x 17.8	5	HD44780	-
	AND771GST-LED	2 x 24	3.2 x 5.50	94.5 x 17.8	5	HD44780	LED
	AND591GST	2 x 40	3.2 x 5.55	154 x 15.3	5	HD44780	-
	AND591GST-LED	2 x 40	3.2 x 5.55	154 x 15.3	5	HD44780	LED
	AND791GST	4 x 40	2.78 x 4.89	149 x 29.5	5	HD44780	-
	AND791GST-LED	4 x 40	2.78 x 4.89	149 x 29.5	5	HD44780	LED

Liquid Crystal Displays

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Monochrome Direct Drive 7-Segment LCD Displays — Standard formats range from 2 characters up to 8 characters (custom formats and configurations are also available). All of our seven segment displays are designed for use in wide temperature and high humidity environments. Backlighting is available in both reflective and transflective configurations. All AND Displays products are covered by a one-year warranty. The 7-segment display is excellent for displaying text on portable instruments due to its ultra-low power requirements.

Stock Number	Part Number	Display Font	Digit Height in inches	Package Dimensions in inches (Length x Width)
	FE1901W		0.5	1.1 x 1.2
	FE0201W		0.5	2.0 x 1.2
	FE0203W		0.5	2.0 x 1.2
	FE0202W		0.5	2.0 x 1.2
	FE0501W		0.7	2.75 x 1.5
	FE0502W		0.7	2.75 x 1.5
	FE0206W		0.5	2.0 x 1.2
	FE0208W		0.4	2.0 x 1.2
	FE0401W		0.5	2.75 x 1.2
	FE0601W		0.7	3.7 x 1.5
	FE1001W		0.5	3.7 x 1.2

Features: Twisted Nematic technology and ultra-low power consumption.
Viewing Mode: Reflective. Dual-in-line pins with 0.1" (2.54) spacing.
Electro-Optical Absolute Maximum Ratings (Liquid Crystal Material)
Operating Temperature Range: Standard temp.— -20oC to +60oC; "W" wide temp. — -30oC to +80oC.
Storage Temperature Range: Standard temp.— -20oC to +60oC; "W" wide temp. — -30oC to +80oC.
Operating Frequency: Standard temp.— 30 Hz to 200 Hz; "W" wide temp. — 60 Hz to 300 Hz.
Operating Characteristics (Liquid Crystal Material)
Operating Voltage: Standard temp.— 3.0 Vrms; "W" wide temp. — 6.0 Vrms.
Operating Temperature: Standard temp.— -20oC to +60oC; "W" wide temp. — -30oC to +85oC.
Contrast Ratio: Standard temp.— 20:1; "W" wide temp. — 20:1.
Expected Life: Standard temp.— 50,000 hours; "W" wide temp. — 100,000 hours.
Viewing Angle: 6 o'clock.

FE1901
Actual Size