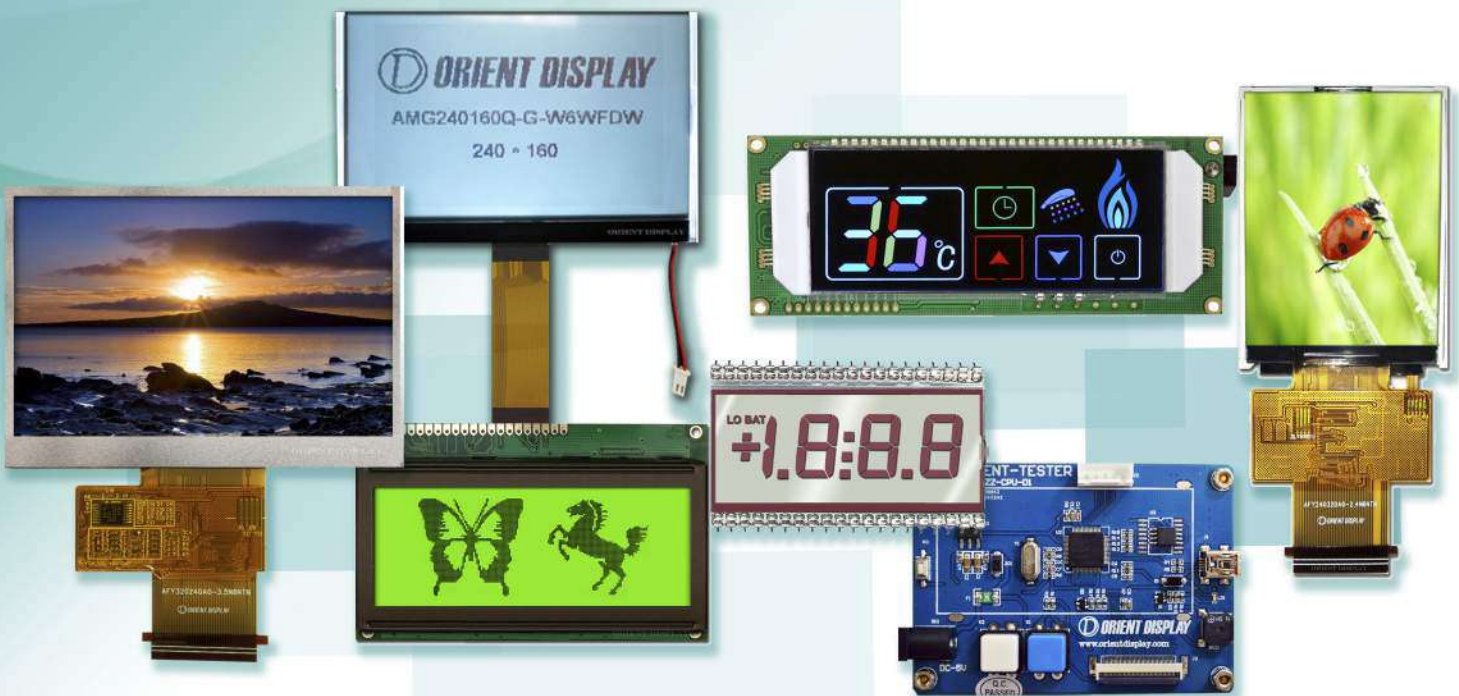





ORIENT DISPLAY

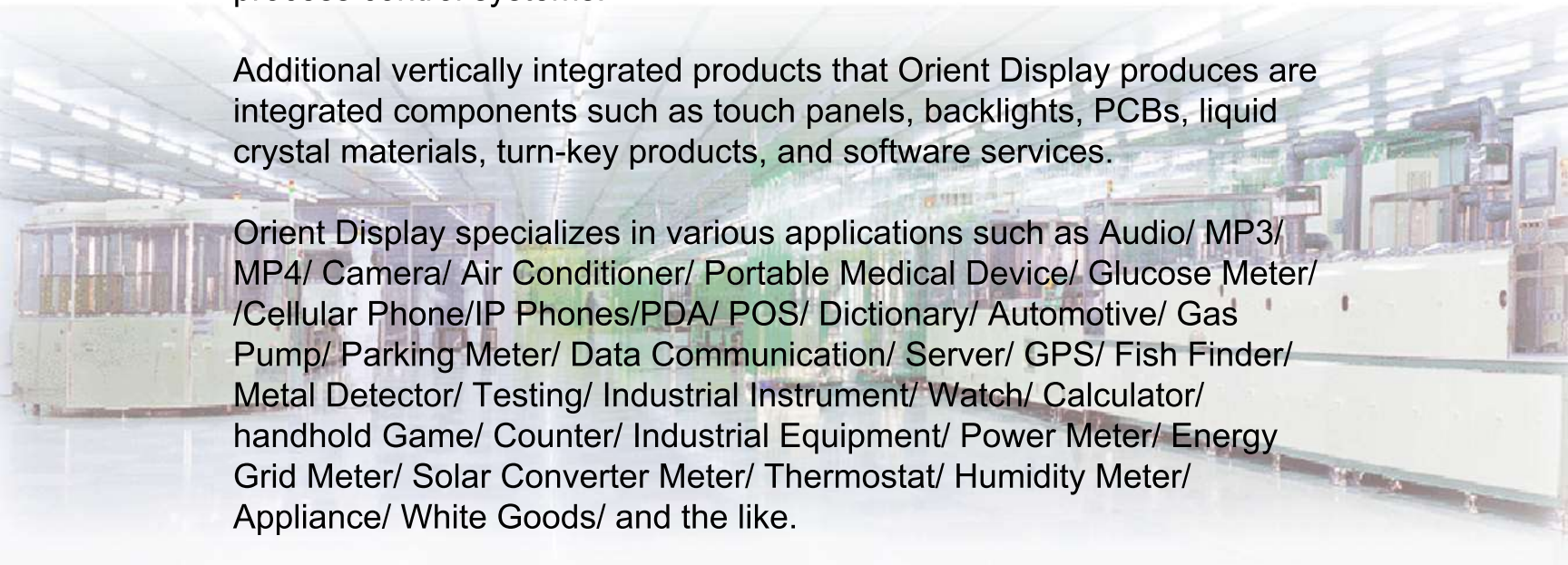




Orient Display is a leading global Liquid Crystal Display (LCD) and Capacitive Touch Panel (CTP) solution provider. Corporate Headquarters is located in Toronto, Canada along with Sales and Engineering offices in both Toronto and Seattle, WA to better serve our worldwide customers. Orient Display currently has two manufacturing plants in China and is happy to announce that demand along with a culture of continual process improvement is allowing, the company to launch a third production facility in China in 2014.

Orient Display has been working side by side with its customers since being founded in 1996 to meet the continuous innovation demands of the LCD industry at a lower cost, with high quality standards and shorter lead times.

Certified with ISO9001, ISO/TS16949, ISO14001 and IECQ/RoHS QC080000, Orient Display ensures 100% customer satisfaction by providing excellent customer service, innovational technologies and total process control systems.



Additional vertically integrated products that Orient Display produces are integrated components such as touch panels, backlights, PCBs, liquid crystal materials, turn-key products, and software services.

Orient Display specializes in various applications such as Audio/ MP3/ MP4/ Camera/ Air Conditioner/ Portable Medical Device/ Glucose Meter/ /Cellular Phone/IP Phones/PDA/ POS/ Dictionary/ Automotive/ Gas Pump/ Parking Meter/ Data Communication/ Server/ GPS/ Fish Finder/ Metal Detector/ Testing/ Industrial Instrument/ Watch/ Calculator/ handhold Game/ Counter/ Industrial Equipment/ Power Meter/ Energy Grid Meter/ Solar Converter Meter/ Thermostat/ Humidity Meter/ Appliance/ White Goods/ and the like.

Orient Display is proud to be partnering with many global customers like Lenovo, Cisco, Bosch, HP, Honeywell, Philips, Panasonic, Siemens, Whirlpool, etc.





Orient Display TFT Features

- Fast delivery: most models in stock in Seattle
- Most models have NO minimum order requirement
- Eval kits with complete ap notes to get your sample working with your images same day
- Software (initialization code) and hardware (schematic) support
- Standardized pin connections for models with CPU and RGB Eval kits
- Users can test different TFT sizes and models without changing hardware
- All Capacitive Touch Panels (CTP) are Projected (P-CAP) type with built-in controller IC
- All Resistive Touch Panel (RTP) are 4-wire standard; 5-wire RTP and Multi-Finger RTP are available
- Wide range of brightness for various light conditions including sunlight readable
- Most TFT models will mate with a standard ZIF connector; no soldering required except as indicated
- Toper = -20 C to +70 C; T stor = -30 C to +80 C
- Long term availability to support your new design

Size	Pixels	TP	Brite	Interface	Features	Driver IC	Model	MOQ
1.8	128x160	NO	220	8bit MCU 8080	20 pin Solder Connector	ILI9163C	AFV128160A00-1.7N6NTN	1K
2.4	240x320	NO	250	16bit MCU/RGB, Ser	40pin CPU Std Connection	ILI9341	AFY240320A0-2.4N6NTN	0
2.4	240x320	NO	300	18bit MCU 8080	36pin Solder Connector	ILI9341	AFV240320A00-2.4N12NTN	1K
2.4	240x320	RTP	220	16bit MCU/RGB, Ser	RTP, 40pin CPU Std	ILI9341	AFY240320A0-2.4N6NTN-R	0
2.8	240x320	NO	230	16bit MCU 8080	37pin Solder Connector	ILI9341	AFV240320A01-2.8N6NTN	1K
2.8	240x320	NO	260	16bit MCU/RGB, Ser	40pin CPU Std Connection	ILI9341	AFY240320A0-2.8N6NTN	0
2.8	240x320	NO	450	16bit MCU/RGB, Ser	Med Brite, 40pin CPU Std	ILI9341	AFY240320A0-2.8N6NTM	0
2.8	240x320	RTP	230	16bit MCU/RGB, Ser	RTP, 40pin CPU Std	ILI9341	AFY240320A0-2.8N6NTN-R	0
3.5	320x240	NO	250	24bit RGB, Serial	Anti-Glare	HX8238	AFV320240A01-3.5N12NTN	1K
3.5	320x240	NO	280	24bit RGB	40pin R Std Connection	HX8238D	AFY320240A0-3.5N6NTN	0
3.5	320x240	NO	450	24bit RGB, Serial	Med Brite, Anti-Glare	HX8238	AFV320240A01-3.5N12NTM	1K
3.5	320x240	NO	450	24bit RGB, Serial	Hi Brite for Sun, Anti-Glare	HX8238	AFD320240A0T-3.5N6WTH	240
3.5	320x240	RTP	220	24bit RGB, Serial	Anti-Glare, RTP	HX8238	AFV320240A01-3.5N12NTN-R	1K
3.5	320x240	RTP	240	24bit RGB	Anti-Glare, RTP, 40pin Std	HX8238D	AFY320240A0-3.5N6NTN-R	0
3.5	320x240	CTP	250	24 bit RGB, Serial	P-CAP	HX8238D	AFY320240A0-3.5N6NTN-C	0
3.5	320x240	RTP	350	24bit RGB	Med Brite, RTP, 40pin R Std	HX8238	AFV320240A01-3.5N12NTM-R	1K
3.5	320x240	RTP	440	24bit RGB, Serial	Med Brite, Anti-Glare	HX8238D	AFY320240A0-3.5N6NTM	0
3.5	320x240	RTP	440	24bit RGB, Serial	Med Brite, A-G, RTP, 40pin	HX8238D	AFY320240A0-3.5N6NTM-R	0
3.5	320x240	CTP	220	24bit RGB, Serial	P-CAP	HX8238	AFV320240A01-3.5N12NTN-C	1K
3.5	320x240	CTP	350	24bit RGB, Serial	Med Brite, P-CAP	HX8238	AFV320240A01-3.5N12NTM-C	1K
4.3	480x272	NO	250	24bit RGB	Anti-Glare	OTA5180	AFV480272A01-4.3N6NTN	1K
4.3	480x272	NO	280	24bit RGB	40pin R Std Connections	OTA5180A	AFY480272A0-4.3N6NTN	0
4.3	480x272	NO	450	24bit RGB	Med Brite, Anti-Glare	OTA5180	AFV480272A01-4.3N6NTM	1K
4.3	480x272	NO	500	24bit RGB	Med Brite, Anti-Glare	OTA5180	AFD480272A1T-4.3N6WTM	1K
4.3	480x272	NO	900	24bit RGB	Hi Brite for Sun, Anti-Refl	OTA5180	AFD480272A2T-4.3N6WTH	240
4.3	480x272	NO	900	24bit RGB	Hi Brite for Sun, Anti-Glare	OTA5180	AFD480272A0T-4.3N6WTH	240
4.3	480x272	RTP	220	24bit RGB	Anti-Glare, RTP	OTA5180	AFV480272A01-4.3N6NTN-R	240
4.3	480x272	RTP	250	24bit RGB	Anti-Glare, RTP, 40pin Std	OTA5180	AFY480272A0-4.3N6NTN-R	0
4.3	480x272	RTP	350	24bit RGB	Med Brite, Anti-Glare, RTP	OTA5180	AFV480272A01-4.3N6NTM-R	1K
4.3	480x272	RTP	450	24bit RGB	Med Brite, 40pin R Std	OTA5180	AFY480272A0-4.3N6NTM	0
4.3	480x272	RTP	450	24bit RGB	Med Brite, A-G, RTP, 40pin	OTA5180A	AFY480272A0-4.3N6NTM-R	0
4.3	480x272	RTP	720	24bit RGB	Hi Brite, Anti-Glare, RTP	OTA5180	AFD480272A0T-4.3N6WTH-R	240

Size	Pixels	TP	Brite	Interface	Features	IC	Model	MOQ
4.3	480x272	CTP	250	24bitRGB	P-CAP	OTA5180	AFY480272A0-4.3N6NTN-C	0
4.3	480x272	CTP	220	24bit RGB	P-CAP	OTA5180	AFV480272A01-4.3N12NTN-C	1K
4.3	480x272	CTP	350	24bit RGB	MedBrite, P-CAP	OTA5180	AFV480272A01-4.3N6NTM-C	1K
4.3	480x272	CTP	400	24bit RGB	MedBrite, P-CAP	OTA5180	AFD480272A1T-4.3N6WTM-C	240
5	800x480	NO	280	24bit RGB	40pin R Std Connection	ILI5960D+ILI6126C	AFY800480A0-5.0N6NTN	240
5	800x480	NO	700	24bit RGB	Hi Brite, Anti-Glare	ILI5960+ILI6126	AFD800480A1T-5.0N6WTH	240
5	800x480	RTP	240	24bit RGB	Anti-Glare, RTP, 40pin Std	ILI5960D+ILI6126C	AFY800480A0-5.0N6NTN-R	0
5	800x480	RTP	390	24bit RGB	Med Brite, 40pin R Std	ILI5960D+ILI6126C	AFY800480A0-5.0N6NTM	0
5	800x480	RTP	390	24bit RGB	Med Brite, A-G, RTP, 40pin	ILI5960D+ILI6126C	AFY800480A0-5.0N6NTM-R	0
5	800x480	RTP	560	24bit RGB	Hi Brite, Anti-Glare, RTP	ILI5960+ILI6126	AFD800480A1T-5.0N6WTH-R	240
5	800x480	CTP	250	24bitRGB	P-CAP	ILI5960+ILI6126	AFY800480A0-5.0N6NTN-C	240
5	800x480	CTP	600	24bit RGB	Hi Brite, P-CAP	ILI5960+ILI6126	AFD800480A1T-5.0N6WTH-C	240
5.7	640x480	NO	400	18bit RGB	Med Brite		AFD640480A0T-5.7N12WTM	240
5.7	640x480	NO	900	18bit RGB	Hi Brite for Sun		AFD640480A1T-5.7N12WTH	240
5.7	640x480	NO	630	18bit RGB	Hi Brite, Ultra-Wide VA		AFD640480A2T-5.7O12WTH	240
5.7	640x480	RTP	320	18bit RGB	Med Brite, Anti-Glare, RTP		AFD640480A0T-5.7N12WTM-R	240
5.7	640x480	RTP	720	18bit RGB	Hi Brite, Anti-Glare, RTP		AFD640480A1T-5.7N12WTH-R	240
7	800x480	NO	250	24bit RGB	Anti-Glare	HX8264+HX8664	AFV800480A02-7.0N12NTN	1K
7	800x480	NO	280	24bit RGB	40pin R Std Connection	ILI5960+ILI6128B	AFY800480A0-7.0N6NTN	0
7	800x480	NO	450	24bit RGB	Med Brite, Anti-Glare	HX8264+HX8664	AFV800480A02-7.0N12NTM	1K
7	800x480	NO	650	18bit RGB	Hi Brite, Anti-Glare		AFD800480A0T-7.0N6WTH	160
7	800x480	NO	1000	18bit RGB	Hi Brite for Sun, Anti-Glare		AFD800480A1T-7.0N6WTH	160
7	800x480	NO	650	6bit LVDS	Hi Brite, Anti-Glare		AFD800480A0L-7.0N6WTH	160
7	800x480	NO	1000	6bit LVDS	Hi Brite for Sun, Anti-Glare	HX8264+HX8664	AFD800480A1L-7.0N6WTH	160
7	800x480	RTP	220	24bit RGB	Anti-Glare, RTP	HX8264+HX8664	AFV800480A02-7.0N12NTN-R	1K
7	800x480	RTP	250	24bit RGB	Anti-Glare, RTP, 40pin Std	ILI5960+ILI6128B	AFY800480A0-7.0N6NTN-R	0
7	800x480	RTP	350	24bit RGB	Med Brite, Anti-Glare, RTP	HX8264+HX8664	AFV800480A02-7.0N12NTM-R	1K
7	800x480	RTP	450	24bit RGB	Med Brite, 40 pin	ILI5960+ILI6128B	AFY800480A0-7.0N6NTM	0
7	800x480	RTP	450	24bit RGB	Med Brite, A-G, RTP, 40pin	ILI5960+ILI6128B	AFY800480A0-7.0N6NTM-R	0
7	800x480	RTP	500	18bit RGB	Hi Brite, Anti-Glare & RTP		AFD800480A0T-7.0N6WTH-R	160
7	800x480	RTP	800	18bit RGB	Hi Brite for Sun,Anti-Glare,RTP		AFD800480A1T-7.0N6WTH-R	160
7	800x480	RTP	1000	6bit LVDS	Hi Brite for Sun,Anti-Glare,RTP		AFD800480A1L-7.0N6WTH-R	160
7	800x480	CTP	250	24bit RGB	P-CAP	ILI5960+ILI6128	AFY800480A0-7.0N6NTN-C	0
7	800x480	CTP	220	24bit RGB	P-CAP	HX8264+HX8664	AFV800480A02-7.0N12NTN-C	1K
7	800x480	CTP	350	24bit RGB	MedBrite, P-CAP	HX8264+HX8664	AFV800480A02-7.0N12NTM-C	1K
7	1024x600	NO	250	LVDS	Anti-Glare	OTA7159+OTD9120	AFV1024600A02L-7.0N12NTN	1K
7	1024x600	NO	500	6bit LVDS	Med Brite		AFD1024600A0L-7.0N6WTM	160
7	1024x600	CTP	450	Med Brite, P-CAP	Med Brite		AFD1024600A0L-7.0N6WTM-C	160
7	1024x600	CTP	450	Med Brite,P-CAP	Med Brite,P-CAP w/USB		AFD1024600A0L-7.0N6WTM-CU	160
8	800x600	NO	500	18bit RGB	Med Brite, Anti-Glare		AFD800600A0T-8.0N6WTM	200
8	800x600	NO	750	18bit RGB	Hi Brite, Anti-Glare		AFD800600A2T-8.0N6WTH	200
8	800x600	RTP	400	18bit RGB	Med Brite, A-G, RTP		AFD800600B0T-8.0N6WTM-R	200
8	800x600	RTP	400	6bit LVDS	Med Brite, A-G, RTP		AFD800600B0L-8.0N6WTM-R	200
8	800x600	CTP	420	18bit RGB	Med Brite, P-CAP		AFD800600A0L-8.0N6WTM-C	200
8	1024x768	NO	700	6bit LVDS	Hi Brite		AFD1024768A1L-8.0N4NTH	200
8	1024x768	NO	1000	6bit LVDS	Hi Brite for Sun		AFD1024768A0L-8.0N4WTH	200
8	1024x768	RTP	560	6bit LVDS	Hi Brite, Anti-Glare & RTP		AFD1024768A1L-8.0N4NTH-R	200
8	1024x768	RTP	800	6bit LVDS	Hi Brite for Sun,Anti-Glare,RTP		AFD1024768A0L-8.0N4NTH-R	200
10.1	1024x600	NO	250	24Bit RGB	Anti-Glare	HX8282+HX8696	AFV1024600A01-10.1N12NTN	1K
10.1	1024x600	NO	300	6bit LVDS	Anti-Glare, Hard Coating		AFD1024600A0L-10.1N6NTM	40
10.1	1024x600	NO	450	6bit LVDS	Med Brite,Anti-Glare,Hard Coat		AFD1024600A1L-10.1N6NTM	40
10.1	1024x600	NO	1000	6bit LVDS	Hi Brite for Sun,Anti-Glare		AFD1024600C8L-10.1N6WTH	40
10.1	1024x600	RTP	240	6bit LVDS	Hard Coating, A-G, RTP		AFD1024600A1L-10.1N6NTM-R	40
10.1	1024x600	RTP	360	6bit LVDS	Med Brite, H-C, A-G, RTP		AFD1024600A0L-10.1N6NTM-R	40
10.1	1024x600	CTP	220	24bit RGB	P-CAP	HX8282+HX8696	AFV1024600A01-10.1N12NTN-C	1K
10.1	1024x600	CTP	360	6bit LVDS	P-CAP		AFD1024600A0L-10.1N6NTM-C	40
10.1	1024x600	CTP	360	6bit LVDS	Med Brite,P-CAP w/USB		AFD1024600A0L-10.1N6NTM-CU	40
10.4	800x600	NO	250	18bit RGB	Anti-Glare		AFD800600A0T-10.4N6NTN	40
10.4	800x600	NO	600	18bit RGB	Hi Brite, Anti-Glare		AFD800600A1T-10.4N6NTH	40
10.4	800x600	RTP	200	18bit RGB	Anti-Glare, RTP		AFD800600A0T-10.4N6NTN-R	40
10.4	800x600	RTP	480	18bit RGB	Hi Brite,Anti-Glare & RTP		AFD800600A1T-10.4N6NTH-R	40
10.4	1024x768	NO	400	6bit LVDS	Med Brite, Anti-Glare		AFD1024768A1L-10.4N6WTM	40
10.4	1024x768	RTP	320	6bit LVDS	Med Brite,Anti-Glare&RTP		AFD1024768A1L-10.4N6WTM-R	40
10.4	1024x768	RTP	800	6bit LVDS	Hi Brite, Anti-Glare & RTP		AFD1024768A0L-10.4N6WTH-R	40
10.4	1024x768	CTP	900	6bit LVDS	Hi Brite, P-CAP		AFD1024768A0L-10.4N6WTH-C	40
10.4	1024x768	CTP	900	6bit LVDS	Med Brite, P-CAP w/USB		AFD1024768A1L-10.4N6WTM-CU	40

Product Information

<http://orientdisplay.com/cstn-tft-lcds.html>

http://www.orientlcd.com/TFT_Color_LCD_s/1632.htm



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M3 TFT Advantages

- Never obsolete which fits the projects need long time availability.
- Simple interface: 8080/6800,UART or RS232 or even the same as monochrome LCD interface. If a monochrome LCD is used before, no major changes for hardware. The driving of Intelligent LCDs is similar to SED1335 or S1D13700.
- Microcontroller used to drive Intelligent LCD is low cost and engineering time can be saved.
- With Easy Mounting Holes
- Available: Blue Mode, White/Black Mode and Color Mode.
- Comes with a Microcontroller

Size	Pixels	Touch	Luminance	Interface	Features	Module Size	Model
2.3	320x240	NO	300	UART	M3 TFT, 65K Colors	67.00x56.20x10.00	AFA320240M-2.3-A8
2.4	240x320	NO	300	UART	M3 TFT, 65K Colors	67.00x56.20x10.00	AFA240320M-2.4-A8
2.4	240x320	RTP	300	UART	M3 TFT, 65K Colors	70.00x57.00x12.00	AFA240320M-2.4-A8-TP
2.8	240x320	NO	300	UART	M3 TFT, 65K Colors	78.60x63.20x13.00	AFA240320M-2.8-A8
2.8	240x320	RTP	300	UART	M3 TFT, 65K Colors	78.60x63.20x13.00	AFA240320M-2.8-A8-TP
3.0	240x400	NO	300	UART	M3 TFT, 65K Colors	85.80x58.90x13.00	AFA240400M-3.0-A8
3.0	240x400	RTP	300	UART	M3 TFT, 65K Colors	85.80x58.90x13.00	AFA240400M-3.0-A8-TP
3.5	320x480	NO	300	UART	M3 TFT, 65K Colors	93.50x69.00x13.00	AFA320480M-3.5-A8
3.5	320x480	RTP	300	UART	M3 TFT, 65K Colors	93.50x69.00x13.00	AFA320480M-3.5-A8-TP
3.5	320x240	NO	280	UART/RS232	M3 TFT, 65K Colors	90.90x80.80x14.00	AFA320240DM-3.5-A8
3.5	320x240	RTP	280	UART/RS232	M3 TFT, 65K Colors	91.00x80.80x15.00	AFA320240DM-3.5-A8-TP
3.5	320x240	NO	280	8080	M3 TFT, 1670K Colors	90.00x80.80x15.00	AFA320240B-3.5-A
3.5	320x240	RTP	280	8080	M3 TFT, 1670K Colors	90.00x80.80x15.00	AFA320240B-3.5-A-TP
4.3	480x272	NO	280	UART/RS232	M3 TFT, 65K Colors	122.00x74.70x14.65	AFA480272DM-4.3-A8
4.3	480x272	RTP	280	UART/RS232	M3 TFT, 65K Colors	122.00x74.70x16.00	AFA480272DM-4.3-A8-TP
4.3	480x272	NO	260	8080	M3 TFT, 1670K Colors	122.00x75.00x16.00	AFA480272B-4.3-A
4.3	480x272	RTP	260	8080	M3 TFT, 1670K Colors	122.00x75.00x16.00	AFA480272B-4.3-A-TP
5.0	640x480	NO	200	UART/RS232	M3 TFT, 65K Colors	139.00x90.00x15.00	AFA640480DM-5.0-A8
5.0	640x480	RTP	200	UART/RS232	M3 TFT, 65K Colors	139.00x90.00x16.00	AFA640480DM-5.0-A8-TP
5.0	640x480	NO	200	8080	M3 TFT, 1670K Colors	139.00x100.00x18.00	AFA640480B-5.0-A
5.0	640x480	RTP	200	8080	M3 TFT, 1670K Colors	139.00x100.00x18.00	AFA640480B-5.0-A-TP
5.6	640x480	NO	200	UART/RS232	M3 TFT, 65K Colors	144.80x110.50x16.00	AFA640480DM-5.6-A8
5.6	640x480	RTP	200	UART/RS232	M3 TFT, 65K Colors	144.80x110.50x17.80	AFA640480DM-5.6-A8-TP
5.6	640x480	NO	200	8080	M3 TFT, 1670K Colors	145.00x110.00x16.00	AFA640480B-5.6-A
5.6	640x480	RTP	200	8080	M3 TFT, 1670K Colors	145.00x110.00x16.00	AFA640480B-5.6-A-TP
7.0	800x480	NO	200	UART/RS232	M3 TFT, 65K Colors	180.00x107.00x16.50	AFA800480DM-7.0-A8
7.0	800x480	RTP	200	UART/RS232	M3 TFT, 65K Colors	180.00x107.00x17.50	AFA800480DM-7.0-A8-TP
7.0	800x480	NO	200	8080	M3 TFT, 1670K Colors	180.00x107.00x17.00	AFA800480B-7.0-A8
7.0	800x480	RTP	200	8080	M3 TFT, 1670K Colors	180.00x107.00x17.00	AFA800480B-7.0-A-TP

M3 TFT Series 2

Focuses on Providing Interface Similar to Monochrome LCDs

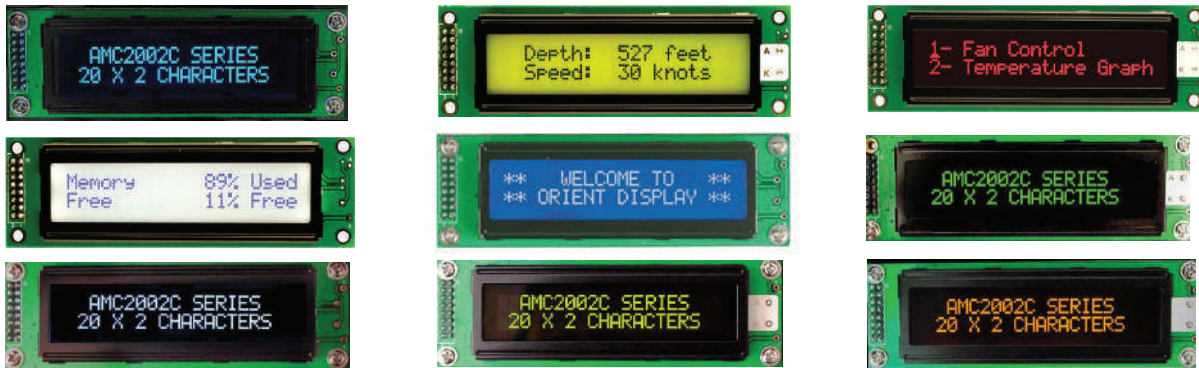
Size	Pixels	Touch	Luminance	Interface	Features	Module Size	Model
3.0	400x240	NO	200	Parallel	M3 TFT S2, 262K Colors	93.00x70.00x7.00	AFA400240C65K-3.0-C03
3.5	320x240	NO	200	Parallel	M3 TFT S2, Neg FSTN	92.00x78.40x10.50	AFA320240CT-3.5-A03
3.5	320x240	NO	200	Parallel	M3 TFT S2, Blue STN	92.00x78.40x10.50	AFA320240CB-3.5-A03
3.5	320x240	NO	200	Parallel	M3 TFT S2, 65K Colors	92.00x78.40x10.50	AFA320240C65K-3.5-A03
3.5	320x240	NO	200	Parallel	M3 TFT S2, 256 Colors	92.00x78.40x10.50	AFA320240C256-3.5-A03
3.5	320x240	NO	200	Parallel	M3 TFT S2, 262K Colors	90.60x80.70x15.00	AFA320240C262K-3.5-M7
4.3	480x272	NO	200	Parallel	M3 TFT S2, Neg FSTN	120.00x85.00x11.00	AFA480272CT-4.3-A03
4.3	480x272	NO	200	Parallel	M3 TFT S2, Blue STN	120.00x85.00x11.00	AFA480272CB-4.3-A03
4.3	480x272	NO	200	Parallel	M3 TFT S2, 262K Colors	122.00x75.00x14.50	AFA480272C262K-4.3-M7
4.3	480x272	NO	200	Parallel	M3 TFT S2, 65K Colors	120.00x85.00x11.00	AFA480272C65K-4.3-A03
4.3	480x272	NO	200	Parallel	M3 TFT S2, 256 Colors	120.00x85.00x11.00	AFA480272C256-4.3-A03
5.6	320x240	NO	200	Parallel	M3 TFT S2, Neg FSTN	160.00x109.00x12.50	AFA320240CT-5.6-A03
5.6	320x240	NO	200	Parallel	M3 TFT S2, Blue FSTN	160.00x109.00x12.50	AFA320240CB-5.6-A03
5.6	320x240	NO	200	Parallel	M3 TFT S2, 256 Colors	160.00x109.00x12.50	AFA320240C256-5.6-A03
5.6	640x480	NO	200	Parallel	M3 TFT S2, Neg FSTN	160.00x109.00x12.50	AFA640480CT-5.6-A03
5.6	640x480	NO	200	Parallel	M3 TFT S2, Blue FSTN	160.00x109.00x12.50	AFA640480CB-5.6-A03
5.6	640x480	NO	200	Parallel	M3 TFT S2, 256 Colors	160.00x109.00x12.50	AFA640480C256-5.6-A03

Product Information

<http://orientdisplay.com/M3-TFT-LCDs.html>



14925 SE Allen Road, Suite 203B, Bellevue, WA 98006
 Tel: (425)698-1938, Fax: (425)698-1852, Email: info@orientdisplay.com



Character LCD Modules Advantages

Character LCD Modules can be found in nearly all types of devices. You can find Character LCD Modules in devices such as parking meters, watches, and calculators. Orient Display offers a standard selection of Character LCD Modules ranging from 8x1 to 40x4 (custom lcd module sizes are also available).

Orient Display also provides a Character LCD module evaluation board AMCT-1. AMCT-1 connects directly to a computer to shorten the engineering development time, and can also be used as the tester in production and quality control. You can buy the tester board at our online store OrientLCD.com.

chars x lines	Module Size	View Area	Character Size	Backlight	Demo Board	Controller	Model
8x1	80.0X36.0X13.0/10.0	61.0X15.8	6.45X10.75	None/LED	AMCT-1	S6A0069 or equivalent	AMC0801A
8x1	84.0X44.0X13.0/10.0	61.0X15.8	6.45X10.75	None/LED	AMCT-1	S6A0069 or equivalent	AMC0801B
8X1	60.0X33.0X12.0/9.0	44.0X13.0	4.41X7.88	None/LED	AMCT-1	S6A0069 or equivalent	AMC0801C
8X2	58.0X32.0X14.0/10.3	38.0X16.0	2.96X5.56	None/LED	AMCT-1	S6A0069 or equivalent	AMC0802B
8X2	84.0X44.0X14.0/10.0	63.0X25.0	6.07X11.44	None/LED	AMCT-1	S6A0069 or equivalent	AMC0802C
8X2	40.0X35.4X14.0/8.0	30.4X13.9	2.95X4.75	None/LED	AMCT-1	S6A0069 or equivalent	AMC0802D
12X2	55.7X32.0X15.0/10.0	45.0X15.5	2.65X5.5	None/LED	AMCT-1	S6A0069 or equivalent	AMC1202A
16X1	80.0X36.0X14.0/10.0	64.5X13.8	3.07X6.56	None/LED	AMCT-1	S6A0069 or equivalent	AMC1601A
16X1	122.0X33.0X14.0/10.0	99.0X13.0	4.84X8.06	None/LED	AMCT-1	S6A0069 or equivalent	AMC1601B
16X1	151.0X40.0X14.0/10.0	120.0X24.0	6.0X14.54	None/LED	AMCT-1	S6A0069 or equivalent	AMC1601D
16X1	72.0X27.0X5.7	61.0X9.5	3.16X5.56	None/LED	AMCT-1	S6A0069 or equivalent	AMC1601E
16X2	80.0X36.0X14.0/10.0	64.5X15.5	2.95X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602A
16X2	122.0X44.0X14.5/9.5	99.0X24.0	4.80X9.66	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602B
16X2	72.0X36.0X14.0/10.0	64.5X15.5	2.95X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602C
16X2	53.0X20.0X8.0	36.0X10.0	1.85X3.15	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602D
16X2	69.0X21.5X8.0	51.0X14.8	2.56X4.90	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602F
16X2	84.0X44.0X14.0/10.0	64.5X15.5	2.95X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602G
16X2	100.0X38.8X14.0/10.0	80.2X20.4	4.07X7.76	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602H
16X2	85.0X30.0X14.0/10.0	64.5X15.5	2.96X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602I
16X2	74.0X24.5X7.8	60.0X11.5	2.95X4.35	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602J
16X2	85.0X36.0X14.0/10.0	64.5X15.5	2.95X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC1602L
16X2	76.0X28.7X16.0	61.0X15.7	2.95X5.15	None/LED	AMCT-1	NT7603	AMC1602Q1-G
16X4	87.0X60.0X14.5/9.0	61.8X25.2	2.96X4.76	None/LED	AMCT-1	S6A0069 or equivalent	AMC1604C
20X1	182.0X43.5X14.0	147.0X18.7	5.90X12.70	None/LED	AMCT-1	S6A0069 or equivalent	AMC2001A
20X2	288.3X78.5X14.0	253.8X56.6	9.9X19.9	None/LED	AMCT-1	S6A0069 or equivalent	AMC2002A
20X2	116.0X37.0X14.5/10.5	83.0X18.6	3.20X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC2002C
20X2	180.0X40.0X14.0/10.0	149.0X23.0	5.92X9.52	None/LED	AMCT-1	S6A0069 or equivalent	AMC2002D
20X2	146.0X43.0X9.4/13.6	123.0X23.0	4.84X9.22	None/LED	AMCT-1	S6A0069 or equivalent	AMC2002F
20X2	89.0X24.0X7.8	76.0X15.0	2.85X5.15	None/LED	AMCT-1	S6A0069 or equivalent	AMC2002G
20X4	98.0X60.0X15.0/10.0	76.0X25.2	2.95X4.75	None/LED	AMCT-1	S6A0069 or equivalent	AMC2004A
20X4	98.0X60.0X14.0/9.0	76.0X25.2	2.95X4.75	None/LED	AMCT-1	S6A0069 or equivalent	AMC2004A-S2
20X4	146.0X62.5X13.0/10.0	123.5X43.0	4.84X9.22	None/LED	AMCT-1	S6A0069 or equivalent	AMC2004B
20X4	191.0X86.0X22.0	143.0X57.0	5.66X9.8	None/LED	AMCT-1	S6A0069 or equivalent	AMC2004G
20X4	65.0X28.4X9.0	46.0X18.4	1.85X3.15	None/LED	AMCT-1	S6A0069 or equivalent	AMC2004H
24X2	118.0X36.0X14.0/10.0	93.5X16.0	3.20X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC2402A
24X4	125.0X39.0X14.0	97.0X27.0	3.20X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC2404A
40X2	182.0X33.5X14.0/11.0	154.5X15.8	3.20X5.55	None/LED	AMCT-1	S6A0069 or equivalent	AMC4002B
40X4	280.0X88.0X17.9	244.0X68.0	5.20X14.51	None/LED	AMCT-1	S6A0069 or equivalent	AMC4004A
40X4	288.3X77.5X14.0	253.8X56.6	5.00X8.476	None/LED	AMCT-1	S6A0069 or equivalent	AMC4004B
40X4	190.0X54.0X14.0/10.0	148.0X30.3	2.78X4.89	None/LED	AMCT-1	S6A0069 or equivalent	AMC4004C

chars x lines	Module Size	View Area	Character Size	Backlight	Controller	Model
8X2	58.0X32.0X14.0/10.0	38.0X16.0	2.96X5.56	None/LED	AC780S	AMC0802B I2C
8X2	58.0X32.0X14.0/10.0	38.0X16.0	2.96X5.56	None/LED	AC780S	AMC0802B SPI
16x2	80.0X36.0X14.0/10.0	64.5X15.5	2.95X5.55	None/LED	AC780S	AMC1602A I2C
16X2	80.0X36.0X14.0/10.0	64.5X15.5	2.95X5.55	None/LED	AC780S	AMC1602A SPI
20X2	116.0X37.0X14.5/10.5	83.0X18.6	3.20X5.55	None/LED	AC780S	AMC2002C I2C
20X2	116.0X37.0X14.5/10.5	83.0X18.6	3.20X5.55	None/LED	AC780S	AMC2002C SPI
20X4	98.0X60.0X15.0/10.0	76.0X25.2	2.95X4.75	None/LED	AC780S	AMC2004A I2C
20X4	98.0X60.0X15.0/10.0	76.0X25.2	2.95X4.75	None/LED	AC780S	AMC2004A SPI

LED Backlight and LCD Color Matching List

	STN POSITIVE YELLOW/GREEN	STN POSITIVE GRAY	STN NEGATIVE BLUE	FSTN POSITIVE	FSTN NEGATIVE	TN POSITIVE GRAY	TN NEGATIVE BLACK
Y/G LED							
RED LED	YY	GY	BY	WY	TY	PY	NY
BLUE LED	YR	GR <i>Not Recommended</i>	BR	WR	TR	PR	NR
WHITE LED	YB	GB	BB <i>Not Recommended</i>	WB	TB	PB	NB
GREEN LED	YW	GW	BW	WW	TW	PW	NW
AMBER LED	YG	GG	BG	WG	TG	PG	NG
WITHOUT BACKLIGHT	YA	GA	BA	WA	TA	PA	NA
	YN	GN	BN <i>Not Recommended</i>	WN	TN <i>Not Recommended</i>	PN	NN <i>Not Recommended</i>

Product Information

<http://orientdisplay.com/character-lcd-modules.html>



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JAZZ-A Graphic LCD

JAZZ A Series is one of our best selling graphic LCD module offerings. It is widely known to the LCD market because of its versatility in formulating LCD mode and back-light color combinations and for its competitive pricing. We created this product in order to offer convenient options for customers to easily build their own LCD combinations without having to rebuild their PCB design.

- 2.7" Graphic COG (Chip-on-glass) LCD Module with 128x64 Dots.
- Supports Long-term product availability
- Downloadable example codes available for product testing, please click [here](#).
- Accessories: JAZZ-AB and JAZZ-AT (Resistive Touch Panel)
- No polarizer, no color filter, and no backlight are used.
- No flickering: human eyes will not fatigue.

Size	Resolution	Dimension	V.A Size	Features	Demo Board	LCD Mode	Controller	Model
2.7"	128 x 64	69.10X46.40X2.9	65.50X37.2	6:00,Transf, ^{1/65} Duty, ^{1/9} Bias	JAZZ-AB	FSTN Pos	ST7567	JAZZ-AC-W
2.7"	128 x 64	69.10X46.40X2.9	65.50X37.2	6:00,Transf, ^{1/65} Duty, ^{1/9} Bias	JAZZ-AB	FSTN Neg	ST7567	JAZZ-AC-T
2.7"	128 x 64	69.10X46.40X2.9	65.50X37.2	6:00,Transmissive, ^{1/65} Duty, ^{1/9} Bias	JAZZ-AB	STN Pos YG	ST7567	JAZZ-AC-Y
2.7"	128 x 64	69.10X46.40X2.9	65.50X37.2	6:00,Transf, ^{1/65} Duty, ^{1/9} Bias	JAZZ-AB	STN Pos Gray	ST7567	JAZZ-AC-G
2.7"	128 x 64	69.10X46.40X2.9	65.50X37.2	6:00,Transmissive, ^{1/65} Duty, ^{1/9} Bias	JAZZ-AB	STN Neg Blue	ST7567	JAZZ-AC-B
2.7"	128 x 64	69.10X46.40X2.9	65.50X37.2	6:00,Transmissive, ^{1/65} Duty, ^{1/9} Bias		ASTN	ST7567	JAZZ-AC-A

JAZZ-A LED Backlight

Size	Dimension	Color	Features	Model
2.7	71.20x48.50x5.20	White	Snap-in Frame, Wired Type	JAZZ-AE-W
2.7	71.20x48.50x5.20	Amber	Snap-in Frame, Wired Type	JAZZ-AE-A
2.7	71.20x48.50x5.20	Yellow Green	Snap-in Frame, Wired Type	JAZZ-AE-Y
2.7	71.20x48.50x5.20	Blue	Snap-in Frame, Wired Type	JAZZ-AE-B
2.7	71.20x48.50x5.20	Green	Snap-in Frame, Wired Type	JAZZ-AE-G
2.7	71.20x48.50x5.20	Red	Snap-in Frame, Wired Type	JAZZ-AE-R

JAZZ-A Accessories

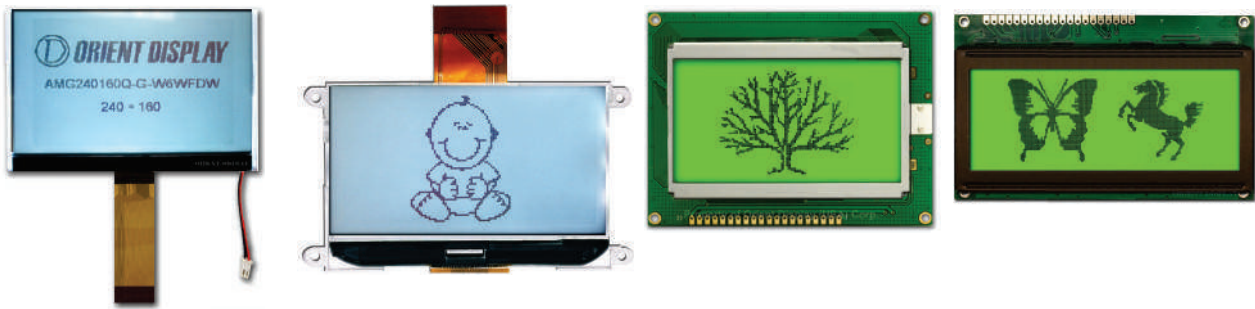
Size	Dimension	V.A. Size	Type	Evaluation Board	Model
2.7	69.10 X 46.40 X 1.0	65.50X37.20	4-Wire Resistive Touch Panel	JAZZ-AB	JAZZ-AT

JAZZ-B Graphic LCD

Size	Resolution	Dimension	V.A Size	Dot Size	Dot Pitch	LCD Mode	Controller	Model
1.0	128 x 64	28.5X20.0X1.7	26.5X14.0	0.16X0.16	0.18X0.18	FSTN Pos	ST7565R	JAZZ-BC-W

JAZZ-B LED Backlight

Size	Dimension	V.A. Size	Backlight	Model
1.0	28X20X2.3	28X14.5	White	JAZZ -BE -W
1.0	28X20X2.3	28X14.5	Green	JAZZ-BE-G



COG LCD Modules

COG LCD modules can be more compact, reliable, cost effective, and require a lower currency than COB LCD modules. Most of our COG LCD modules are custom made, which our engineers are more than happy to assist you in the design process. If you have design ideas, drawings, specifications, or samples and would like our assistance, please contact us and we will be happy to help design products to meet your specifications, schedule, and budget.

Size	Resolution	Module size	V. A Size	Dot Size	Dot Pitch	Backlight	Controller	Model
1.7"	128x64	45.0X40.0X7.2	37.0X28.0	0.252X0.33	0.282X0.36	None/LED	ST7565R	AMG12864R2-G
2.1"	128x128	48.0X52.8x2.85	44.0X40.5	0.282X0.282	0.297X0.297	LED	UC1617	AMG128128P-G
2.3"	16x2	76.0X28.7X6.0	61.0X15.7	0.55X0.60	0.60X0.65	None/LED	NT7603	AMC1602Q1-G
2.9"	128x64	87.6X50.4X5.9	70X37	0.495X0.495	0.51X0.51	LED	ST7565	AMG12864P-G
3.0"	160x160	83.8X76.5X9.6	60.0X60.0	0.32X0.32	0.34X0.34	LED	UC1698	AMG160160Q-G
3.1"	160x160	75.8X89.2X8.5	62.3X62.3	0.335X0.335	0.35X0.35	LED	UC1698	AMG160160P1-G
3.9"	240x160	105.5X67.2X4.2	99.0X57.5	0.33X0.30	0.3 5X0.32	LED	UC1698	AMG240160Q-G
4.0"	240x128	101.3X76.3X4.5	92.0X60.5	0.37x0.33	0.40X0.36	LED	UC1608	AMG240128P-G
4.3"	240x64	134.6X55.1X5.8	111.0X37.0	0.41X0.47	0.4 4X0.50	LED	UC1608	AMG24064P-G

COB LCD Modules

Size	Resolution	Dimension	V. A. Size	Dot Size	Backlight	Controller	Model
1.9"	128X32	66.0X26.0X8.5	51.0X14.8	0.33X0.34	None/LED	S6B0107, S6B0108	AMG12832A
1.9"	128X64	54.0X50.0X7.0	44.50X30.0	0.28X0.35	None/EL	S6B0107, S6B0108	AMG12864D
2.0"	122X32	65.4X29.1X5.7	54.8X19.1	0.36X0.41	None/ LED/EL	S6B0107, S6B0108	AMG12232F
2.1"	160X32	84.0X44.0X14.0	60.5X18.5	0.30X0.35	None/LED	ST7920, Chinese fonts	AMG16032A
2.2"	122X32	84.0X44.0X14.0/10.0	60.5X18.5	0.40X0.45	None/LED	SED1520 or equivalent	AMG12232A
2.2"	122X32	80.0X36.0X14.0/10.0	60.5X18.5	0.40X0.45	None/LED	SED1520 or equivalent	AMG12232B
2.2"	122X32	65.8X27.0X12.0	60.2X18.0	0.45X0.40	None /LED	SED1520 or equivalent	AMG12232D
2.2"	122X32	80.0X36.0X13.5/8.8	60.5X18.5	0.40X0.45	None/LED	S6B0107, S6B0108	AMG12232G
2.4"	128X64	75.0X52.8X9.0	60.0X32.6	0.40X0.40	None/ LED	S6B0107, S6B0108	AMG12864J
2.5"	160X64	89.0X35.6X17.0	62.4X25.6	0.34X0.34	None/LED	S6B0086 or equivalent	AMG16064A
2.7"	128X64	78.0X70.0X12.0	62.0X44.0	0.40X0.56	None /LED	S6B0107, S6B0108	AMG12864B
2.7"	128X64	78.0X70.0X12.0	62.0X44.0	0.40X0.56	None/LED	S6B0107, S6B0108	AMG12864H
2.9"	122X32	98.0X60.0X13.0/11.0	76.0X25.2	0.53X0.61	None/LED	SED1520 or equivalent	AMG12232C
2.9"	128X64	93.0X70.0X14.0/10.0	72.0X40.0	0.48X0.48	None/LED	S6B0107, S6B0108	AMG12864A
2.9"	128X64	113.0X65.0X11.7/9.0	73.5X39.0	0.458X0.458	None/LED	S6B0107, S6B0108	AMG12864E
3.3"	192X64	100.0X60.0X14.6/12.0	84.0X31.0	0.36X0.36	None/LED	S6B0107, S6B0108	AMG19264A
3.8"	192X48	122.4X52.7X14.1/9.0	99.0X24.0	0.44X0.41	None/LED	S6B0107, S6B0108	AMG19248A
4.0"	192X64	130.0X65.0X12.8/8.8	104.0X39.0	0.458X0.458	None/LED	S6B0107, S6B0108	AMG19264B
4.0"	192X64	120.0X62.0X12.8/8.8	104.0X39.0	0.458X0.458	None/LED	S6B0107, S6B0108	AMG19264C
4.1"	240X128	114.0X82.0X15.0	94.5X54.5	0.35X0.35	None/LED/CCFL	S6B0107, S6B0108	AMG240128C
4.7"	320X240	139.0X106.1X14.5	103.0X79.0	0.30X0.30	None/LED/CCFL	None, Touch Panel	AMG320240F
4.8"	202X32	150.0X45.8X0/12.0	123.0X24.0	0.55X0.62	None/LED	T6963C	AMG20232A
4.8"	240X128	144.0X104.0X15.0/13.0	114.0X64.0	0.40X0.40	None/LED	T6963C	AMG240128A
4.8"	240X128	144.0X104.0X15.0/13.0	114.0X64.0	0.40X0.40	None/LED	T6963C	AMG240128B
4.8"	240X128	144.0X104.0X15.0/13.0	114.0X64.0	0.40X0.40	None/LED	T6963C	AMG240128D
5.2"	240X64	180.0X65.0X16.0/11.0	132.2X39.2	0.49X0.49	None/LED	T6963C	AMG24064A
5.2"	240X64	180.0X65.0X16.0/13.0	132.2X39.0	0.49X0.49	None/LED	T6963C	AMG24064B

Product Information

<http://orientdisplay.com/tab-cog-lcds.html>
<http://orientdisplay.com/graphic-lcd-modules.html>



Orient Display Bi-Stable LCD Modules Features

Bi-stable can retain an image without power. The crystals may exist in one of two stable orientations and power is only required to change the image. Bi-stable LCD can change colors, and keep that color even when power is cut off.

Bi-stable LCD Advantages:

- Reflective display with excellent sunlight readability.
- Low power: Zero power is used when the image is stable.
- Ultra wide viewing angle = 80 degrees in all directions.
- High resolution graphic with 200 dpi. Up to 256 levels of gray scale.
- No polarizer, no color filter, and no backlight are used.
- No flickering: human eyes will not fatigue.

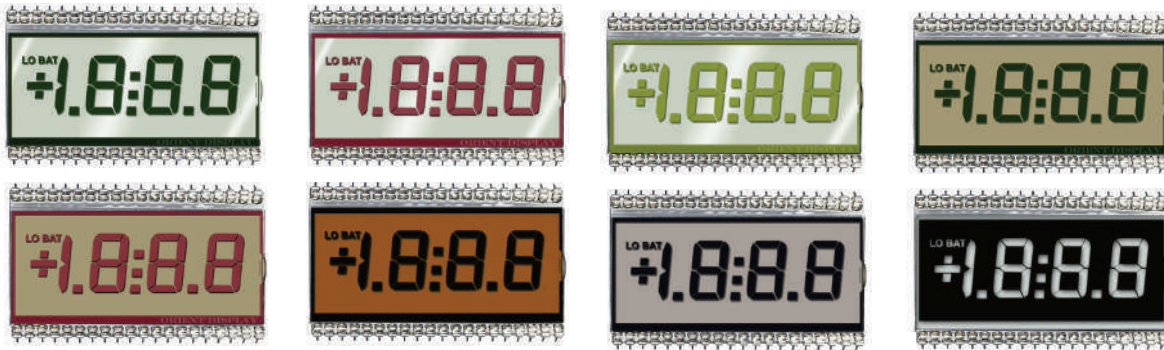
Technical Details:

- Bi-Stable displays need protection from UV.
- Bi-Stable displays are slow to change. Image refresh is 8 seconds at 25°C.
- Operating voltage of 35V is achieved with an internal charge pump.
- Add a transparent cover to protect the LCD viewing area.
- Anti reflective / anti glare film added to the cover will improve the optics.

Size	Resolution	LCD Color Combination	Demo Board	V.A. Size	Module Size	Model
3.0	132X64	White on Blue	JAZZ-CB	67.5X35.3	70.5X44.3	JAZZ-CW-B
3.0	132X64	Green on Black	JAZZ-CB	67.5X35.3	70.5X44.3	JAZZ-CG-D
3.0	132X64	Yellow on Black	JAZZ-CB	67.5X35.3	70.5X44.3	JAZZ-CY-D
3.0	132X64	Yellow on Pink and Blue	JAZZ-CB	67.5X35.3	70.5X44.3	JAZZ-CY-PB

Product Information

<http://orientdisplay.com/bistable-lcd-modules.html>
http://www.orientlcd.com/category_s/1849.htm



LCD Glass Panel Advantages

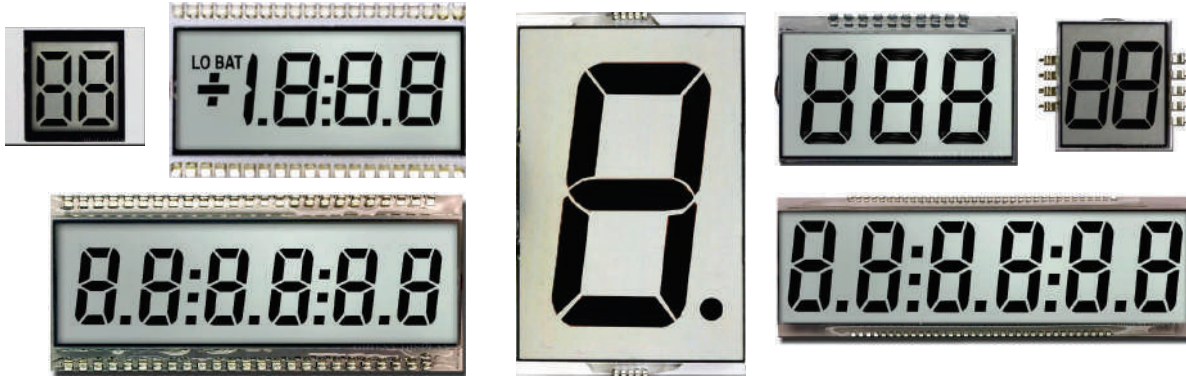
Orient Display provides LCD glass products from 1 to 24 digits, from standard to customized LCD glass to fully meet customers' requirements.

It can be made with the following options

- Connection: pin, zebra, heat seal or FPC connections
- Multi-color inside or outside screen printing
- Positive or Negative display
- Sunlight readable
- High reliability of over 100,000 hours
- Extreme temperature range from -40°C to 90°C
- Wide viewing angle
- Fast response time (< 1ms)
- Customized shapes, and so on.

LCD Glass Panels With Colorful Polarizers

Digits	LCD Mode	Glass Size	V.A.	Digit Height	Features	Connection	Temperature	Part Number
3 ^{1/2}	+TN (Black/Amber)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PO
3 ^{1/2}	+TN (Green/Mirror)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PMG
3 ^{1/2}	+TN (Pink/Mirror)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PMP
3 ^{1/2}	+TN (YG/Mirror)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PMY
3 ^{1/2}	+TN (Green/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PWG
3 ^{1/2}	+TN (Pink/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PWP
3 ^{1/2}	+TN (YG/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PWY
3 ^{1/2}	+TN (Black/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-PWD
3 ^{1/2}	+TN (White/Mirror)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-NMW
3 ^{1/2}	+FSTN (Green/Mirror)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WMG
3 ^{1/2}	+FSTN (Pink/Mirror)	50.80x30.48	45.8x17.86	12.70	00, 6Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WMP
3 ^{1/2}	+FSTN (YG/Mirror)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WMY
3 ^{1/2}	+FSTN (Green/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WWG
3 ^{1/2}	+FSTN (Pink/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WWP
3 ^{1/2}	+FSTN (YG/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WWY
3 ^{1/2}	+FSTN (Blue/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WWB
3 ^{1/2}	+FSTN (Red/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-WWR
3 ^{1/2}	-FSTN (Black/White)	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re ^{ec} , 5V, w/ lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	JAZZ-EC-TRW



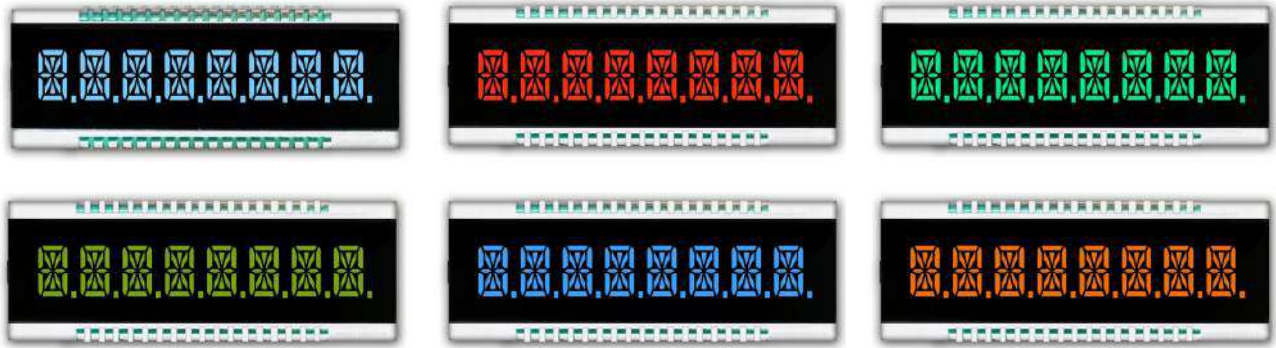
Digits	LCD Mode	Glass Size	Viewing Area	Digit Height	Features	Connection	Temperature	Part Number
1	TN Positive	122.56x81.28	109.22x76.2	101.60	6:00, Static, Transf, 5V	Pin	Op:0°C-50°C, St:-20°C-70°C	OD-103T
1	TN Positive	122.56x81.28	109.22x76.2	101.60	6:00, Static, Re#ec, 5V	Pin	Op:0°C-50°C, St:-20°C-70°C	OD-103R
2	TN Positive	22.86x21.34	15.86x18.18	12.70	6:00, 1/2 Duty, 1/2 Bias, Transf, 4.3V	Pin	Op:0°C-50°C, St:-20°C-60°C	OD-202
2	TN Positive	8.00x10.00	6.00x5.50	4.00	6:00, Static, Re#ec, 3V	Zebra	Op:0°C-50°C, St:-10°C-60°C	OD-204
2 1/2	TN Positive	30.00x26.17	26.00x17.17	12.17	6:00, Static, Re#ec, 5V	Pin	Op:0°C-50°C, St:-20°C-70°C	OD-251
3	TN Positive	33.10x20.40	30.50x15.80	12.20	6:00, 1/3 Duty, 1/2 Bias, Trans, 2.7V	Pin	Op:0°C-50°C, St:-10°C-60°C	OD-301
3	TN Positive	30.70x16.20	27.90x10.00	7.87	6:00, Static, Re#ec, 5V	Pin	Op:0°C-50°C, St:-20°C-70°C	OD-302
3 1/2	TN Positive	50.80x30.48	45.8x17.86	12.70	6:00, Static, Trans, 5V, ^{sw} lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	OD-358T
3 1/2	TN Positive	50.80x30.48	45.8x17.86	12.70	6:00, Static, Re#ec, 5V, ^{sw} lowbat & +/-	Pin	Op:0°C-50°C, St:-20°C-70°C	OD-358R
3 1/2	TN Positive	93.85x45.72	86.23x30.35	24.90	6:00, 1/4 D, 1/3 B, Trans/Ref, 5V, ^{sw} Arrow & +/-	Pin	Op:-30°C-80°C, St:-35°C-85°C	OD-3515
3 1/2	TN Positive	69.85x38.10	63.00x24.00	17.80	6:00, Static, Trans/Ref, 5V, ^{sw} Arrow & +/-	Pin	Op:-30°C-80°C, St:-30°C-80°C	OD-3516
3 3/4	TN Positive	20.10x10.10	18.10x7.30	6.00	6:00, 1/2 D, 1/3 B, Re#ec, 5V, ^{sw} with E	Zebra	Op:-20°C-60°C, St:-20°C-70°C	OD-371
3 3/4	TN Positive	23.70x11.50	21.70x8.20	7.00	6:00, 1/2 D, 1/3 B, Re#ec, 3V, ^{sw} with E	Zebra	Op:-20°C-60°C, St:-20°C-70°C	OD-372
3 1/2	TN Negative	30.70x18.10	28.00x14.00	8.30	6:00, 1/4 D, 1/3 B, Transf, 4.5V, ^{sw} with 25 Dots	W/O Pin	Op:-10°C-60°C, St:-20°C-70°C	OD-391
4	TN Positive	50.80x30.45	44.45x16.51	12.70	6:00, Static, Transf, 3.3V	Pin	Op:-20°C-70°C, St:-30°C-80°C	OD-409
4 1/2	TN Positive	50.80x30.50	47.50x17.70	10.20	6:00, Static, Re#ec, 5V, ^{sw} lowbat & +/-	Pin	Op:-30°C-80°C, St:-30°C-80°C	OD-454
4	TN Positive	35.56x22.86	31.56x12.51	7.62	6:00, 1/3 D, 1/2 B, Re#ec, 5V, ^{sw} 16 Segs	Pin	Op:-20°C-60°C, St:-25°C-70°C	OD-491
5	TN Positive	50.80x30.48	47.80x20.00	10.20	6:00, Static, Transf, 5V	Pin	Op:-30°C-80°C, St:-30°C-80°C	OD-502
6	TN Positive	69.85x30.48	63.50x16.51	12.70	6:00, Static, Re#ec, 5V	Pin	Op:-20°C-80°C, St:-30°C-80°C	OD-609R
6	TN Positive	69.85x30.48	63.50x16.51	12.70	6:00, Static, Transf, 5V	Pin	Op:-20°C-80°C, St:-30°C-80°C	OD-609T
6	TN Positive	30.00x17.30	27.60x11.60	8.00	1/4 D, 1/3 B, Re#ec, 3V	Pin	Op:0°C-70°C, St:-10°C-80°C	OD-6010
8	TN Positive	70.00x25.0	64.00x12.50	9.00	6:00, 1/4 D, 1/3 B, Re#ec, 4.7V, ^{sw} 14 Segs	Pin	Op:-30°C-80°C, St:-40°C-80°C	OD-893
8	TN Positive	93.98x30.48	87.63x19.05	11.00	12:00, 1/4 D, 1/3 B, Trans#, 5V, ^{sw} 14 Segs	Pin	Op:-20°C-80°C, St:-40°C-80°C	OD-894
24	HTN Positive	61.80x18.80	58.80x13.30	5.03	12:00, 1/12 D, 1/5 B, Re#ec, 4.8V, ^{sw} 16 Segs	Zebra	Op:0°C-50°C, St:-10°C-60°C	OD-2491

Product Information

<http://orientdisplay.com/lcd-glass.html>



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VTN LCD Advantages

VTN is a unique type of LCD where the liquid crystal fluid is vertically aligned perpendicular to the glass substrate. With this innovation, vertically aligned TN or VTN offers very dark or true black background and ultra wide viewing cone with ultra high contrast ratio making it a highly improved version of traditional Twisted Nematic LCDs.

- True black background
- Suitable for all backlight
- Ultra wide viewing cone
- Operating Temp: -30°C to 80°C
- Storage Temp: -40°C to 80°C
- Temperature independence: Background color doesn't change at -30°C to 80°C
- Ultra high contrast ratio: duty < 1/8 : 1000:1 or even higher and 1/16 ≥ duty ≥ 1/8 : 200:1 or even higher

VTN LCD

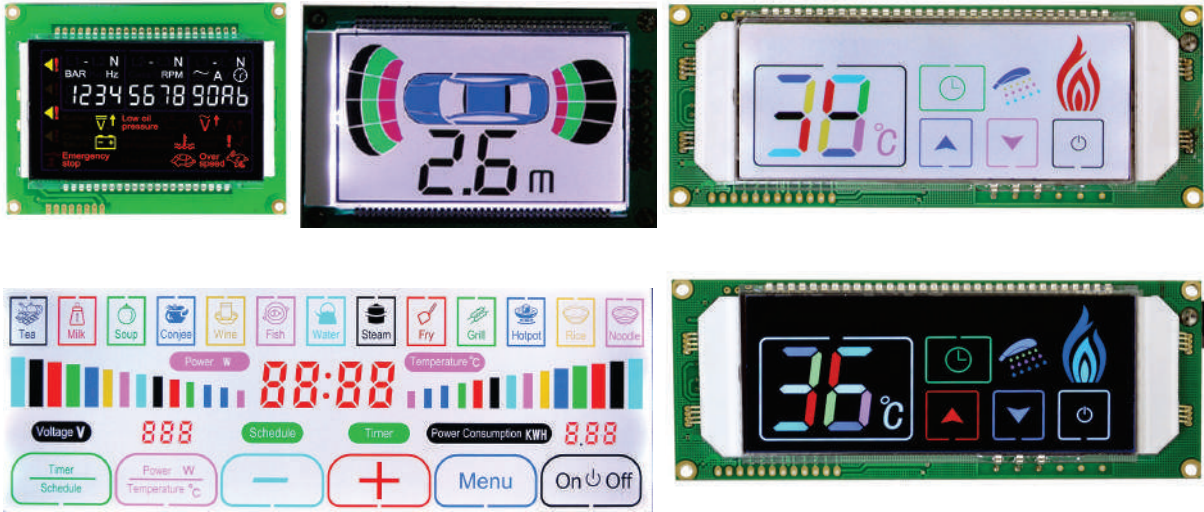
Digits	Demo Board	Glass Size	Viewing Area	Digit Height	Features	Connection	Temperature	Part Number
8	JAZZ-DB	69.00x12.50	64.00x12.50	9.00	6:00, 1 ¹ / ₄ D, 1 ¹ / ₃ B, Tans, 4.7V	Pin	Op: -30C-80C, St: -40-80C	JAZZ-DC-V

VTN Backlight

Backlight Color	Type	Size	Connection	Temperature	Part Number
Amber	LED	72.00x18.50	Wired	Op: -30C-70C, St: -40-80C	JAZZ-DE-A
White	LED	72.00x18.50	Wired	Op: -30C-70C, St: -40-80C	JAZZ-DE-W
Red	LED	72.00x18.50	Wired	Op: -30C-70C, St: -40-80C	JAZZ-DE-R
Blue	LED	72.00x18.50	Wired	Op: -30C-70C, St: -40-80C	JAZZ-DE-B
Green	LED	72.00x18.50	Wired	Op: -30C-70C, St: -40-80C	JAZZ-DE-G
Yellow Green	LED	72.00x18.50	Wired	Op: -30C-70C, St: -40-80C	JAZZ-DE-Y


Product Information

<http://orientdisplay.com/VTN-Lcd.html>



FS LCD Characteristics

Storage Temperature	-30°C to 80°C
Operating Temperature	0°C to 60°C
Driving Method	Static
Drive Frequency	55 to 60Hz
Operating Voltage	3 to 5V
Segments	Up to 32 0SEG
Module Structure	COB (Chip-on-Board)

- 8- Color Display: 
- Vivid Colors with Wide Viewing Angle
- Higher Contrast and Higher Brightness
- Rapid Response
- FS LCD can be integrated with Capacitive Touch Screen

Product Information

<http://orientdisplay.com/FS-lcd.html>

We understand that different customers have different requirements for technologies, quality, flexibility and services, the goal of our business is to achieve 100% customer satisfaction. The check list below is to understand initially of the customer's requirements:

Custom Color TFT LCD



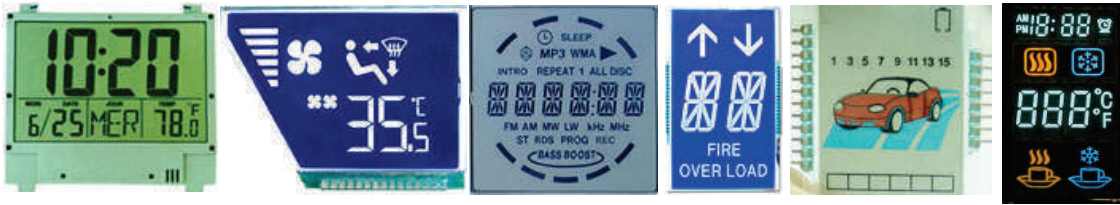
- Existing project (need drop in replacement or only the same interface?) or new design
- LCD size diagonal (from 1.44" to 21")
- Resolution (for example: 640X480)
- With touch panel? If yes, RTP (Resistive TP) or CTP (Capacitive TP, see another section)?
- Interface (Parallel, SPI, IIC, RGB, LVDS, URAT etc)
- Quantity and Target price
- Shipping Term. (FOB:Hong Kong or FCA: Seattle)
- Other requirements or information

Capacitive Touch Panel



- Existing project (need drop in replacement?) or new design
- Dimension (outside and sensor). It is better to send us a drawing or sketch
- Touch Type: Touch key, Single Point, Two Points, Multi-touch (5-10 points)
- Handwriting support is needed?
- Drilling holes are needed?
- Shape: Rectangle or irregular?
- Fingerprint resistant coating is needed?
- CTP and Len thickness [We can suggest](#)
- Others: LCD resolution, Drop test standard, Surface hardness, Interface etc. [We can suggest.](#)
- Quantity and Target price
- Shipping Term. (FOB:Hong Kong or FCA: Seattle)

Custom LCD Glass



- Dimensions. It is better to send us a drawing or sketch
- Connection (pin, zebra, heat seal or FPC) [We can suggest](#)
- Positive/Negative. Reflective/Transflective/Transmissive, [We can suggest](#)
- Temperature range (indoor use or outdoor use)
- Application
- Existing project (need drop in replacement?) or new design
- Quantity and Target price
- Shipping Term (FOB:Hong Kong or FCA: Seattle)
- Other requirements or information

Custom LCD Modules including Color TFT LCDs



- Dimensions of LCD module. It is better to send us a drawing or sketch
- What to display?
 - Digit (How many segments?)
 - Alphanumeric (How many characters?)
 - Graphic (How about the resolution?)
- Positive/Negative. Reflective/Transflective/Transmissive. [We can suggest](#)
- COB. COG if they have [We can suggest](#)
- IC and/or connections if available [We can suggest](#)
- Preferred voltage, duty, bias if available
- Temperature range (indoor use or outdoor use?)
- Backlight needed? and color?
- Application
- Existing project (Need drop replacement?) or new design
- Quantity and Target price
- Shipping Term (FOB:Hong Kong or FCA: Seattle)
- Other requirements or information

Custom LED Backlight

- Dimension or provide the LCD drawing/sketch
- Color (White, Red , Blue, Green, Yellow Green, Amber, Orange or multi-color)
- Application
- Brightness and Life time [We can suggest](#)
- Preferred voltage. current if available
- Temperature range
- Quantity and Target price
- Shipping Term. (FOB:Hong Kong or FCA: Seattle)
- Other requirements or information

Product Information

<http://orientdisplay.com/custom-lcd-modules.html>



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TFT



CTP



LCD Glass Panels With Colorful Polarizers



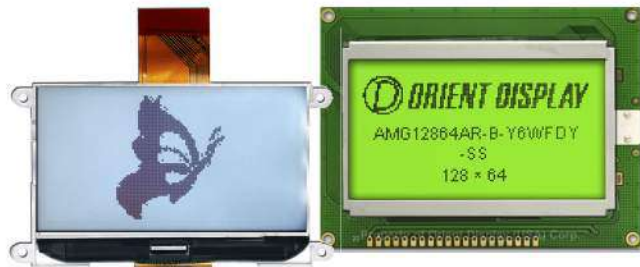
VTN LCD



JAZZ-A LCD



Graphic LCD



Standard LCD Glass



Character LCD



Bi-Stable LCD Modules





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