



Company Name: E-SHINE DISPLAY CO., LIMITED  
Tel: +86-592-3600771 +86-592-3155060  
Fax: +86-592-6029182  
Post Code: 361006  
E-Mail: info@e-shinedisplay.com sales@e-shinedisplay.com  
Internet: www.e-shinedisplay.com  
Office Add: 2F, 40# JIAXING LI, HULI DISTRICT, XIAMEN, FUJIAN, CHINA.  
Factory Add: 9 XINMEI ROAD, HAICANG DISTRICT, XIAMEN, FUJIAN, CHINA.



# 厦门易阳光电有限公司 E-SHINE DISPLAY CO., LTD

## PRODUCT CATALOG

*Specialize in  
LCD, LCM, TFT and OLED Technology  
more than 10 years*



Credit based, Innovation sourced,  
Improvement Persisted, Development upgraded.

## Company Profile

E-Shine display provides the Europe, North America, South America, Africa, Asia and so on with cost effective high quality LCD, LCM, TFT and OLED display device. In addition to our vast standard part offerings. We pride ourselves on frist-rate customer support and development assistance.



## Our Advantages

E-Shine Display customers enjoy a 8-point advantage by using our products.

- 1)PRODUCT KNOWLEDGE: Our engineer team consists of experts with a clear focus on current display technologies being developed for the worldwide marketplace.
- 2)COST EFFECTIVE PRODUCTS: Our high quality products are manufactured in state-of-the-art ISO certified factories.
- 3)TIME TO MARKET: Our expedited lead times allow customers to go from product idea to actual production faster than anyone else in the market. We will maintain this speed by offering programs.
- 4)GLOBAL DISPLAY TECHNOLOGY SOLUTIONS: Our customers enjoy the most basic display solutions to highly complex turnkey solutions.
- 5)TECHNICAL SUPPORT: Our engineering Department provides high quality hardware and software design support.
- 6)DIVERSIFIED PRODUCT LINES & SUSTAINED SUPPLIERS: Our main products are LCD, LCM, TFT and OLED display and so on. We have sustained suppliers especially of TFT products.
- 7)VALUE-ADD SERVICES: In addition to modifying displays, we offer custom plastic injection molding, metal stamping and complete assembly productions.
- 8)REASONABLE PRICE: Not only for standard items but also for custom displays.

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**Helpful Hint**

When starting your next project take into consideration how your application is going to be used. This will help to determine what type of display mode would be ideal for your final, overall look and readability.

## Display Modes

LCD Displays can come in different display modes: positive and negative. The type of application in which the display will be used will impact which mode should be selected.

Here is a look at the differences between the two modes.

### Negative Type

Negative type displays provide an image with light pixels on a dark background. The backlight must be used for this type of display and is capable of multiple pixel colors.



### Positive Type


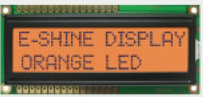
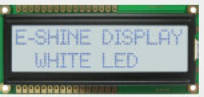


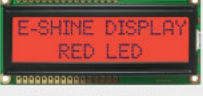
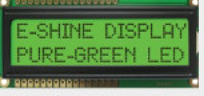




Positive type displays provide an image with dark pixels on a light background. Ambient light or a backlight can be used for this type of display and is capable of multiple background colors.



# Display Modes

There are many decisions to make when backlighting an LCD since the color of the display can impact the overall look, feel and functionality of your application. The type of display will also effect the overall look of the display whether it's STN vs. FSTN, or Positive vs. Negative display modes. Below are examples of the wide variety of backlight colors there are to choose from.

## STN Display Types

Display Type: STN(+) Gray	Backlight Color Examples	
 <ul style="list-style-type: none"> <li>- STN (+) Gray Background</li> <li>- BLUE TEXT</li> <li>- Backlight "Off"</li> </ul>	 Orange LED Backlight "On"	 White LED Backlight "On"
	 Blue LED Backlight "On"	 Yellow-Green LED Backlight "On"
	 Red LED Backlight "On"	 Pure-Green LED Backlight "On"
Display Type: STN(+) Yellow-Green	Backlight Color Examples	
 <ul style="list-style-type: none"> <li>- STN (+) Yellow-Green Background</li> <li>- BLUE TEXT</li> <li>- Backlight "Off"</li> </ul>	 Yellow-Green LED Backlight "On"	
	Display Type: STN(-) Blue	Backlight Color Examples
 <ul style="list-style-type: none"> <li>- STN (-) Blue Background</li> <li>- WHITE TEXT</li> <li>- Backlight "Off"</li> </ul>	 Blue LED Backlight "On"	



### Helpful Hint

If you are looking for an LCD display that will offer a high contrast ratio and a wider viewing angle, then the FSTN is the perfect polarizer for your project.

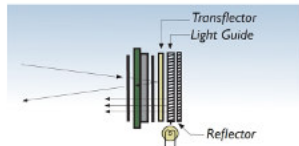
## FSTN Display Types

Display Type: FSTN(+)	Backlight Color Examples	
 <ul style="list-style-type: none"> <li>- FSTN (+) Gray Background</li> <li>- BLACK TEXT</li> <li>- Backlight "Off"</li> </ul>	 Red LED Backlight "On"	 Amber LED Backlight "On"
	 Orange LED Backlight "On"	 Blue LED Backlight "On"
	 White LED Backlight "On"	 Pure-Green LED Backlight "On"
Display Type: FSTN(-)	Backlight Color Examples	
 <ul style="list-style-type: none"> <li>- FSTN (-) Black Background</li> <li>- GRAY TEXT</li> <li>- Backlight "Off"</li> </ul>	 Red LED Backlight "On"	 Amber LED Backlight "On"
	 Orange LED Backlight "On"	 Blue LED Backlight "On"
	 White LED Backlight "On"	 Pure-Green LED Backlight "On"

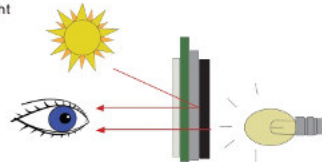
## LCD Light Modes

### Transflective

Transflective polarizers have both reflecting and transmitting properties and offer the most versatile viewing characteristics. They can be viewed in direct sunlight and when combined with a backlight in low light conditions.



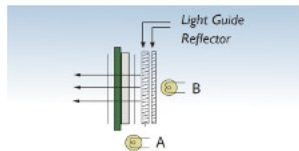
Ambient light or backlighting can be used for this type of display.



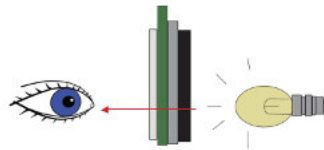
Example of Transflective Light Mode

### Transmissive

Transmissive LCDs always require a backlight and provide the highest brightness display. They are best suited for applications where direct sunlight viewing is not involved.



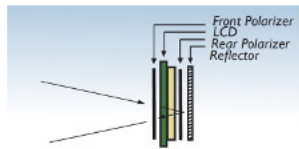
Backlighting is necessary.



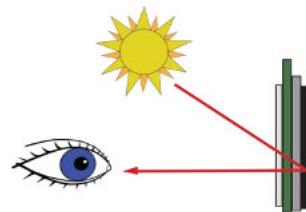
Example of Transmissive Light Mode

### Reflective

Reflective polarizers are used in high ambient light environments or whenever sufficient power is not available to drive the backlight.



Ambient light is necessary to use this type of display.



Example of Reflective Light Mode

## LCD Assembly Types

The most commonly used methods for mounting an LCD's IC Controller/Driver are COG, COB and TAB type assemblies.

### COG (Chip-On-Glass)



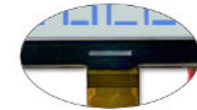
The COG mounting method is most popular for compact design applications. For this mounting method, the controller IC chip or driver is directly mounted to the LCD glass as a bare chip. This method allows for a smaller footprint of the IC and reduces the mounting area.

#### Advantages:

- Smaller footprint and mounting area
- Allows for thin displays
- Better suited for handling high frequency signals

#### Disadvantages:

- No real "industry standard" sizes
- Can be difficult to assemble or mount the display to an application
- Active area is offset rather than centered
- External capacitors are required on the main board



### COB (Chip-On-Board)



The COB mounting method is the most commonly seen mounting type in LCD display applications. With this method, the controller IC chip or driver is directly mounted on the back of a PCB board. This PCB board is affixed to the LCD glass. The COB mounting method allows for easy assembly of the display to any design application.

#### Advantages:

- Compact displays
- Available in "industry standard" sizes
- Easy application industry

#### Disadvantages:

- Larger overall dimensions
- More costly than COG



### TAB (Tape Automated Bonding)



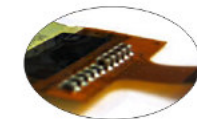
The TAB mounting method requires that the LCD's controller IC or driver be packaged in a thin, hard bubble package. This package is then affixed to the tape which is connected to the LCD by adhesive that is located along the edge of the tape.

#### Advantages:

- Can be more cost effective than COG if keypad integration is desired
- Active area is centered
- Allows for thin displays
- Better suited for handling high frequency signals

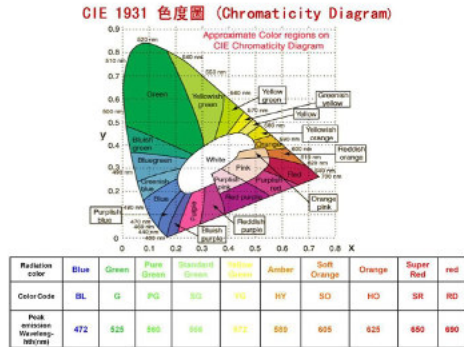
#### Disadvantages:

- Weak bonding area
- More expensive than COG
- Requires packaging of the controller IC or driver
- External capacitors are required on the main board





# LED Backlight



## BTN(VA-LCD)

What's the Features?

1. Fully Black background color compare to TN Negative, blue color.
2. No light is transmitted through display 'OFF' patterns (Segments).
3. Excellent Contrast Ratio achieved.
4. Multi-color display along with Silk printing.

Item	Specification
LCD Type	BTN (VA-LCD)
Display Mode	Negative
Contrast ratio	>=500:1
Features	Pure black background. Super high contrast ratio to 2000:1. Background and contrast invariable vs. temperature. Multi-color is possible along with Color Silk Pring
Duty ratio	1:1 - 1:4
Response Time (Duty=1, Vop=5V)	-35°C : Tr+Tf<4S
View Angle	L/U/R/D 60/50/60/70
TempOp	-35°C ~ +80°C
TempSt	-40°C ~ +90°C
Application	Industrial instruments, automobile products, household appliances

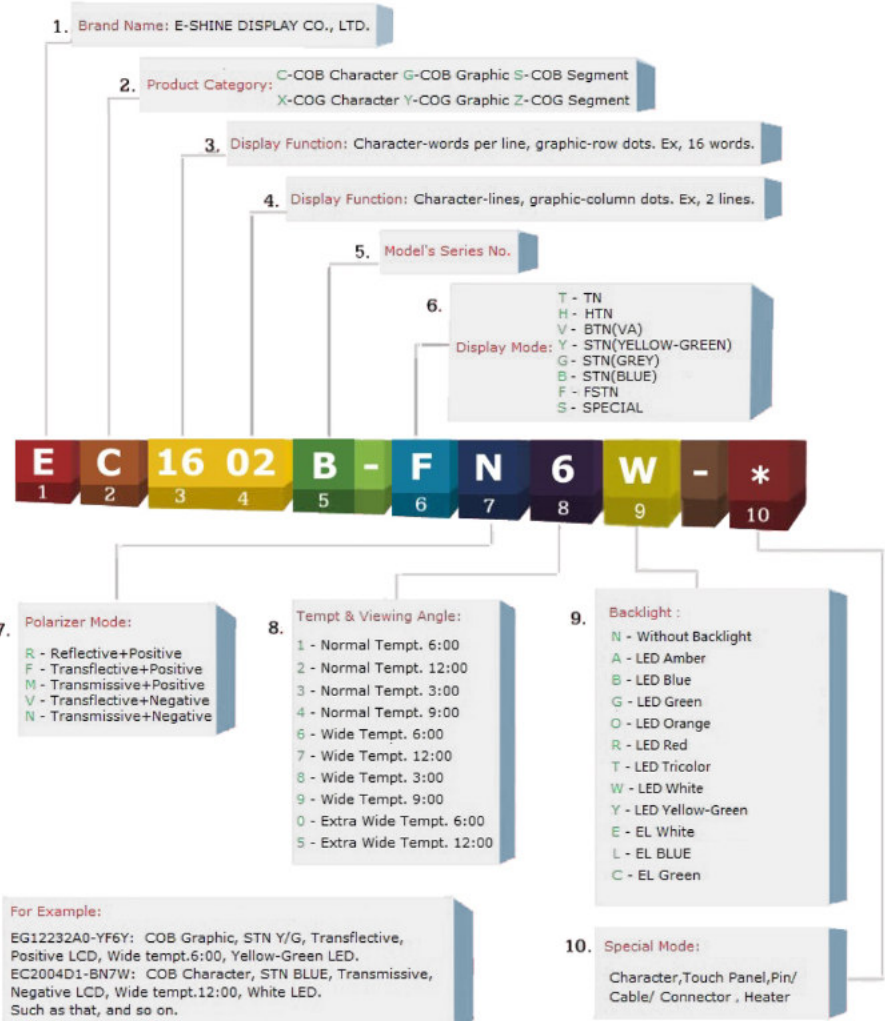


BTN



COMPARE WITH NORMAL TN

# LCM Coding System



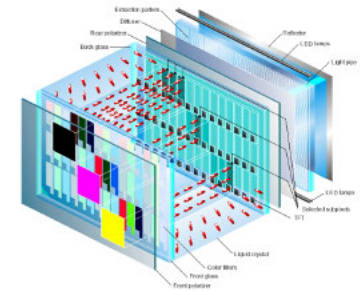






# TFT Technology

E-SHINE Display supports TFT with a wide range of applications in Home Automation, Automotive, Industrial, Medical, and others. We are fully capable of custom design TFT display to meet our customers' requirements. The size of our standard TFT products is range from 2.0" TFT to 10.4" TFT with different interface, resolution, brightness of backlight and so on. We can offer control board if customer request.



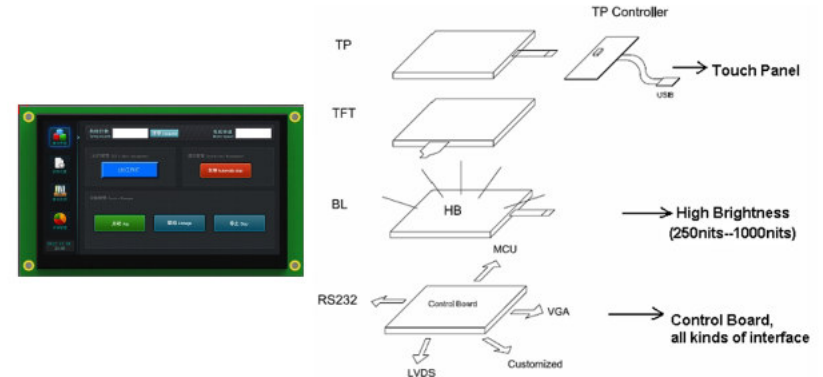
## Integrated TFT Solutions/ Color Display

**Features:** 2.0"-10.4"

Touch panel (capacitive or resistive)

Optional connectors or control boards

LED luminance 250-1000 nits





GRAPHIC COB MODULE LIST

Display Format Char x Line	Module No.	Module Size (W x H x T mm)	Viewing Area	Dot Size	Built-in Control
120*32	EG12032B	68.1*32.9*6.2/7.6	62.0*22.5	0.42*0.60	WE6120 or Equivalent
122*32	EG12232D	65.8*27.2*4.7/6.5	54.8*18.3	0.36*0.40	WE6120 or Equivalent
	EG12232A	84.0*44.0*10.0/15.0	64.0*17.9	0.40*0.45	WE6120 or Equivalent
	EG12232A9	80.0*36.0*13.6	60.5*18.5	0.40*0.45	WE6120 or Equivalent
	EG12232E	84.0*44.0*10.0/15.0	64.0*17.9	0.40*0.45	ST7920
	EG12232G	84.0*44.0*10.0/15.0	64.0*17.9	0.40*0.45	WE6120 or Equivalent
128*32	EG12832E	84.0*44.0*10.0/15.0	64.0*17.9	0.36*0.40	ST7920
128*64	EG12864A	93.0*70.0*9.0/13.0	72.0*40.0	0.48*0.48	NT7108 or Equivalent
	EG12864A1	93.0*70.0*9.0/13.0	72.0*40.0	0.48*0.48	T6963C or Equivalent
	EG12864B	78.0*70.0*10.0/15.0	62.0*44.0	0.40*0.56	NT7108 or Equivalent
	EG12864B1	78.0*70.0*10.0/15.0	62.0*44.0	0.40*0.56	T6963C or Equivalent
	EG12864E	93.0*70.0*9.0/13.0	72.0*40.0	0.48*0.48	ST7920
	EG12864G	87.0*71.0*9.0/15.0	62.0*44.0	0.40*0.56	NT7108 or Equivalent
	EG12864H	75.0*52.7*9.0/12.5	60.0*32.5	0.39*0.39	NT7108 or Equivalent
	EG12864H1	75.0*52.7*9.0/12.5	60.0*32.5	0.39*0.39	T6963C or Equivalent
	EG12864M	63.2*52.2*11.5	54.0*36.0	0.35*0.45	NT7108 or Equivalent
128*128	EG128128A	92.0*108.0*12/16.5	73.0*73.0	0.50*0.50	T6963C or Equivalent
	EG128128D	86.0*95.00*9.70	69.0*69.0	0.46*0.46	T6963C or Equivalent
160*32	EG16032A	114.0*40.0*9.5/13.5	92.0*22.0	0.49*0.49	ST7920
	EG16032A1	114.0*40.0*9.5/13.5	92.0*22.0	0.49*0.49	WE6120 or Equivalent
	EG16032B	122.0*44.0*9.5/13.5	99.0*24.0	0.55*0.56	ST7920
	EG16032C	118.0*44.0*9.5/13.5	99.0*24.0	0.55*0.58	WE6120 or Equivalent
160X80	EG16080F	100*54*7.0/11.0	72.3*37.8	0.39*0.39	WE6120 or Equivalent
192*64	EG19264A	100.0*60.0*8.1/12.5	84.0*31.0	0.36*0.38	NT7108 or Equivalent
	EG19264B1	120.0*62.0*8.4/13.5	100.0*37.0	0.45*0.45	NT7108 or Equivalent
240*64	EG24064A1	180.0*65.0*10/18.0	132.0*39.0	0.49*0.49	T6963C or Equivalent
	EG24064A9	180.0*65.0*10/16.0	132.0*39.0	0.49*0.49	T6963C or Equivalent
240*128	EG240128A1	144.0*104.0*15.0	114.0*64.0	0.40*0.40	T6963C or Equivalent
320*240	EG320240A	160.0*109.0*13.0	122.0*92.0	0.34*0.34	RA8835
	EG320240B	160.0*109.0*13.0	122.0*92.0	0.34*0.34	NT7086 or Equivalent

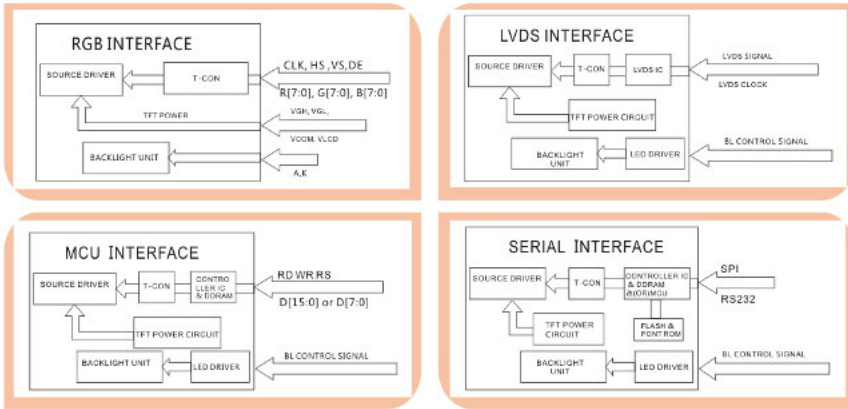
CHARACTER COG MODULE LIST

Display Format Char x Line	Module No.	Module Size (W x H x T mm)	Viewing Area	Character Size	Dot Size	Backlight	Built-in Control	Connect Type
8x1	EX0801B	32.28*18.0*5.1	29.88*8.09	2.96*5.54	0.54*0.64	LED	ST7032	COG+PIN
10x2	EX1002B1	35.1*25.3*2.0	32.1*14.3	2.45*4.15	0.45*0.55	NO	ST7032	COG+PIN
16x2	EX1602A	54.7*25.3*5.1	45.7*14.3	2.41*4.68	0.41*0.55	LED	NT7605H	COG+PIN
	EX1602B4	64.5*26.0*6.0	60.5*14.7	2.95*5.15	0.50*0.60	LED	ST7032	COG+PIN
	EX1602E5	73.9*27.5*5.2	61.0*16.8	2.97*5.15	0.57*0.60	LED	SPLC782A1	COG+PIN
	EX1602S9	122*44*14.8	99.0*23.0	3.85*9.22	0.722*1.1	LED	ST7032	COG+PIN
20x2	EX2002A5	66.0*23.0*2.8	61.0*15.1	2.45*4.87	0.45*0.54	NO	ST7036I	COG+PIN
	EX2002A8	74.5*25.0*6.2	61.0*15.1	2.45*5.55	0.45*0.65	LED	NT7605H	COG+PIN

GRAPHIC COG MODULE LIST

Display Format Char x Line	Module No.	Module Size (W x H x T mm)	Viewing Area	Dot Size	Built-in Control	Backlight	Connect Type (COG TAB)
72x48	EY7248A	32.0*28.8*4.7	28.0*18.8	0.29*0.29	ST7565V	LED	COG+FPC
96x64	EY9664A	33.0*33.0*1.9	30.0*22.2	0.22*0.27	ST7565R	NO	COG+FPC
102x64	EY10264A	30.93*35.0*5.3	34.0*22.2	0.29*0.29	ST7565R	LED	COG+FPC
128x32	EY12832A5	47.0*18.5*5.8	43.0*12.5	0.29*0.29	ST7565R	LED	COG+FPC
	EY12832C7	113.3*42.7*10.3	80.8*23.2	0.55*0.55	ST7565P	LED	COG+FPC
128x64	EY12864A	86.0*44.0*5.7	58.0*28.8	0.36*0.40	SPLC501C	LED	COG+FPC
	EY12864AC	72.0*47.0*4.7	68.0*36.0	0.47*0.47	S1D15605	LED	COG+FPC
	EY12864E7	58.2*41.7*5.7	50.0*25.0	0.33*0.33	ST7565R	LED	COG+FPC
	EY12864G4	79.7*53.5*6.5	70.7*38.8	0.48*0.48	ST7565P	LED	COG+FPC
	EY12864H6	71.3*54.9*5.9	65.5*40.0	0.42*0.51	SPLC502A	LED	COG+FPC
	EY12864I	70.0*44.0*2.8	66.0*32.7	0.45*0.45	ST7565P-G	LED	COG+FPC
	EY12864J9	77.4*52.4*6.5	70.0*40.0	0.48*0.48	ST7565R	LED	COG+FPC
	EY12864L5	54.6*42.2*4.6	50.6*31.0	0.34*0.418	ST7565R	LED	COG+FPC
	EY12864S3	65.2*38.2*5.2	49.0*26.0	0.33*0.33	ST7565p-G	LED	COG+FPC
160x160	EY160160A9	78.85*74.1*5.5	61.0*61.0	0.32*0.32	UC1698U	LED	COG+FPC
192x96	EY19296A3	79.7*53.5*6.5	70.7*38.8	0.31*0.33	ST7529	LED	COG+FPC
240X64	EY24064A	144.9*55.4*6.5	132.6*39.0	0.50*0.50	ST7565Px2	LED	COG+FPC
	EY24064B1	134.6*55.1*5.8	111.0*37.0	0.41*0.47	UC1808	LED	COG+FPC
240x160	EY240160A1	79.7*63.5*6.8	71.8*49.0	0.241*0.251	UC1698U	LED	COG+FPC
	EY240160A3	77.42*61.0*4.6	73.42*48.0	0.26*0.26	ST7829	LED	COG+FPC

TFT Solutions



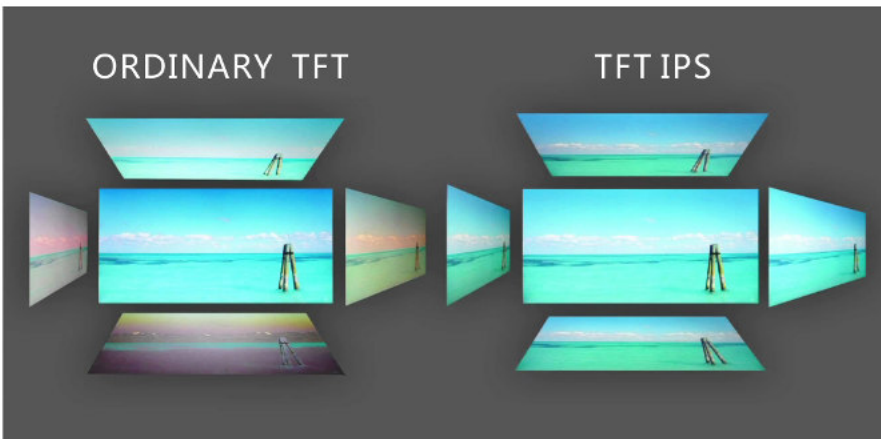
New Technology for TFT - IPS Panels.

Advantage

1. Display consistent, accurate color from all viewing angles and without having any blur.
2. Unlike TN LCDs, IPS panels do not lighten or show tailing when touched. This is important for touch-screen devices, such as smartphones and tablets.
3. IPS panels can process high speed signals without data loss by using copper wiring with low resistance values.
4. IPS Panels offer clear images and stable response time.

Disadvantages

1. IPS panels require up to 15% more power than TN displays.
2. IPS panels are more expensive to produce than TN displays.



TFT Product Tables										
Item	Screen Size	Aspect Ratio	Resolution	Module Size(mm)	Active Area(mm)	Viewing Angle(Typ.) θT/θB/θL/θR	Luminance (cd/m <sup>2</sup> )	Contrast Ratio	8/16bit MCU	
ET24K240320MT2	2.4"	4:3	240x3(RGB)x320	42.72x59.46x2.45	36.72x48.96	55/25/150/50	200	350	8/16bit MCU	
ET24K240320MA1	2.4"	4:3	240x3(RGB)x320	42.72x59.46x2.15	36.72x48.96	80/80/80/80	250	500	SPI-3.4 Serial, 8/15/18bit MCU	
ET28K240320MB1	2.8"	4:3	240x3(RGB)x320	50.0x69.2x2.15	43.2x57.60	50/70/70/70	200	350	8/16bit MCU	
ET28K240320RT1	2.8"	4:3	240x3(RGB)x320	50.50x69.75x2.9	43.2x57.60	65/50/55/55	200	300	6/8/16/18bit RGB	
ET32K240320MT2	3.2"	4:3	240x3(RGB)x320	57.04x76.7x3.1	48.6x64.8	65/55/60/60	250	450	16/18bit MCU	
ET35Z320480RA2	3.5"	2:3	320x3(RGB)x480	54.76x85.24x2.0	48.96x73.44	85/85/85/85	320	700	39pin FPC RGB	
ET35K320480MA7	3.5"	2:3	320x3(RGB)x480	54.56x83.57x2.1	48.96x73.44	80/80/80/80	320	500	SPI-3.4 Serial, 8/16/18bit MCU	
ET35L320240RB1	3.5"	4:3	320x3(RGB)x240	76.9x63.9x3.3	70.08x52.56	50/55/60/60	250	400	54pin FPC, Parallel 24bit RGB	
ET35R320240AB1	3.5"	4:3	320x3(RGB)x240	76.9x63.9x3.3	70.08x52.56	75/80/80/80	450	500	54pin FPC, Parallel 24bit RGB	
ET43A480272RB4	4.3"	16:9	480x3(RGB)x272	105.5x67.2x4.05	95.04x53.856	50/70/70/70	400	500	40pin FPC, Parallel 24bit RGB	
ET43K480800AA1	4.3"	5:3	480x3(RGB)x800	61.06x104.25x2.0	56.16x93.6	80/80/80/80	450	800	SPI-3.4 Serial, 8/16/18/24bit MCU And RGB	
ET50A60480RB2	5.0"	4:3	640x3(RGB)x480	117.65x86.43x5.7	101.568x76.176	50/70/70/70	250	500	50pin FPC, Parallel 24bit RGB	
ET50A480272RB3	5.0"	16:9	480x3(RGB)x272	120.70x75.90x3.1	110.88x62.832	50/70/70/70	350	500	40pin FPC, Parallel 24bit RGB	
ET56A60480RB3	5.6"	4:3	640x3(RGB)x480	126.5x100.0x5.7	112.896x84.672	50/70/70/70	350	500	40pin FPC, Parallel 18bit RGB	
ET57G320240CB1	5.7"	4:3	320x3(RGB)x240	144.0x104.6x12.3	115.2x86.4	70/70/80/80	800	800	CMOS, Parallel 6bit RGB	
ET57G640480CB1	5.7"	4:3	640x3(RGB)x480	144.0x104.6x12.3	115.2x86.4	70/70/80/80	700	800	CMOS, Parallel 6bit RGB	
ET70A800480RB2	7"	15:9	800x3(RGB)x480	165x104x5.5	152.4x91.44	50/70/70/70	250	500	60pin FPC, Parallel 18bit RGB	
ET70A800480RB3	7"	15:9	800x3(RGB)x480	165x104x4.4	152.4x91.44	50/70/70/70	300	500	40pin, 18bit RGB connector	
ET70A800480RB4	7"	15:9	800x3(RGB)x480	165x104x5.5	152.4x91.44	50/70/70/70	450	500	60pin, 18bit RGB FPC	
ET70A800480LB6	7"	16:9	800x3(RGB)x480	164.9x100x12.5	154.08x85.92	55/70/70/70	1000	500	LVDS 1port, 18bit RGB connector	
ET70A800480RB2	7"	16:9	800x3(RGB)x480	164.9x100.0x5.7	154.08x85.92	50/70/70/70	250	500	50pin FPC, Parallel 24bit RGB	
ET70A800480RB4	7"	16:9	800x3(RGB)x480	164.9x100.0x5.7	154.08x85.92	50/70/70/70	400	500	50pin FPC, Parallel 24bit RGB	
ET70Z102460LB1	4.3"	16:9	1024x3(RGB)x600	165.75x105.39x4.8	153.6x90.0	70/75/75/75	500	700	LVDS 1port, 6/8bit RGB	
ET80H800480RB1	8"	16:9	800x3(RGB)x480	192.8x116.9x6.4	176.64x99.36	50/70/70/70	450	500	50pin FPC, Parallel 24bit RGB	
ET80H1024768LA1	8"	4:3	1024x3(RGB)x768	174.00x136.00x2.45	162.05x121.54	85/85/85/85	350	800	LVDS 1port, 6/8bit RGB	
ET80E800600RB5	8"	4:3	800x3(RGB)x900	183.0x141.0x5.6	162x121.5	50/70/70/70	250	500	50pin FPC, Parallel 24bit RGB	
ET84N640480LB6	8.4"	4:3	640x3(RGB)x480	200.0x152.0x10.5	170.88x128.16	60/80/80/80	450	600	LVDS 1port, 6bit RGB	
ET84N800600LA1	8.4"	4:3	800x3(RGB)x900	200.0x152.0x8.2	170.4x127.8	80/80/80/80	400	800	LVDS 1port, 6/8bit RGB	
ET101E1280800LA1	10.1"	16:10	1280x3(RGB)x800	229.46x149.1x2.5	216.96x135.6	85/85/85/85	350	800	LVDS 1port, 8bit RGB	
ET104N640480LA7	10.4"	4:3	640x3(RGB)x480	243.0x185.1x10.5	211.2x158.4	80/80/80/80	450	900	LVDS 1port, 6bit RGB	
ET104N800600LA5	10.4"	4:3	800x3(RGB)x900	243.0x185.1x10.5	211.2x158.4	80/80/80/80	400	900	LVDS 1port, 6bit RGB	
ET104N1024768LA8	10.4"	4:3	1024x3(RGB)x768	243.0x185.1x10.5	211.2x158.4	80/80/80/80	400	800	LVDS 1port, 6/8bit RGB	
ET104L800600RB1	10.4"	4:3	800x3(RGB)x900	228.4x175.4x5.9	211.2x158.4	50/70/70/70	250	500	60pin FPC, Parallel 18bit RGB	



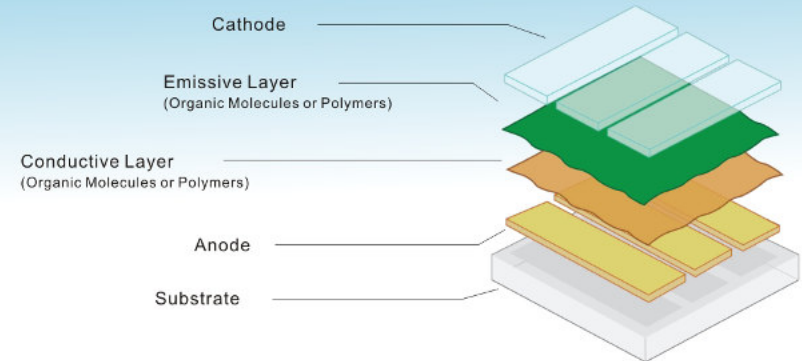


## OLED Technology



E-SHINE Display's OLED modules are easy to use, all-in-one designs. We shall also support custom OLED modules as our engineer team is very powerful and professional. E-SHINE Display's custom designed module boards for each Graphic OLED allow the user to have just one interface supply. The Graphic OLED module board has all the required external logic components, making it fast and easy to start using the displays.

### Structure of OLED Display



### How it works

Organic Light Emitting Diode (OLED) Displays are brighter, higher contrast displays, have faster response times, wider viewing angles and use less power than the conventional VFD, LED or LCD displays. OLED Displays are self-illuminating and require no backlight for maximum visibility in all environments. This allows OLEDs to be significantly thinner than standard VFD, LED or LCD displays.

Key Features:

- Fast response time: 10 μs
- Wide viewing angle: up to 160°
- Thin designs
- Self-illuminated; no backlight necessary
- Low power consumption
- High brightness
- High contrast ratio: 200:1
- Wide operation temperature: -40°C to +80°C
- Visible under the sunshine.
- Serial or parallel MPU interface
- Character Module OLEDs include 4 built-in font tables
- Graphic module OLEDs include required external logic and voltages
- Competitive cost
- Monochrome, area color, or full color
- RoHS Compliant



The Character OLEDs and Graphic OLEDs can be used as compatible replacement displays for some of our Character or Graphic LCD displays and VFD displays.

Full Color OLED Display (Graphic Type)

Item	Screen Size	Number of Pixels	Panel Size(mm)	Active Area(mm)	Pixel pitch(mm)	Pixel Size(mm)	Luminance (cd/m <sup>2</sup> )	Color	Interface
EO12836AF	0.88"	128RGB*36	26.59*13*1.23	21.48*6.028	0.07*0.20	0.05*0.168	100	65,536 Colors	Parallel / Serial
EO9664AF	0.95"	96RGB*64	25.7*22.2*1.5	20.14*13.42	0.07*0.21	0.05*0.19	100	65,536 Colors	Parallel / Serial
EO9696AF	1.1"	96RGB*96	25.9*37.69*1.3	19.852*19.852	0.069*0.207	0.049*0.187	100	65,536 Colors	Parallel / Serial
EO9896BF	1.12"	96RGB*96	27*30.1*1.28	20.135*20.14	0.067*0.221	0.046*0.21	100	262,144 Colors	Parallel / Serial
EO12896AF	1.27"	128RGB*96	33.7*26.9*1.8	25.713*19.28	0.067*0.201	0.047*0.185	100	262,144 Colors	Parallel / Serial
EO160128AF	1.45"	160RGB*128	35.6*30.8*1.7	26.78*23.024	0.06*0.18	0.04*0.164	100	262,144 Colors	Parallel / Serial
EO128128AF	1.5"	128RGB*128	33.8*34.0*1.6	26.855*26.864	0.07*0.21	0.045*0.194	90	262,144 Colors	Parallel / Serial
EO160128BF	1.69"	160RGB*128	39.9*34.0*1.6	33.575*26.864	0.07*0.21	0.045*0.194	80	262,144 Colors	Parallel / Serial

Monochrome OLED Display (Character Type)

Item	Screen Size	Number of Characters	Panel Size(mm)	Active Area(mm)	Character pitch(mm)	Character Size(mm)	Luminance (cd/m <sup>2</sup> )	Color	Interface
EO1602A	2.26"	16*2	68.5*17.5*2.0	56.22*11.52	3.55*5.95	2.97*5.57	120	Monochrome (Yellow or White)	Parallel / Serial
EO1602B	3.67"	16*2	105.0*26.5*2.0	91.14*18.98	5.76*10.08	4.74*8.90	100	Monochrome (Blue, White, Red, Green, Yellow)	Parallel / Serial
EO2002A	2.93"	20*2	84.5*19.28*2.0	73.52*11.52	3.7*5.95	3.22*5.57	120	Monochrome (Yellow or White)	Parallel / Serial
EO2004A	2.89"	20*4	84.5*27.5*2.0	70.42*20.82	3.55*5.35	2.97*4.77	120	Monochrome (Yellow or White)	Parallel / Serial

Monochrome OLED Display (Graphics Type)

Item	Screen Size	Number of Pixels	Panel Size(mm)	Active Area(mm)	Pixel pitch(mm)	Pixel Size(mm)	Luminance (cd/m <sup>2</sup> )	Monochrome Color	Interface
EO6432A	0.49"	64*32	14.5*11.6*1.28	11.18*5.58	0.195*0.195	0.175*0.175	100	White	Parallel / I2C Serial
EO6448A	0.86"	84*48	18.36*18.10*2.1	13.42*10.06	0.21*0.21	0.19*0.19	100	Blue or Amber	Parallel / I2C Serial
EO9632A	0.68"	96*32	19.8*12.8*1.28	16.3*6.42	0.19*0.19	0.17*0.17	100	White	Parallel / I2C Serial
EO9616A	0.69"	96*16	26.3*8*1.3	17.26*3.18	0.18*0.2	0.16*0.18	100	White	I2C
EO9639A	0.83"	96*39	23.8*18.2*1.3	19.37*7.86	0.202*0.202	0.182*0.182	100	Blue or White	Parallel / I2C Serial
EO9616B	0.84"	96*16	26*9.2*1.3	21.1*3.5	2.52*2.52	2.22*2.22	100	White	I2C
EO12836A	0.88"	128*36	25.86*12*1.23	21.74*5.56	0.19*0.175	0.17*0.155	120	White	Parallel / I2C Serial
EO12832A	0.91"	128*32	26.9*13.7*1.28	22.38*5.58	0.175*0.175	0.155*0.155	150	Blue	Parallel / I2C Serial
EO12832B	0.91"	128*32	30.0*11.5*1.45	22.384*5.584	0.175*0.175	0.159*0.159	150	White or Blue	I2C Serial
EO9664A	0.95"	96*64	24.9*22.95*1.4	19.953*13.424	0.208*0.208	0.193*0.194	80	White	Parallel / I2C Serial
EO12864A	0.96"	128*64	26.7*19.26*1.45	21.74*10.66	0.17*0.17	0.154*0.154	120	White, Blue, Blue and Yellow	Parallel / I2C Serial
EO64128A	0.96"	64*128	18.0*31.0*1.3	10.86*21.74	0.19*0.19	0.17*0.17	120	White	Parallel / I2C Serial
EO12864B	1.01"	128*64	28.22*21.63*1.35	23.02*11.5	0.2*0.2	0.18*0.18	100	White	Parallel / I2C Serial
EO12832C	1.04"	128*32	29.8*14.5*1.3	25.58*6.38	0.2*0.2	0.18*0.18	120	White	Parallel / I2C Serial
EO12836B	1.1"	128*36	31.4*16.2*1.3	26.86*7.54	0.21*0.21	0.19*0.19	120	Blue, Amber, White	Parallel / I2C Serial
EO9696A	1.12"	96*96	27.0*30.1*1.3	20.14*20.14	0.23*0.23	0.21*0.21	100	White or Amber	Parallel / I2C Serial
EO9696B	1.12"	96*96	27.0*27.0*1.61	20.14*20.14	0.23*0.23	0.21*0.21	120	Blue	Parallel / I2C Serial
EO12864C	1.3"	128*64	34.5*23.0*1.45	29.42*14.70	0.23*0.23	0.21*0.21	100	White	Parallel / I2C Serial
EO128128A	1.46"	128*128	33.5*37.0*1.485	26.284*26.284	0.295*0.295	0.274*0.274	120	White or Amber	Parallel / I2C Serial
EO12864D	1.54"	128*64	45.24*29.14*2.0	35.056*17.52	0.274*0.274	0.258*0.258	150	Blue, Amber, White, Yellow	Parallel / I2C Serial
EO25632A	1.82"	256*32	52.0*11.5*1.88	46.06*5.74	0.208*0.208	0.18*0.18	100	White or Amber	Parallel / I2C Serial
EO12832D	2.23"	128*32	62.0*24.0*2.0	55.02*13.18	0.43*0.41	0.41*0.39	120	Yellow, Blue	Parallel / I2C Serial
EO12864E	2.4"	128*64	60.5*37.0*2.0	55.02*27.49	0.43*0.43	0.40*0.40	100	Blue, Amber, White, Yellow	Parallel / I2C Serial
EO12864F	2.7"	128*64	73.0*41.88*2.0	61.41*30.69	0.48*0.48	0.45*0.45	100	Green, Amber, White, Yellow	Parallel / Serial
EO25664A	2.8"	256*64	84.0*25.8*2.0	69.104*17.264	0.27*0.27	0.254*0.254	80	Blue or Amber	Parallel / Serial
EO25664B	3.12"	256*64	86.0*27.8*2.0	76.78*19.18	0.3*0.3	0.28*0.28	80	Blue or Amber	Parallel / Serial
EO25664C	5.50"	256*64	146.0*46.0*2.0	135.65*33.86	0.53*0.53	0.50*0.50	80	Green	Parallel / Serial