



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## Active Matrix

# TFT LCDs

Deliver Best-in-Class  
Front-of-Screen Performance



Optrex TFT LCDs provide exceptionally high contrast, color saturation and luminance and a range of performance enhancements such as Natural Color Matrix (NCM) for true color fidelity, Anti-reflective coating and Ultra-Wide Viewing angles.

### Why Choose Optrex for your TFT LCD Designs?

- Upward compatibility
- Higher luminance (Up to 1500 nits)
- Ultra-Wide Viewing technology (Up to 170° viewing angle)
- Field replaceable/long life CCFL
- LED backlighting
- Wide temperature range
- RoHS compliant\*
- NCM (Natural Color Matrix)

- 6/8 bit compatibility with LVDS interfaces
- Reduced EMI via LVDS interfaces
- Anti-reflective coating
- Wide format (16:9)
- Reverse Scan



### Quickstart Your Design with LCD ToolKITs™

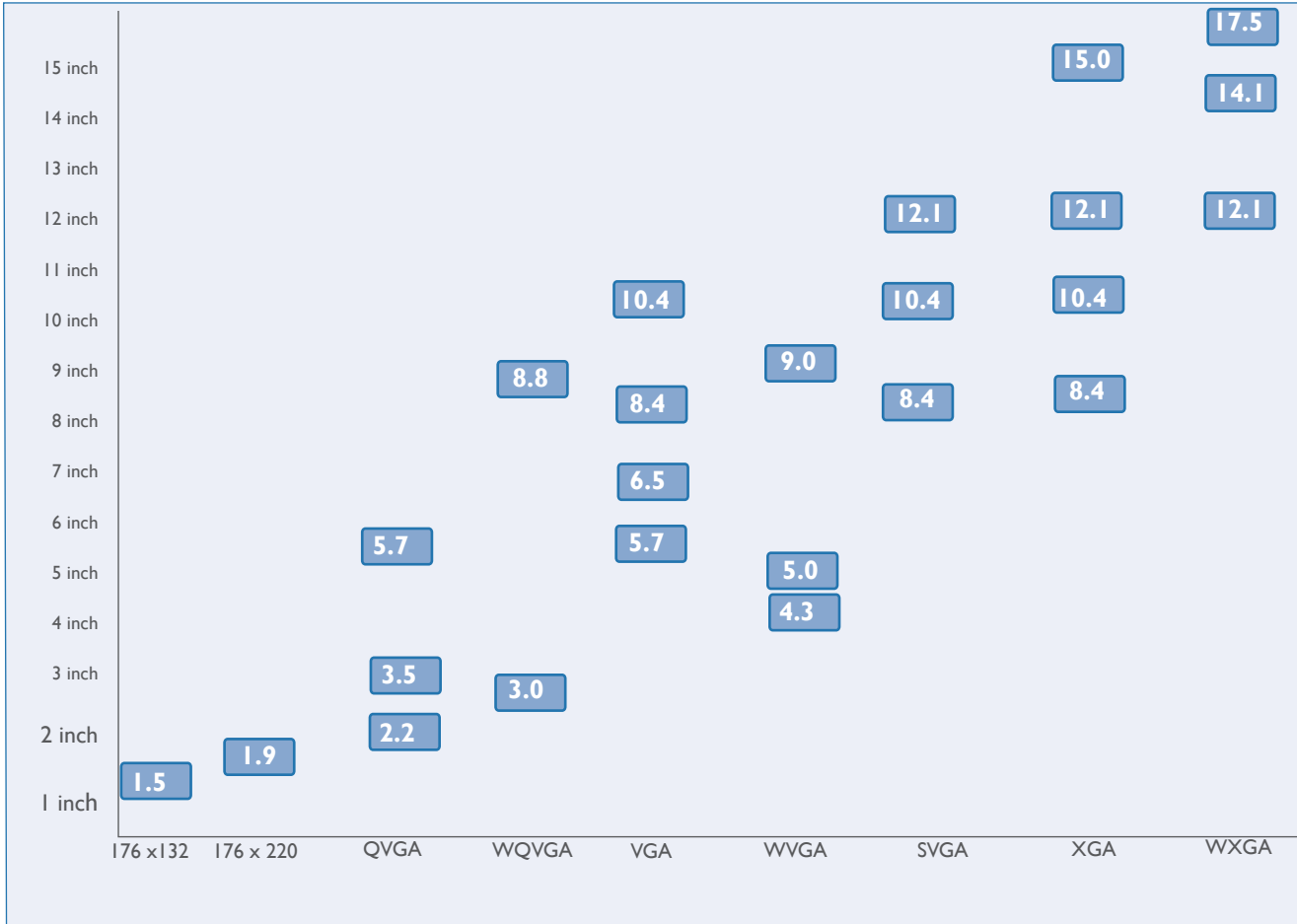
To speed design and save engineering & procurement time, Optrex's LCD ToolKITs™ contain everything you need to put a TFT LCD display into operation - right out of the box.

- TFT panel
- Controller
- Inverter
- Cables
- Software
- Power supply



## TFT LCDs At-a-Glance

Optrex TFT LCDs deliver best-in-class front-of-screen performance for a wide variety of Industrial, Telecommunications and Automotive applications in sizes ranging from 1.5-inch to 17.5-inch displays.



### Optrex Offers Long Manufacturing Lifecycles

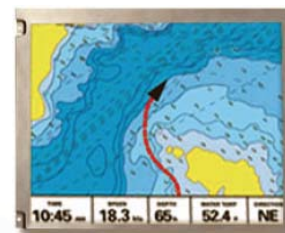
- Three to five year life cycles
- Backward compatibility in future models
- Performance increases with each planned upgrade

## Special Features / Technologies

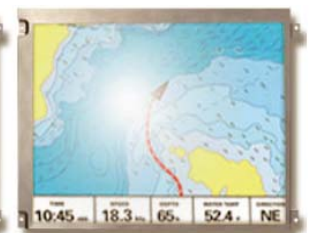


### Anti-Reflective Coating

Surface reflectivity is reduced to less than 1%. Providing outstanding performance in high ambient- light environments with excellent legibility, No glare, no decrease in luminance or contrast, and no increase in backlight power consumption.



Anti-reflective



Anti-glare



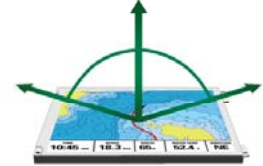
### Touch Screen Solution

A touch screen display provides the ability for the user to make choices by touching icons or graphical buttons on the screen.  
 Standard 4-wire touch screen product manufactory integration.  
 Other touch technology also avaiable.



### Ultra Wide Viewing & IPS

- A film technology that we apply to the LCD to achieve wide viewing angle. up to 80/80/70/80.
- IPS (In- Plain - Switch )mode Technology to achieve viewing angle to 85/85/85/85. ( Available on certain size only)



### High Luminance

Conventional TFT LCD will have so call “wash out” issue when under direct sun light.We improve the readability by increasing the luminance of the LCD.

- Up to 1500 nits luminance
- Designed for operation in direct sunlight



### Natrual Color Matrix

NCM delivers true color fidelity using a hardware-based color transform algorithm to render vivid color, crisp text and artifact-free video that are true to the source data.



### White LED Backlight System

Some key features of LED backlight system are:

- No warm-up time, LED are instantly on
- High voltage inverter not needed, improved EMI performance
- Lower power consumption
- Larger dimming ratio, easy dimming control
- No mercury, enviromental friendly

	5.7"	6.5"	8.4"	10.4"	12.1"	15.0"
VGA	○	○	○			
SVGA			○	○	○	
XGA					○	



### Wide Format (16: 9)

- Meets high definition display format
- Expands usable display area and allows more information on the screen



For more detail information, please vist our website: [www.optrex.com](http://www.optrex.com)

# TFT LCD Display Line-up

## Small Prottable Size TFT

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
1.5"	T-51991GD015-MLW-AIN	176 x 132	80:1	150	LED	CMOS	(h v): ±30   ±30	-10 to 60°C	
1.9"	T-51909GD019J-LM-ACN	176 x 220	350:1	230	LED	CMOS	(h v):TBD	-20 to 70°C	
3.0"	T-55149GD030J-MLW-AJN	240 x 400	105:1	400	LED	CMOS	(h v): ±70   -60/80	-20 to 70°C	
3.5"	T-51963GD035J-MLW-AFN	240 x 320	70:1	160	LED	CMOS	(h v): ±40   ±40	-20 to 70°C	
	T-51963GD035J-MLW-AGN	240 x 320	70:1	130	LED	CMOS	(h v): ±40   ±40	-20 to 70°C	
	T-51963GD035J-MLW-AHN	320 x 240	70:1	160	LED	CMOS	(h v): ±40   ±40	-20 to 70°C	
	T-55343GD035JU-LW-ADN	320 x 240	700:1	400	LED	CMOS	(h v): ±80   ±80	-20 to 70°C	
	T-55343GD035JU-LW-AEN	320 x 240	700:1	400	LED	CMOS	(h v): ±80   ±80	-20 to 70°C	
4.3"	T-55226D043J-LW-AAN	800 x 480	300:1	200	LED	CMOS	(h v): ±65   -65/45	-20 to 70°C	
5.0"	T-55382GD050JU-LW-A-AAN	800 x 480	500:1	320	LED	CMOS	(h v): ±65   -45/65	-20 to 70°C	
	T-55382GD050JU-LW-A-ABN	800 x 480	500:1	400	LED	CMOS	(h v): ±65   -45/65	-20 to 70°C	
	T-55423GD050J-LW-A-AAN	800 x 480	500:1	200	LED	CMOS	(h v): ±85   ±85	-20 to 70°C	
	T-55423GD050J-LW-A-ABN	800 x 480	600:1	300	LED	CMOS	(h v): ±85   ±85	-20 to 70°C	
5.7"	T-55264GD057J-FW-ABN	320 x 240	350:1	500	CCFL	CMOS	(h v): ±70   ±70	-20 to 70°C	
	T-55264GD057J-FW-ADN	320 x 240	350:1	400	CCFL	CMOS	(h v): ±70   ±70	-20 to 70°C	
	T-55265GD057J-LW-ABN	320 x 240	350:1	500	LED	CMOS	(h v): ±70   ±70	-20 to 70°C	
	T-55265GD057J-LW-ACN	320 x 240	350:1	400	LED	CMOS	(h v): ±70   ±70	-20 to 70°C	
	AA057VF02	640 x 480	600:1	400	LED	CMOS	(h v): ±80   -60/80	-20 to 70°C	

**Legend:** Natural Color Matrix Ultra Wide Viewing High Luminance Anti-reflective Coating Transflective Wide Format Touch Screen

# TFT LCD Display Line-up

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
6.5"	T-51750GD065J-FW-ADN	640 x 480	300:1	400	CCFL	CMOS	(h v): ±55   30/-60	-25 to 75°C	
	T-51750GD065J-FW-AFN	640 x 480	300:1	400	CCFL	CMOS	(h v): ±55   30/-60	-25 to 75°C	
	T-51750GD065J-FW-APN	640 x 480	300:1	320	CCFL	CMOS	(h v): ±55   30/-60	-20 to 70°C	
	T-51952D065J-FW-A-ABN	640 x 480	700:1	600	CCFL	CMOS	(h v): ±70   -60/50	-20 to 70°C	
	T-51952D065J-FW-A-ACN	640 x 480	750:1	600	CCFL	CMOS	(h v): ±65   -60/50	-20 to 70°C	
8.4"	T-51638D084J-FW-A-AB	640 x 480	500:1	480	CCFL	CMOS	(h v): ±65   -60/50	-20 to 70°C	
	T-51638D084J-FW-A-AC	640 x 480	500:1	480	CCFL	CMOS	(h v): ±65   -60/50	-20 to 70°C	
	T-55399D084J-FW-A-AAN	640 x 480	600:1	480	CCFL	CMOS	(h v): ±80   -60/80	-30 to 80°C	
	T-55151FD084J-MFW-A-AAN	640 x 480	200:1	200	CCFL	CMOS	(h v): ±80   -70/50	-20 to 70°C	
	T-55308D084J-FW-A-AAN	800 x 600	600:1	400	CCFL	LVDS	(h v): ±80   -60/80	-20 to 70°C	
	T-51639D084JU-FW-A-AB	1024 x 768	400:1	300	CCFL	LVDS	(h v): ±65   -50/60	-20 to 70°C	
10.4"	T-51513D104JU-FW-A-AIN	640 x 840	500:1	430	CCFL	CMOS	(h v): ±65   -45/65	-20 to 70°C	
	T-51513D104JU-FW-A-AHN	640 x 840	600:1	430	CCFL	CMOS	(h v): ±60   -45/65	-20 to 70°C	
	T-51513D104J-FW-A-AKN	640 x 480	400:1	380	CCFL	CMOS	(h v): ±80   -80/70	-20 to 70°C	
	T-51513D104J-FW-A-AJN	640 x 480	500:1	430	CCFL	CMOS	(h v): ±65   -65/45	-20 to 70°C	
	T-55334D104J-FW-A-AAN	640 x 480	700:1	1500	CCFL	CMOS	(h v): ±70   -65/65	-20 to 70°C	
	T-55333GD104J-FW-A-AAN	640 x 480	600:1	500	CCFL	CMOS	(h v): ±70   -65/65	-20 to 70°C	
	T-55320GD104J-FW-A-AAN	640 x 480	600:1	500	CCFL	CMOS	(h v): ±70   -65/65	-20 to 70°C	
	T-51944D104J-FW-A-AA	800 x 600	500:1	400	CCFL	LVDS	(h v): ±70   -60/50	-20 to 70°C	
	T-51944D104J-FW-A-ABN	800 x 600	600:1	400	CCFL	LVDS	(h v): ±65   -60/50	-20 to 70°C	
	T-55225D104J-FW-A-AAN	1024 x 768	500:1	400	CCFL	LVDS	(h v): ±80   -65/65	-20 to 70°C	
	T-55468D104J-FW-A-AAN	1024 x 768	600:1	1000	CCFL	LVDS	(h v): ±80   -65/65	-20 to 70°C	

**Legend:** Natural Color Matrix Ultra Wide Viewing High Luminance Anti-reflective Coating Transflective Wide Format Touch Screen

# TFT LCD Display Line-up

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
12.1" S	T-51512D121J-FW-A-AFN	800 x 600	500:1	400	CCFL	CMOS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-51512D121J-FW-A-AGN	800 x 600	500:1	400	CCFL	CMOS	(h v): ±60   -75/45	-20 to 70°C	NCM
	T-51512D121J-FW-A-AHN	800 x 600	400:1	350	CCFL	CMOS	(h v): ±80   -80/70	-20 to 70°C	NCM
	T-51866D121J-FW-A-AA	800 x 600	500:1	350	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-51866D121J-FW-A-ABN	800 x 600	600:1	400	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	NCM
	T-52017D121J-FW-A-AAN	800 x 600	650:1	1000	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-52017D121J-FW-A-ABN	800 x 600	700:1	1000	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	NCM
	T-55196D121J-FW-A-AAN	800 x 600	650:1	1500	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-55196D121J-FW-A-ABN	800 x 600	700:1	1500	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	NCM
12.1" X	T-51756D121J-FW-A-ACN	1024 x 768	550:1	320	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-51756D121J-FW-A-ADN	1024 x 768	600:1	320	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	NCM
	T-51756D121J-FW-A-AEN	1024 x 768	400:1	280	CCFL	LVDS	(h v): ±85   -80/70	-20 to 70°C	NCM
	T-55105D121J-FW-A-AAN	1024 x 768	600:1	1000	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-55105D121J-FW-A-ABN	1024 x 768	700:1	1000	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	NCM
	T-55105D121J-FW-A-ACN	1024 x 768	450:1	900	CCFL	LVDS	(h v): ±85   -70/80	-20 to 70°C	NCM
15"	T-51863D150J-FW-A-AA	1024 x 768	450:1	250	CCFL	LVDS	(h v): ±75   -60/50	-20 to 70°C	NCM
	T-51863D150J-FW-A-AE	1024 x 768	450:1	450	CCFL	LVDS	(h v): ±75   -60/50	-20 to 70°C	NCM
	T-51863D150J-FW-A-AD	1024 x 768	350:1	400	CCFL	LVDS	(h v): ±85   -80/70	-20 to 70°C	NCM
	T-51863D150J-FW-A-AFN	1024 x 768	600:1	800	CCFL	LVDS	(h v): ±75   -60/50	-20 to 70°C	NCM
	T-55335D150J-FW-A-AAN	1024 x 768	650:1	1500	CCFL	LVDS	(h v): ±75   -60/50	-20 to 70°C	NCM

**Legend:** Natural Color Matrix Ultra Wide Viewing High Luminance Anti-reflective Coating Transflective Wide Format Touch Screen

# TFT LCD Display Line-up

## Wide Format TFTs (16:9 )

Size	Part #	Display Format	Contrast	Nits	Interface	Viewing Angle	Operating Temp.	Special Features
8.8"W	T-51965GD088H-FW-AHN	640 x 240	185:1	250	LVDS	(h v): ±50   ±45	40 to 80°C	NCM
9.0"W	T-55311D090J-FW-A-AAN	800 x 480	600:1	600	LVDS	(h v): ±75   -60/80	-20 to 70°C	NCM
	T-55311D090J-FW-A-ABN	800 x 480	600:1	600	LVDS	(h v): ±80   -60/80	-20 to 70°C	NCM
12.1"W	T-55312D121J-FW-A-ABN	1280 x 800	500:1	400	LVDS	(h v): ±75   -65/70	20 to 70°C	NCM
14.1"W	T-55313D141J-FW-A-ABN	1280 x 800	700:1	400	LVDS	(h v): ±80   -80/70	20 to 70°C	NCM
17.5"W	T-55336D175J-FW-A-AAN	1280 x 768	500:1	400	LVDS	(h v): ±75   -60/50	20 to 70°C	NCM

## LED Backlighting Solution















Size	Part #	Display Format	Contrast	Nits	Interface	Viewing Angle	Operating Temp.	Special Features
5.7"	AA057VF02	640 x 480	600:1	400	CMOS	(h v): ±80   -60/80	-20 to 70°C	NCM
	T-55265GD057J-LW-ABN	320 x 240	350:1	500	CMOS	(h v): ±70   ±70	-20 to 70°C	
	T-55265GD057J-LW-ACN	320 x 240	350:1	400	CMOS	(h v): ±70   ±70	-20 to 70°C	
6.5"	T-51750GD065J-LW-ANN	640 x 480	300:1	600	CMOS	(h v): ±55   -60/30	-25 to 75°C	
	T-51750GD065J-LW-AQN	640 x 480	300:1	600	CMOS	(h v): ±55   -60/30	-20 to 70°C	
	T-51750GD065J-LW-AON	640 x 480	300:1	750	CMOS	(h v): ±55   -60/30	-25 to 75°C	
	T-55465D065J-LW-A-AAN	640 x 480	600:1	700	CMOS	(h v): ±80   -60/80	-30 to 80°C	NCM
8.4"	T-55466D084J-LW-A-AAN	800 x 600	600:1	600	LVDS	(h v): ±80   -60/80	-30 to 80°C	NCM
	T-55467D084J-LW-A-AAN	640 x 480	600:1	800	CMOS	(h v): ±80   -60/80	-30 to 80°C	NCM
12.1"	T-55373D121J-LW-A-AAN	800 x 600	500:1	400	CMOS	(h v): ±65   -75/45	-20 to 70°C	NCM
	T-55374D121J-LW-A-AAN	800 x 600	500:1	400	LVDS	(h v): ±65   -75/45	-20 to 70°C	NCM

**Legend:**

- Natural Color Matrix
- Ultra Wide Viewing
- High Luminance
- Anti-reflective Coating
- Transflective
- Wide Format
- Touch Screen



## Touch Screen Solution

Size	Part #	Display Format	Contrast	Nits	Interface	Viewing Angle	Operating Temp.	Special Features
3.5"	T-51963GD035J-MLW-AGN	240 x 320	70:1	130	CMOS	(h v): ±40   ±40	-20 to 70°C	 
	T-55343GD035JU-LW-AEN	320 x 240	450:1	400	CMOS	(h v): ±80   ±80	-20 to 70°C	  
5.0"	T-55423GD050J-LW-A-AAN	800 x 480	500:1	200	CMOS	(h v): ±85   ±85	-20 to 70°C	 
5.7"	T-55264GD057J-FW-ADN	320 x 240	350:1	400	CMOS	(h v): ±70   ±70	-20 to 70°C	
	T-55265GD057J-LW-ACN	320 x 240	350:1	400	CMOS	(h v): ±70   ±70	-20 to 70°C	 
6.5"	T-51750GD065J-FW-APN	640 x 480	300:1	320	CMOS	(h v): ±55   -60/30	-20 to 70°C	
	T-51750GD065J-LW-AQN	640 x 480	300:1	600	CMOS	(h v): ±55   -60/30	-20 to 70°C	  

More touch Screen custom solutions are available, please contact us for details.

## Quickstart Your Design with LCD ToolKITs™

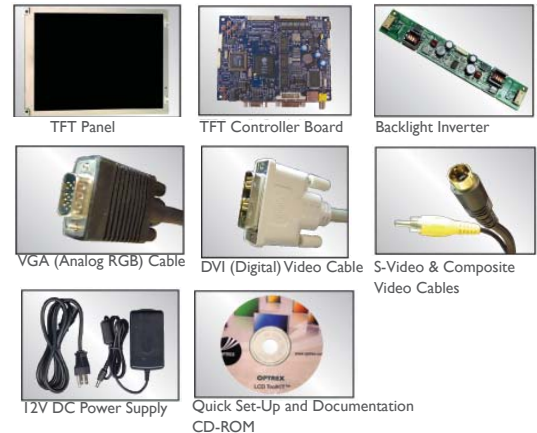
Optrex LCD ToolKITs™ contain a TFT LCD panel, controller and backlight inverter boards, cables and a CD-ROM with a Quick Set-up guide and controller manual. This complete kit speeds design and saves engineering and procurement time. LCD ToolKITs support VGA, DVI, composite video and S-video interfaces.

*It's all  
in the Box*



### Available ToolKITs™

Size	Part #	Module
6.5 inch	TK065V01	T-51750GD065J-FW-A*
10.4 inch	TK104S01	T-51944D104J-FW-A-A*
12.1 inch	TK121S01	T-51512D121J-FW-A-A*
12.1 inch	TK121S02	T-51866D121J-FW-A-A*
12.1 inch	TK121X01	T-51756D121J-FW-A-A*
15.0 inch	TK150X03	T-51863D150J-FW-A-A*



### Take the Next Step...

Detailed Product Information

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