

## 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™

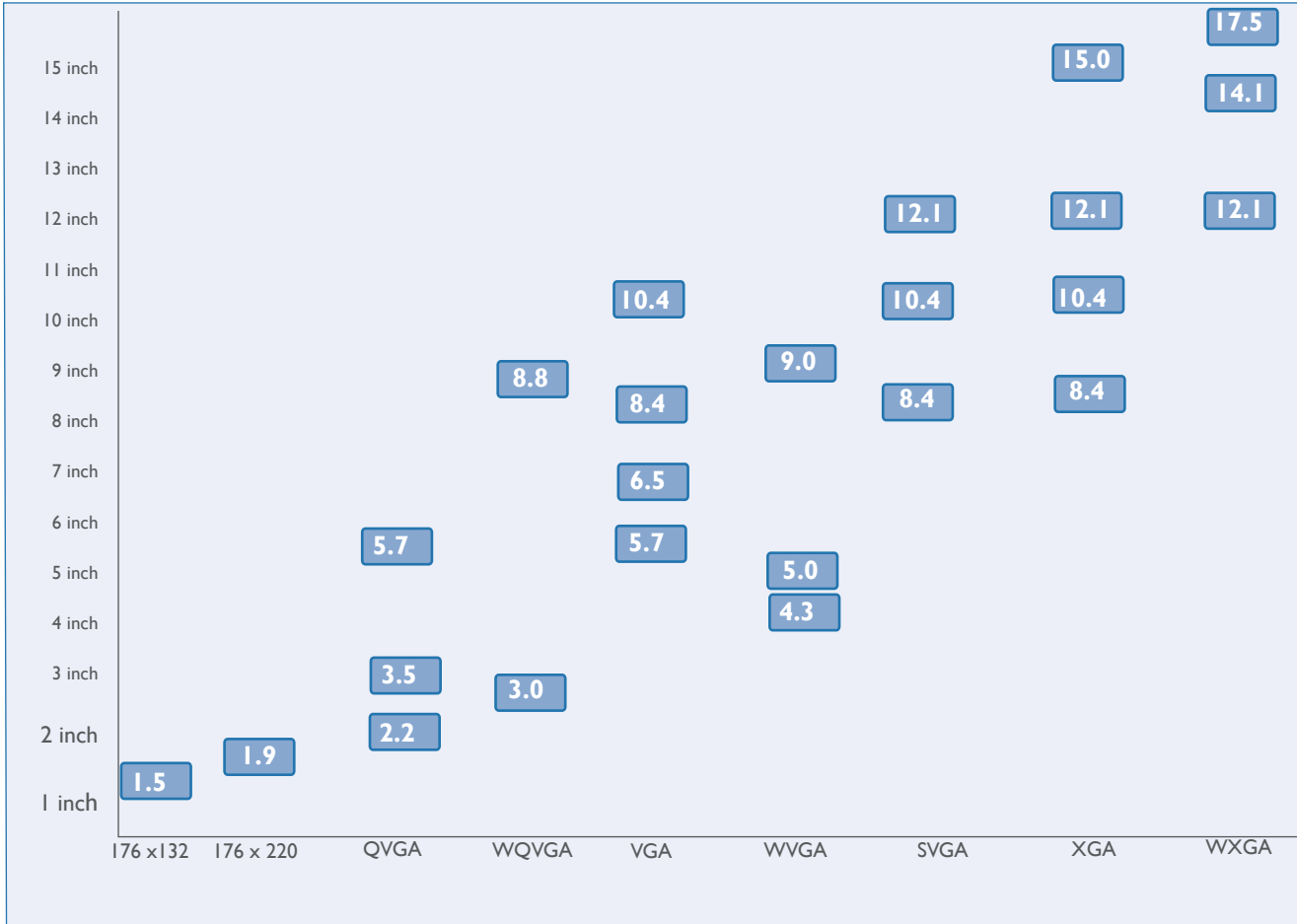
To speed design and save engineering & procurement time, Optrex's LCD ToolKITs™ contain everything you need to put a TFT LCD display into operation - right out of the box.

- 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

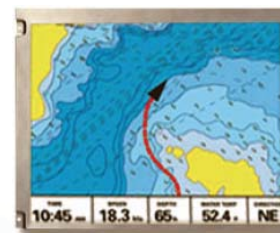
- Three to five year life cycles
- Backward compatibility in future models
- Performance increases with each planned upgrade

## Special Features / Technologies

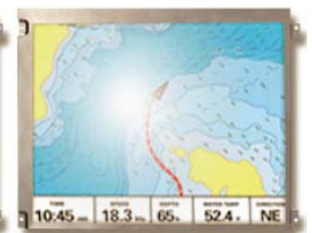


### Anti-Reflective Coating

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



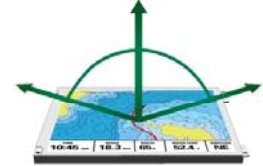
### Touch Screen Solution

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 Protatable 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™

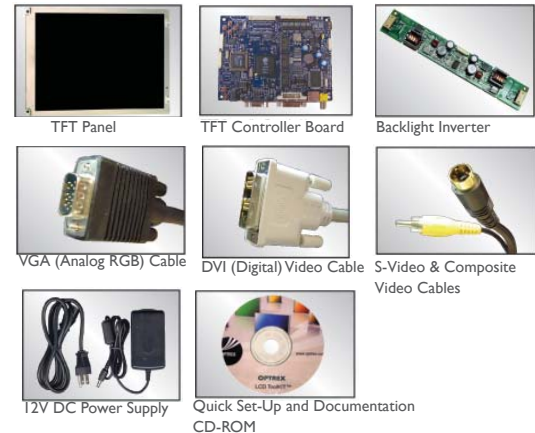
Optrex LCD ToolKITs™ contain a TFT LCD panel, controller and backlight inverter boards, cables and a CD-ROM with a Quick Set-up guide and controller manual. This complete kit speeds design and saves engineering and procurement time. LCD ToolKITs support VGA, DVI, composite video and S-video interfaces.

*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

[www.optrex.com/products/tft.asp](http://www.optrex.com/products/tft.asp)

Request a Product Quote

[www.optrex.com/products/quote.asp](http://www.optrex.com/products/quote.asp)

Contact a Representative in your area

[www.optrex.com/contacts](http://www.optrex.com/contacts)

Engineering Resources

[www.optrex.com/engineering](http://www.optrex.com/engineering)

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