

## Active Matrix

# TFT LCDs

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



Optrex TFT LCDs provide exceptionally high contrast, color saturation and luminance with 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?

- Higher luminance (up to 1500 nits)
- Super-Wide-View (up to 170° degree)
- Long-life LED backlighting (up to 100K hours)
- Wide temperature range (up to -40 to 85C)
- Sunlight readable display
- RoHS compliant\*
- NCM (Natural Color Matrix)
- Reduced EMI via LVDS interfaces
- Anti-reflective coating

- Factory applied touch panels
- Wide format (16:9)
- Reverse Scan
- Upward compatibility



High Outdoor Readability

### Quickstart Your Design with LCD ToolKITs™

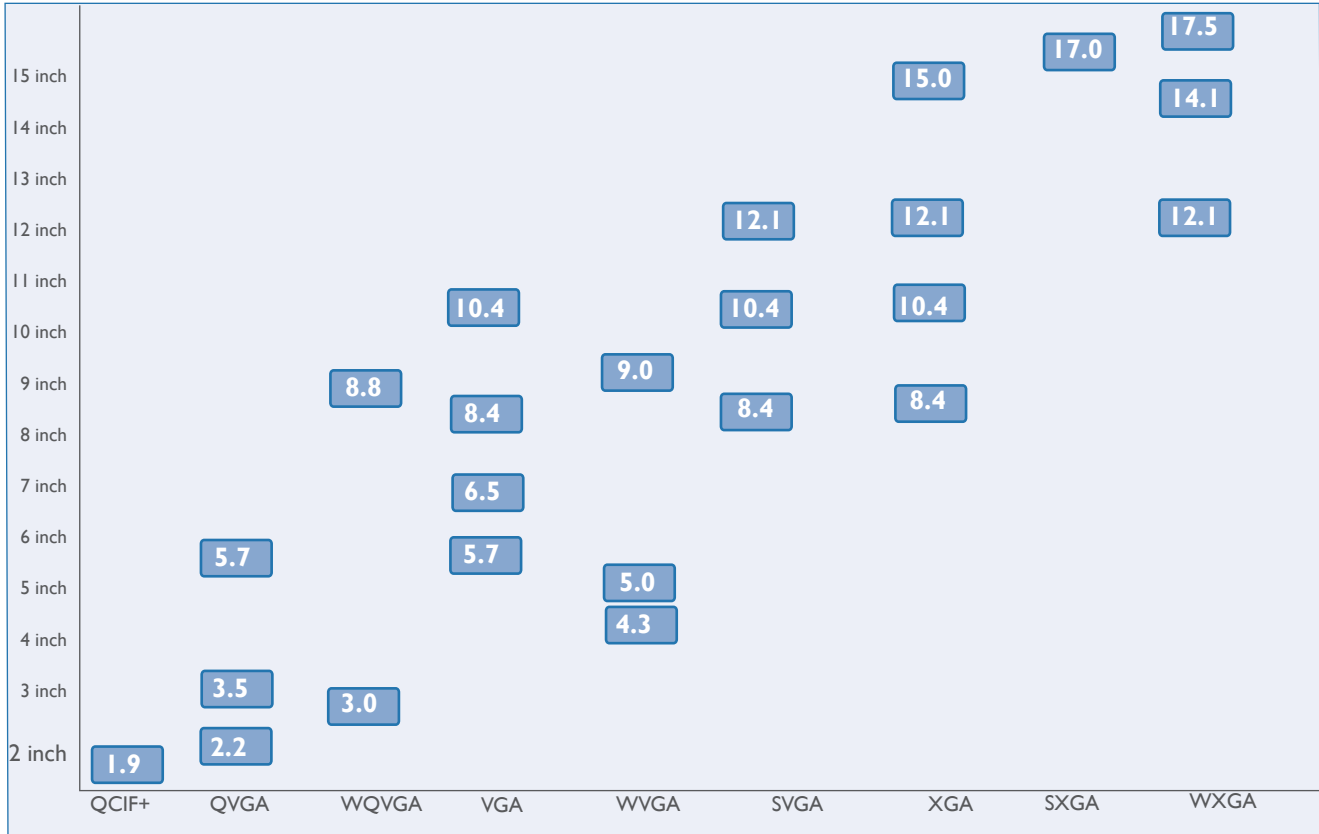
To speed design and save engineering & procurement time, Optrex's LCD ToolKITs™ contain everything you need to put a TFT LCD display into operation - right out of the box.

- 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 1.9-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

### Deliver High Quality Products for Industrial Customers

#### Quality Certifications

- ISO /TS 16949 (Automotive Standard)
- VDA-6 (European Automotive Quality Standard)
- ISO 9000
- ISO 14000



## Special Features / Technologies

### LED Backlighting



LED backlighting has many advantages: No warm-up time, immediate power up, better EMI performance, lower power consumption and a wider dimming ratio. LEDs also do not contain mercury making them more environmentally friendly.

The majority of Optrex TFTs have an LED lifetime of 100K hours. This is the equivalent of operating the LED backlight at full brightness for 7 days a week, 24 hours a day, for 11 years.



### Super Wide View



Super Wide View technology delivers superior image quality with a wide viewing angle of 85/85/85/85 and true color accuracy. Super Wide View technology also provides minimum color shifting from any angle giving the best image performance.

Optrex also provides a wide view film technology as standard on many TFTs with LED backlights. Wide view film will provide a viewing angle of 80/80/60/80, which is acceptable for most industrial applications.



### Touch Switch & TTS



Optrex developed a unique projective capacitive touch technology.

It achieves the following without the intensive programming necessary for projective capacitive touch technology:

- High transparency (over 95%)
- High sensitivity and high reliability
- Ease of design and calibration
- Can be glass bonded to the TFT display

Standard 4-wire touch screen for all products as well as custom touch products are available too.



### Super High Bright



Conventional TFT LCDs experience so-called “wash out” when used in direct sun light. We provide a much improved readability in direct sunlight by increasing the luminance of the LCD up to 1500 nits. These higher luminance displays are shipped from the factory as high bright displays and specifically designed to operate at the higher brightness level.



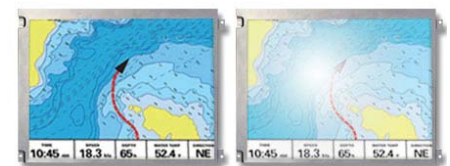
### Natural Color Matrix



Natural Color Matrix technology is a patented technology that delivers a true color fidelity using a hardware-based color transforming algorithm to render a vivid color gamut, crisp text and artifact-free video that is more accurate to the original source data.



### Anti-Reflective



Optrex's Anti-Reflective coating reduces surface reflectivity 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.



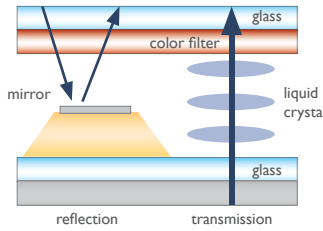
### 16 : 9 Wide Display



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



### Transflective Display

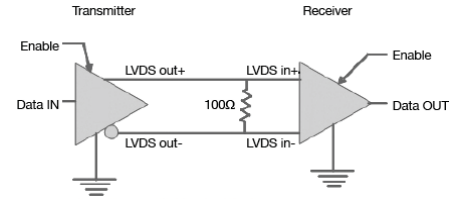


An inner mirror design on each TFT cell rather than a reflective film results in a higher light reflectance.

- Achieved reflectance up to 20%
- Ideal for outdoor applications



### LVDS Interface



LVDS interface reduces the amount of voltage swing which dramatically improves the EMI performance of the display.

- Standard LVDS interface makes it easy for the customer's system design and delivers the best overall performance.

## Quickstart Your Design with LCD ToolKITs™

Optrex LCD ToolKITs provide a convenient solution that speeds design and saves engineering and procurement time.

### LCD ToolKITs include:

- TFT-LCD display panel
- TFT controller board with on-screen display
- A backlight inverter board / or LED driver board for LED backlit panel
- 12V DC power supply and AC line cord
- Analog RGB cable & DVI (digital input) cable

The Optrex LCD ToolKIT is real a plug-and play solution. You will be able to have your design up and running in minutes. Please contact us for detailed information.

*It's all in the Box*



TFT Panel



TFT Controller Board



VGA (Analog RGB) Cable



DVI (Digital) Video Cable



Backlight Inverter



12V DC Power Supply

## Optrex Value Add Capability

The Value add facility in Michigan has 7000 sq. ft. of assembly area of which 2000 sq. ft is a Class 1K clean room. The whole area is a very well lit environment that is ESD and humidity/temperature controlled.

We are the Total LCD solution provider and can do many assemblies for our customers while maintaining the factory warranty:

- Touch screen integration
- Electro-mechanical assembly
- Full product assembly and test

Please contact us for detailed information.

# TFT LCD Display Line-up

## TFT LCD with LED Backlighting

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
1.9"	T-51909GD019J-LW-ACN	176 x 220	350:1	230	LED	CMOS	(h v):TBD	-20 to 70°C	
2.0	T-55522GD020JU-MLW-A-AAN	320 X 240	150:1	350	LED	CMOS	(h v):±60  -45/80	-20 to 70°C	
2.2"	T-55458GD022J-LW-A-AAN	240 x 320	300:1	200	LED	CMOS	(h v):±65   -50/70	-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	320	LED	CMOS	(h v):±80   ±80	-20 to 70°C	
	T-55596GD035JU-LW-AAN	320 x 240	300:1	360	LED	CMOS	(h v):±50   -80/30	-20 to 70°C	
	T-55596GD035JU-LW-ABN	320 x 240	750:1	400	LED	CMOS	(h v):±80   ±80	-20 to 70°C	
4.3"	T-55226D043J-LW-A-AAN	800 x 480	400:1	200	LED	CMOS	(h v):±65   -65/45	-20 to 70°C	
5.0"	T-55382GD050JU-LW-A-AAN	800 x 480	450:1	350	LED	CMOS	(h v):±65   -45/65	-20 to 70°C	
	T-55382GD050JU-LW-A-ABN	800 x 480	450:1	420	LED	CMOS	(h v):±65   -45/65	-20 to 70°C	
	T-55423GD050J-LW-A-AAN	800 x 480	600:1	250	LED	CMOS	(h v):±85   ±85	-20 to 60°C	
	T-55423GD050J-LW-A-ABN	800 x 480	600:1	300	LED	CMOS	(h v):±85   ±85	-20 to 60°C	
	T-55583GD050J-LW-A-AAN	800 x 480	900:1	800	LED	CMOS	(h v):±85   ±85	-20 to 70°C	
	T-55583GD050J-LW-A-ABN	800 x 480	900:1	800	LED	CMOS	(h v):±85   ±85	-20 to 70°C	
5.7" Q	T-55520GD057J-LW-ACN	320 x 240	350:1	800	LED	CMOS	(h v):±70   ±70	-20 to 70°C	
	T-55265GD057J-LW-ADN	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	
5.7" V	T-55548GD057JU-LW-ABN	640 x 480	500:1	500	LED	CMOS	(h v):±70   ±70	-20 to 70°C	
	T-55620GD057JU-LW-AAN	640 x 480	500:1	500	LED	LVDS	(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	
	AA057VG02	640 x 480	185:1	300	LED	CMOS	(h v):±80   -65/50	-20 to 70°C	

**Legend:**

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

### TFT LCD with LED Backlighting (con't)

Size	Part #	Display Format	Con- trast	Nits	Inter- face	Viewing Angle	Operating Temp.	Special Features
6.5"	T-51750GD065J-LW-ANN	640 x 480	300:1	600	CMOS	(h v): ±55   -55/30	-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	-20 to 70°C	
	T-55619GD065J-LW-AAN	640 x 480	300:1	750	LVDS	(h v): ±55   -60/30	-20 to 70°C	
	T-55465D065J-LW-A-AAN	640 x 480	600:1	700	CMOS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
	T-55465D065J-LW-A-ABN	640 x 480	600:1	700	CMOS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
	T-55629D065J-LW-A-AAN	640 x 480	600:1	700	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
8.4" V	T-55467D084J-LW-A-AAN	640 x 480	600:1	800	CMOS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
8.4" S	T-55466D084J-LW-A-AAN	800 x 600	600:1	600	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
	T-55466D084J-LW-A-ABN	800 x 600	570:1	480	LVDS	(h v): ±80   -60/80	-20 to 70°C	<b>NCM</b>
	T-55466D084J-LW-A-ACN	800 x 600	600:1	1200	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
8.4" X	T-55549D084J-LW-A-AAN	1024 x 768	600:1	500	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
	T-55549D084J-LW-A-ACN	1024 x 768	600:1	1000	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
9.0" W	T-55561D090J-LW-A-AAN	800 x 480	900:1	400	LVDS	(h v): ±85   ±85	-30 to 80°C	<b>NCM</b> <b>SWV</b> <b>WIDE</b>
	T-55561D090J-LW-A-ABN	800 x 480	850:1	320	LVDS	(h v): ±85   ±85	-20 to 70°C	<b>NCM</b> <b>SWV</b> <b>WIDE</b>
	T-55562D090J-LW-A-AAN	800 x 480	800:1	800	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b> <b>WIDE</b>
	T-55562D090J-LW-A-ABN	800 x 480	760:1	640	LVDS	(h v): ±80   -60/80	-20 to 70°C	<b>NCM</b> <b>WIDE</b>
	T-55618D090J-LW-A-AAN	960 x 540	1000:1	400	LVDS	(h v): ±85   ±85	-20 to 60°C	<b>NCM</b> <b>SWV</b> <b>WIDE</b>
10.4" V	T-55532D104J-LW-A-AAN	640 x 480	700:1	800	CMOS	(h v): ±70   ±65	-20 to 70°C	<b>NCM</b>
	T-55532D104J-LW-A-ABN	640 x 480	700:1	800	CMOS	(h v): ±70   ±65	-20 to 70°C	<b>NCM</b>
	T-55532D104J-LW-A-ACN	640 x 480	700:1	1500	CMOS	(h v): ±70   ±65	-20 to 70°C	<b>NCM</b>
	T-55532D104J-LW-A-ADN	640 x 480	700:1	1500	CMOS	(h v): ±70   ±65	-20 to 70°C	<b>NCM</b>
10.4" S	T-55563D104J-LW-A-AAN	800 x 600	700:1	700	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
	T-55563D104J-LW-A-ABN	800 x 600	700:1	1200	LVDS	(h v): ±80   -60/80	-30 to 80°C	<b>NCM</b>
	T-55563D104J-LW-A-ADN	800 x 600	700:1	1200	LVDS	(h v): ±80   -60/80	-30 to 70°C	<b>NCM</b>

**Legend:**

<b>NCM</b> Natural Color Matrix	Ultra Wide Viewing	<b>SWV</b> Super Wide Viewing	Super High Luminance	Anti-reflective Coating	Transflective	<b>WIDE</b> Wide Format	Touch Screen
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### TFT LCD with LED Backlighting (con't)

Size	Part #	Display Format	Con- trast	Nits	Inter- face	Viewing Angle	Operating Temp.	Special Features
10.4" X	T-55533D104J-LW-A-AAN	1024 x 768	700:1	600	LVDS	(h v): ±80   ±65	-30 to 80°C	NCM
	T-55533D104J-LW-A-ABN	1024 x 768	700:1	1000	LVDS	(h v): ±80   ±65	-30 to 80°C	NCM
	T-55586D104J-LW-A-AAN	1024 x 768	700:1	1000	LVDS	(h v): ±80   ±65	-30 to 80°C	NCM
12.1" S	T-55373D121J-LW-A-AAN	800x 600	550:1	550	CMOS	(h v): ±80   -60/80	-30 to 80°C	NCM
	T-55374D121J-LW-A-AAN	800x 600	600:1	550	LVDS	(h v): ±80   -60/80	-30 to 80°C	NCM
	OP60190AA	800 x 600	800:1	450	LVDS	(h v): ±80   -60/80	-30 to 80°C	NCM SWV
12.1" X	T-55513D121J-LW-A-AAN	1024 x 768	600:1	500	LVDS	(h v): ±80   -80/60	-30 to 80°C	NCM
	T-55566D121J-LW-A-AAN	1024 x 768	600:1	1000	LVDS	(h v): ±80   -80/60	-30 to 80°C	NCM
12.1"W	T-55592D121J-LW-A-AAN	1280 x 800	700:1	700	LVDS	(h v): ±80   -60/80	-30 to 80°C	NCM
14.1"W	T-55313D141J-LW-A-AGN	1280 x 800	700:1	800	LVDS	(h v): ±80   -60/80	-20 to 70°C	NCM
15.0"	T-55534D150J-LW-A-AAN	1024 x 768	800:1	800	LVDS	(h v): ±80   -80/60	-20 to 70°C	NCM
	T-55534D150J-LW-A-ABN	1024 x 768	800:1	1500	LVDS	(h v): ±80   -80/60	-20 to 70°C	NCM
	T-55519D150J-LW-A-AAN	1024 x 768	1000:1	350	LVDS	(h v): ±85   ±85	-20 to 70°C	NCM SWV
	T-55519D150J-LW-A-ABN	1024 x 768	1000:1	1100	LVDS	(h v): ±85   ±85	-20 to 70°C	NCM SWV
	OPT60191AA	1024 x 768	700:1	450	LVDS	(h v): ±80   -70/70	0 to 65°C	NCM
17.5"W	T-55621D175J-LW-A-AAN	1280 x 768	700:1	700	LVDS	(h v): ±80   -60/80	-20 to 70°C	NCM
19.2"W	T-55604D192J-LW-A-AAN	1920 x 360	700:1	500	LVDS	(h v): ±80   -60/80	-30 to 80°C	NCM

**Legend:**

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

# TFT LCD Display Line-up

## Industrial Size TFT - CCFL backlights

Size	Part #	Display Format	Contrast	Nits	Back-light	Inter-face	Viewing Angle	Operating Temp.	Special Features
6.5"	T-51750GD065J-FW-ADN	640 x 480	300:1	400	CCFL	CMOS	(h v): ±55   -60/30	-25 to 75°C	
	T-51750GD065J-FW-AFN	640 x 480	300:1	400	CCFL	CMOS	(h v): ±55   -60/30	-25 to 75°C	
	T-51750GD065J-FW-APN	640 x 480	300:1	320	CCFL	CMOS	(h v): ±55   -60/30	-20 to 70°C	
	T-51952D065J-FW-A-ADN	640 x 480	700:1	600	CCFL	CMOS	(h v): ±80   -60/80	-20 to 70°C	
	T-51952D065J-FW-A-AEN	640 x 480	750:1	600	CCFL	CMOS	(h v): ±80   -60/80	-20 to 70°C	
8.4"	T-55399D084J-FW-A-ABN	640 x 480	600:1	480	CCFL	CMOS	(h v): ±80   -60/80	-30 to 80°C	
	T-55399D084J-FW-A-ACN	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	
9.0"	T-55311D090J-FW-A-ABN	800 x 480	600:1	600	CCFL	LVDS	(h v): ±80   -60/80	-20 to 70°C	
10.4" V	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-AJN	640 x 480	500:1	430	CCFL	CMOS	(h v): ±65   -65/45	-20 to 70°C	
	T-55334GD104J-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	
10.4" S	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	
10.4" X	T-55225D104J-FW-A-AAN	1024 x 768	500:1	400	CCFL	LVDS	(h v): ±80   -65/65	-20 to 70°C	
	T-55225D104J-FW-A-ABN	1024 x 768	600:1	400	CCFL	LVDS	(h v): ±80   -65/65	-20 to 70°C	

**Legend:**

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

# TFT LCD Display Line-up

## Industrial Size TFT -CCFL Backlights (continued)

Size	Part #	Display Format	Contrast	Nits	Back-light	Inter-face	Viewing Angle	Operating Temp.	Special Features
12.1" S	T-51512D121J-FW-A-AIN	800 x 600	600:1	450	CCFL	CMOS	(h v): ±80   -80/60	-30 to 80°C	NCM
	T-51866D121J-FW-A-ACN	800 x 600	600:1	450	CCFL	LVDS	(h v): ±80   -80/60	-30 to 80°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-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
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-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
17"	T-55535D170J-FW-A-AA	1280 x 1024	900:1	550	CCFL	LVDS	(h v): ±80   -60/80	-20 to 70°C	NCM

**Legend:**

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

# Outdoor Use TFT LCD Display Line-up

Super High Luminance (Brightness > 1000 nits)

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
8.4"	T-55466D084J-LW-A-ACN	800 x 600	600:1	1200	LED	LVDS	(h v): ±80   -60/80	-30 to 80°C	
	T-55549D084J-LW-A-ACN	1024 x 768	600:1	1000	LED	LVDS	(h v): ±80   -60/80	-30 to 80°C	
10.4" V	T-55334D104J-FW-A-AAN	640 x 480	700:1	1500	CCFL	CMOS	(h v): ±70   -65/65	-20 to 70°C	
	T-55532D104J-LW-A-ACN	640 x 480	700:1	1500	LED	CMOS	(h v): ±70   -65/65	-20 to 70°C	
	T-55532D104J-LW-A-ADN	640 x 480	700:1	1500	LED	CMOS	(h v): ±70   -65/65	-20 to 70°C	
10.4" S	T-55563D104J-LW-A-ABN	800 x 600	700:1	1200	LED	LVDS	(h v): ±80   -60/80	-30 to 80°C	
	T-55563D104J-LW-A-ADN	800 x 600	700:1	1200	LED	LVDS	(h v): ±80   -60/80	-30 to 70°C	
10.4" X	T-55533D104J-LW-A-ABN	1024 x 768	700:1	1000	LED	LVDS	(h v): ±80   -65/65	-30 to 80°C	
	T-55586D104J-LW-A-AAN	1024 x 768	700:1	1000	LED	LVDS	(h v): ±80   -65/65	-30 to 80°C	
12.1" S	T-55196D121J-FW-A-AAN	800 x 600	650:1	1500	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	
	T-55196D121J-FW-A-ABN	800 x 600	700:1	1500	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	
12.1" X	T-55566D121J-LW-A-AAN	1024 x 768	600:1	1000	LED	LVDS	(h v): ±80   -80/60	-30 to 80°C	
	T-55105D121J-FW-A-AAN	1024 x 768	600:1	1000	CCFL	LVDS	(h v): ±65   -75/45	-20 to 70°C	
	T-55105D121J-FW-A-ABN	1024 x 768	700:1	1000	CCFL	LVDS	(h v): ±60   -75/45	-20 to 70°C	
15.0"	T-55335D150J-FW-A-AAN	1024 x 768	650:1	1500	CCFL	LVDS	(h v): ±75   -60/50	-20 to 70°C	
	T-55534D150J-LW-A-ABN	1024 x 768	800:1	1500	LED	LVDS	(h v): ±80   -80/60	-20 to 70°C	
	T-55519D150J-LW-A-ABN	1024 x 768	1000:1	1100	LED	LVDS	(h v): ±85   ±85	-20 to 70°C	

## Transflective TFT LCD

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
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   -40/40	-20 to 70°C	
	T-51963GD035J-MLW-AGN	240 x 320	70:1	130	LED	CMOS	(h v): ±40   -40/40	-20 to 70°C	
	T-51963GD035J-MLW-AHN	320 x 240	70:1	160	LED	CMOS	(h v): ±70   -40/40	-20 to 70°C	
5.7"	AA057VG02	640 x 480	185:1	300	LED	CMOS	(h v): ±80   -65/50	-20 to 70°C	
8.4"	T-55151FD084J-MFW-A-AAN	640 x 480	200:1	200	CCFL	CMOS	(h v): ±80   -70/50	-20 to 70°C	

**Legend:**

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

# Touch Technology for TFT LCD Display

## Capacitive Touch Switch Solution

Size	Part #	Display Format	Contrast	Nits	Back-light	Interface	Viewing Angle	Operating Temp.	Special Features
3.0"	T-55149GD030J-MLW-AMN	240 x 400	105:1	400	LED	CMOS	(h v): ±70   -60/80	-20 to 70°C	
3.5"	T-51963GD035J-MLW-ALN	240 x 320	70:1	150	LED	CMOS	(h v): ±40   -40/40	-20 to 70°C	
	T-55343GD035J-LW-AFN	320 x 240	700:1	360	LED	CMOS	(h v): ±80   -80/80	-20 to 70°C	

## Resistive 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	700:1	400	CMOS	(h v): ±80   ±80	-20 to 70°C	
5.0"	T-55423GD050J-LW-A-AAN	800 x 480	600:1	250	CMOS	(h v): ±85   ±85	-20 to 60°C	
	T-55382GD050JU-LW-A-AAN	800 x 480	450:1	350	CMOS	(h v): ±65   -45/65	-20 to 70°C	
5.7"	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	
8.4"	T-55466D084J-LW-A-ABN	800 x 600	570:1	480	LVDS	(h v): ±80   -60/80	-20 to 70°C	
9.0"	T-55562D090J-LW-ABN	800 x 480	760:1	640	LVDS	(h v): ±80   -60/80	-20 to 70°C	
	T-55561D090J-LW-A-ABN	800 x 480	8500:1	320	LVDS	(h v): ±85   ±85	-20 to 70°C	

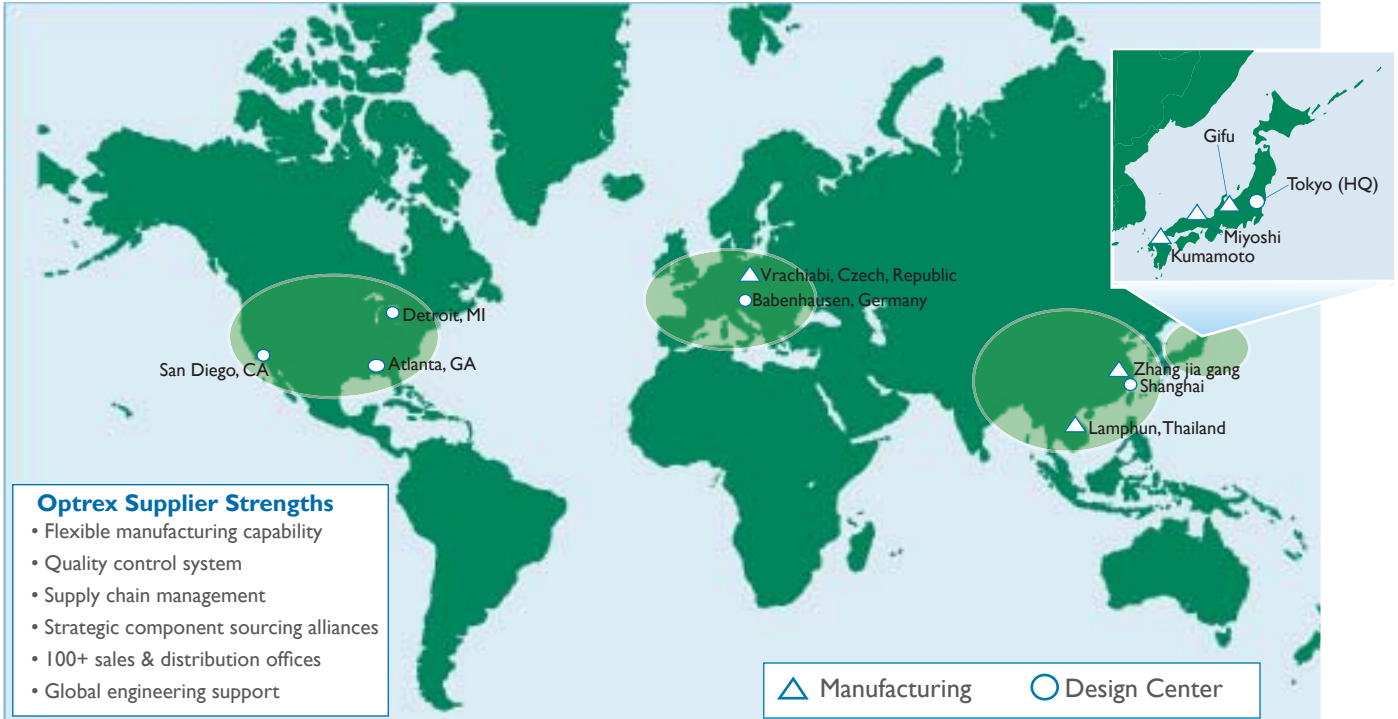
We offer touch screen custom solutions for all standard TFT-LCD display products, please contact us for details.

**Legend:**

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

# Manufacturing and Global Support

Optrex flat panel displays are produced using a network of 14 manufacturing and design centers throughout the world.



- Optrex Supplier Strengths**
- Flexible manufacturing capability
  - Quality control system
  - Supply chain management
  - Strategic component sourcing alliances
  - 100+ sales & distribution offices
  - Global engineering support

▲ Manufacturing      ○ Design Center

**Optrex America, Inc. Headquarters**

*Detroit (Plymouth), Michigan*

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