

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
- Ultra-Wide Viewing technology (Up to 170° viewing angle)
- Field replaceable/long life CCFL
- Reverse Scan
- Wide temperature range
- RoHS compliance (*)
- NCM (Natural Color Matrix)

- 6/8 bit compatibility with LVDS interfaces
- Reduced EMI via LVDS interfaces
- Anti-reflective coating



Quickstart Your Design with LCD ToolKITs™

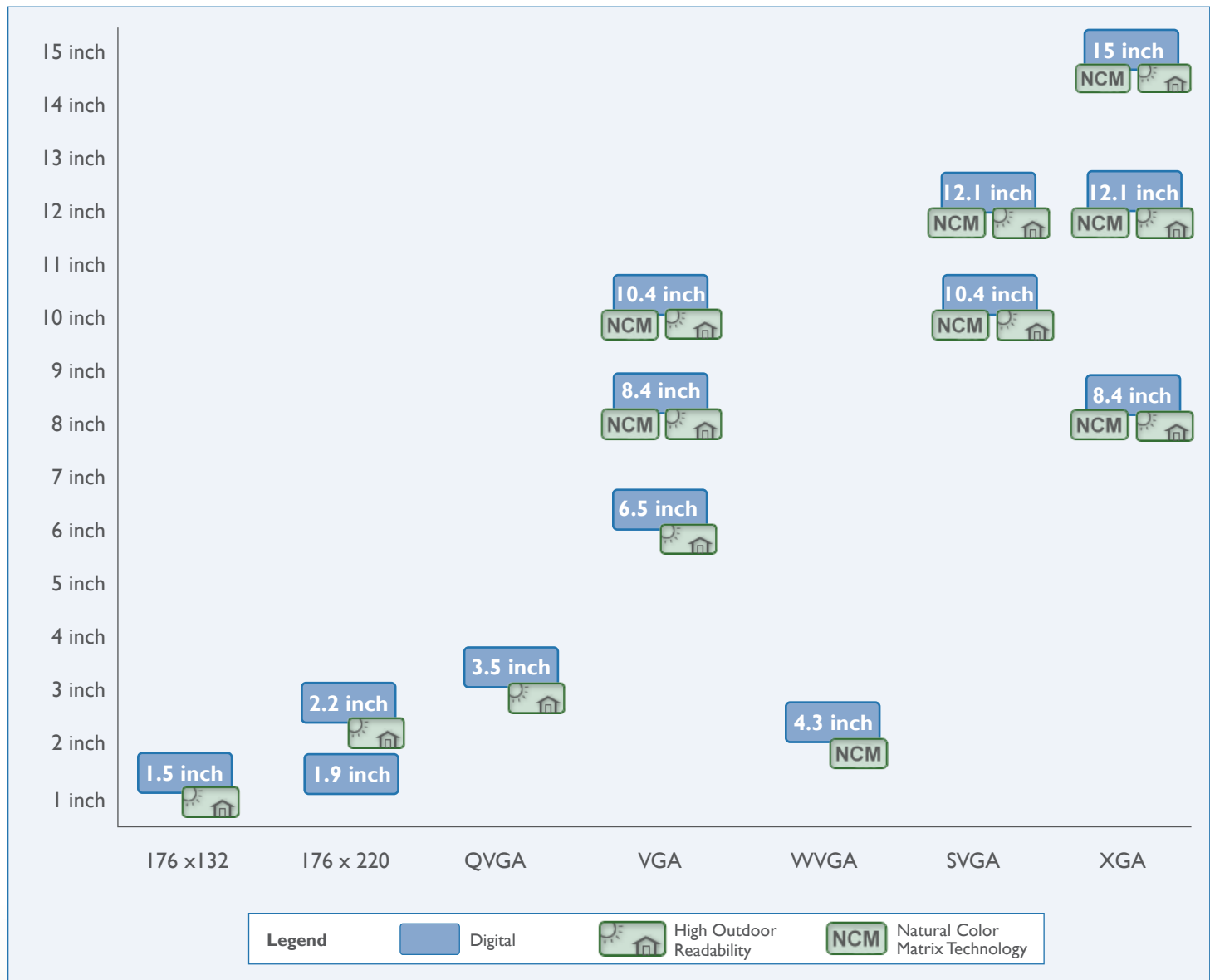
To speed design and save engineering & procurement time, Optrex' LCD ToolKITs™ contain everything you need to put a TFT LCD display into operation - right out of the box.

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



TFT LCDs At-a-Glance

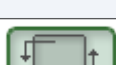
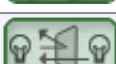
Optrex TFT LCDs deliver best-in-class front-of-screen performance for a wide variety of Industrial, Telecommunications and Automotive applications in sizes ranging from 1.5-inch to 15-inch displays.



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

Natural 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.	
Anti-reflective Coating	Surface reflectivity is reduced to approximately 0.3%, 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.	
Ultra Wide Viewing	- Up to 170° viewing angle and high brightness - Higher contrast sphere than a conventional wide viewing film - Improved viewing angle from diagonal than IPS	
Reverse Scan	Provides the ability to select either a normal scan or a reverse scan to obtain the best intended image, depending on whether the mounted display will be viewed typically from above or below	
ToolKIT™	A convenient kit solution that speeds design and saves engineering and procurement time for developers of products using flat panel displays. The LCD module and all interface components the designer needs are conveniently supplied in a single box.	
Replaceable Backlight	Backlights are field replaceable. Redundant backlight design functions with only one tube allowing for emergency down time, an important feature for touch screen applications.	
Transflective	Transflective displays offer both Reflective and Transmissive modes, resulting in high light reflectance for a bright display.	
Touch Screen	A touch screen display provides the ability for the user to make choices by touching icons or graphical buttons on the screen.	

TFT LCD Display Line-up

Size	Part #	Display Format	Contrast	Nits	Interface	Viewing Angle	Operating Temp.	Special Features
1.5"	T-51991GD015-MLW-AIN	176 x 132	80:1	150	CMOS	(h v): ±30 ±30	-10 to 60°C	
1.9"	T-51909GD019J-LM-ACN	176 x 220	350:1	230	CMOS	(h v): N.A.	-20 to 70°C	
2.2"	T-51570GD022J-MLW-AGN	176 x 220	100:1	120	CMOS	(h v): 40/-50 ±50	-20 to 70°C	 
3.5"	T-51963GD035J-MLW-AGN	240 x 320	70:1	130	CMOS	(h v): ±40 ±40	-20 to 70°C	  
	T-51963GD035J-MLW-AFN	240 x 320	70:1	160	CMOS	(h v): ±40 ±40	-20 to 70°C	 
	T-51963GD035J-MLW-AHN	320 x 240	70:1	160	CMOS	(h v): ±40 ±40	-20 to 70°C	 
4.3"	T-55226GD043J-LW-AAN	800 x 480	300:1	200	CMOS	(h v): ±65 -65/45	-20 to 70°C	  
6.5"	T-51750GD065J-FW-AFN	640 x 480	300:1	400	CMOS	(h v): ±55 30/-60	-25 to 75°C	  
	T-51750GD065J-FW-ADN	640 x 480	300:1	400	CMOS	(h v): ±55 -30/60	-25 to 75°C	 
	T-51952D065J-FW-A-ACN	640 x 480	700:1	600	CMOS	(h v): ±70 -60/50	-20 to 70°C	  
	T-51952D065J-FW-A-ABN	640 x 480	700:1	600	CMOS	(h v): ±70 -60/50	-20 to 70°C	 

TFT LCD Display Line-up

Size	Part #	Display Format	Contrast	Nits	Interface	Viewing Angle	Operating Temp.	Special Features
8.4"	T-51639D084J-U-FW-A-AB	1024 x 768	400:1	300	LVDS	(h v): ±65 -50/60	-20 to 70°C	  NCM
	T-51638D084J-FW-A-AC	640 x 480	500:1	480	CMOS	(h v): ±65 -60/50	-20 to 70°C	  
	T-51638D084J-FW-A-AB	640 x 480	500:1	480	CMOS	(h v): ±65 -60/50	-20 to 70°C	 
	T-55151FD084J-MFW-A-AAN	640 x 480	200:1	200	CMOS	(h v): ±80 -70/50	-20 to 70°C	   
10.4"	T-51944D104J-FW-A-ABN	800 x 600	600:1	400	LVDS	(h v): ±70 -60/50	-20 to 70°C	  NCM 
	T-51944D104J-FW-A-AA	800 x 600	500:1	400	LVDS	(h v): ±70 -60/50	-20 to 70°C	  NCM 
	T-51513D104J-U-FW-A-AHN	640 x 840	600:1	430	CMOS	(h v): ±65 -45/65	-20 to 70°C	  NCM 
	T-51513D104J-U-FW-A-AIN	640 x 840	600:1	430	CMOS	(h v): ±65 -45/65	-20 to 70°C	  NCM
	T-51513D104J-FW-A-AE	640 x 480	400:1	380	CMOS	(h v): ±80 -80/70	-20 to 70°C	  
	T-51513D104J-FW-A-AJN	640 x 480	500:1	430	CMOS	(h v): ±65 -65/45	-20 to 70°C	  NCM
	T-55225D104J-FW-A-AAN	1024 x 768	500:1	400	CMOS	(h v): ±65 -65/50	-20 to 70°C	  NCM
12.1"	T-55105D121J-FW-A-ABN	1024 x 768	700:1	1000	LVDS	(h v): ±65 -75/45	-20 to 70°C	  NCM 
	T-55105D121J-FW-A-AAN	1024 x 768	600:1	1000	LVDS	(h v): ±65 -75/45	-20 to 70°C	  NCM
	T-51756D121J-FW-A-AEN	1024 x 768	400:1	280	LVDS	(h v): ±85 ±85	-20 to 70°C	  NCM 
	T-51756D121J-FW-A-AA	1024 x 768	550:1	320	LVDS	(h v): ±65 -75/45	-20 to 70°C	  
	T-52017D121J-FW-A-ABN	800 x 600	500:1	1000	LVDS	(h v): ±65 -75/45	-20 to 70°C	  NCM 
	T-52017D121J-FW-A-AAN	800 x 600	500:1	1000	LVDS	(h v): ±65 -75/45	-20 to 70°C	  NCM
	T-51866D121J-FW-A-ABN	800 x 600	600:1	400	LVDS	(h v): ±65 -75/45	-20 to 70°C	  NCM 
	T-51866D121J-FW-A-AA	800 x 600	500:1	350	LVDS	(h v): ±65 -75/45	-20 to 70°C	  NCM 
	T-51512D121J-FW-A-AE	800 x 600	400:1	350	CMOS	(h v): ±80 -80/70	-20 to 70°C	  
	T-51512D121J-FW-A-AGN	800 x 600	500:1	400	CMOS	(h v): ±65 -75/45	-20 to 70°C	  NCM 
	T-51512D121J-FW-A-AFN	800 x 600	500:1	400	CMOS	(h v): ±65 -75/45	-20 to 70°C	  NCM
	T-55196D121J-FW-A-AAN	800 x 600	650:1	1500	CMOS	(h v): ±65 -75/45	-20 to 70°C	  NCM
	T-55196D121J-FW-A-ABN	800 x 600	700:1	1500	CMOS	(h v): ±60 -75/45	-20 to 70°C	  NCM 

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-AA
10.4 inch	TK104S01	T-51944D104J-FW-A-AA
12.1 inch	TK121S01	T-51512D121J-FW-A-AB
12.1 inch	TK121S02	T-51866D121J-FW-A-AA
12.1 inch	TK121X01	T-51756D121J-FW-A-AA
15.0 inch	TK150X03	T-51863D150J-FW-A-AB

To order Optrex TFT LCD ToolKITs online,
visit www.optrex.com



TFT Panel



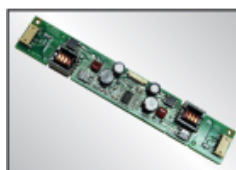
TFT Controller Board with
On-Screen Display Board



VGA (Analog RGB) Cable



12V DC Power Supply



Backlight Inverter



DVI (Digital) Video Cable



S-Video & Composite Video
Cables



Quick Set-Up and
Documentation CD-ROM

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