



23" LCD Monitor

Model: 150TFT[X]2303[XX]

Manual

Version 1.1 /Jan. 2015



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1. Introduction

Congratulations with the purchase of your monitor. This LCD monitor is a color active matrix thin-film-transistor (TFT) liquid crystal (LCD) to provide superior display performance.

2. Safety

This monitor is only be suitable for use in an interior environment where there are not sealed, not subject to dust, dirt, condensation (Pollution Degree 2) (IP20).

It is not allowed to connect appliances to the monitor which does not comply to SELV or Class II qualification.

Turn off the monitor before cleaning.

The slots located on the backside of the monitor case are for ventilation. Do not block or insert anything inside the ventilation slots.

It is important that your monitor remains dry. Do not pour liquid into or onto the monitor. If the monitor becomes wet do not attempt to repair it yourself.

To unplug the monitor from the power outlet before cleaning. Do not use alcohol (methyl, ethyl or isopropyl) or any strong dissolvent. Do not use thinner or benzene, abrasive cleaners or compressed air. To clean the monitor, use a cloth lightly damped with a mild detergent.

If the liquid crystal materials leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, legs or clothes, it must be washed away thoroughly with soap.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

3. Model descriptions

Part number	Description
150TFT2303	Monitor 23"
150TFTG2303	Monitor 23" with 4mm tempered glass
150TFTS2303MU	Monitor 23" with 3M touch screen USB

Further models to be announced.

4. Monitor connection

1. Connect the 12V power supply to the monitor.
2. Connect one end of the video cable to the computer and the other to the monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding.
3. Connect one end of either the touch screen cable to the computer and the other end to the monitor.
4. Press the power button on the rear panel to turn the monitor power on.

5. Monitor specifications

Panel

Manufactures	Part No.
LG	LM230WF3-SLE1

Absolute Maximum Ratings

Item	Unit	Min	Typical	Max	Remarks
Operating Temperature	°c	0	-	50	
Storage Temperature	°c	-20	-	60	
Operation Humidity	%	10	-	90	
Storage Humidity	%	10	-	90	

Input characteristics

Description	Signal	Unit	Min	Typical	Max	Remarks
Power in (2,5mm plug)						
	Input	VDC	11.4	12	12,6	
	Consumption	A		1,9		
RGB Input						
	Analog RGB	VPP	0	0.7	-	
	Sync	VDC	0	5	5.5	
	H Frequency	KHz	31	64	80	
	V Frequency	Hz	55	60	75	
DVI-D Input						
	DATA/CLK	VPP	450	500	900	

Display Characteristics

Item	Unit	Specifications
Screen Diagonal	[inch]	23
Active Area	[mm]	509.184 (H) x 286.416(V)
Pixels		1920x1080
RoHS Compliance		RoHS Compliance

Optical Characteristics

Item	Unit	Conditions	Min.	Typ.	Max	Remarks
White Luminance	[cd/m2]	Center point	200	250	-	-
Contrast Ratio			600	1000	-	-
Response Time	[msec]	Gray to Gray	-	14	25	-
Viewing Angle	[degree]	Horizontal (Right)	170	178	-	-
	[degree]	CR = 10 (Left)				
	[degree]	Vertical (Upper)	170	178	-	
	[degree]	CR = 10 (Lower)				

RGB input format

Item	Description	Resolution
Resolutions	XGA	1024x768
	720P (HD)	1280x720
	WXGA	1366x768
	SXGA	1280x1024
	WSXGA+	1680x1050
	1080P (FHD)	1920x1080

6. Operation

Color LED: This LED shows the state of controller.

Green is the “normal state”.

Red is the “Off mode”. (Can’t find Sync. signals)

Amber is the “DPMS mode” (*Display Power Management Signaling*).

PC Settings: The PC needs to be set to an appropriate graphics mode that has the same resolution with the LCD panel to have clear screen image. And the vertical refresh rate should be set to one of 56~75Hz, non-interlaced signal.

LCD display System Settings: The OSD (On Screen Display) provides certain functions to have clear image and others. This board supports 5 buttons OSD operation as a standard. The control functions defined on OSD operation are as below.

Pc Graphics Output: Signal quality is very important, if there is noise or instability in the PC graphics output this may result in visible noise on the display. Refer to the graphic modes table in specification section for supported modes. Non-interlaced & interlaced video input is acceptable.

(If installed) USB cable: Plug the USB cable to the connector on the backside of the monitor.

VGA cable: Plug the VGA cable to the connector on the backside of the monitor.

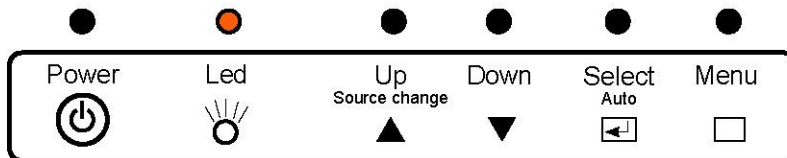
DVI-D Cable: Plug the DVI-D Cable (Not included) to the connector on the backside of the monitor.

Power supply: Plug the 24V power supply (Not included) to the connector on the backside of the monitor (separate power supply 182-0520).

Power on: Switch on the monitor by using the on/off switch on the OSD control buttons.

PC Setting: The controller has been designed to take a very wide range of input signals however to optimize the PC’s graphic performance we recommend choosing 60Hz vertical refresh rate this will not cause screen flicker.

OSD Control Board: The OSD (On Screen Display) provides certain functions to have clear image and others. This board supports 4 buttons OSD operation as a standard. The control functions defined on OSD operation are as below.



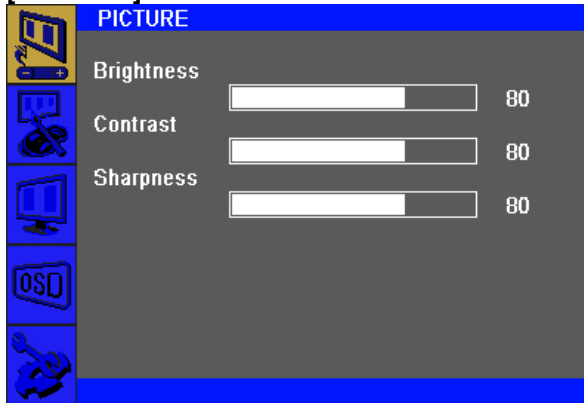
The chosen OSD settings will be stored in memory. The OSD menu can be cleared from the screen from the screen by moving the selection bar to the EXIT MENU icon pressing the SEL button otherwise it will be automatically cleared after a few second of non-use.

7. OSD MENU

The chosen OSD settings will be stored in memory. The OSD menu can be cleared from the screen by pressing the **MENU** button otherwise it will be automatically cleared after a few seconds of non-use.

OSD Main Menu

[PICTURE]



PICTURE

- Brightness
- Contrast
- Sharpness

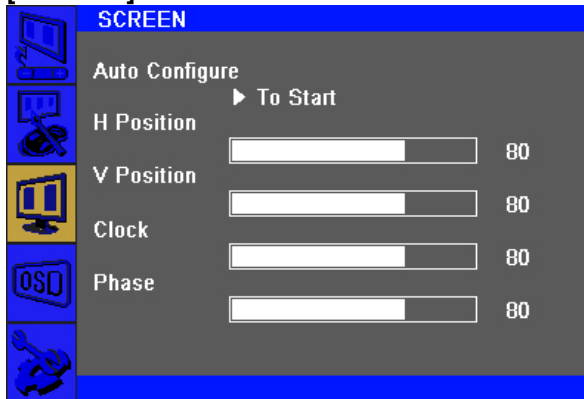
[COLOR]



COLOR

- Color Status Management
 - ▶ NORMAL
- Red
- Green
- Blue
- Auto Color
 - ▶ To Start

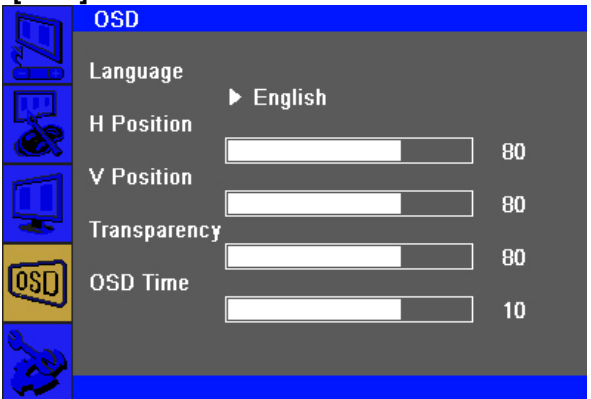
[SCREEN]



SCREEN

- Auto Configure
 - ▶ To Start
- H Position
- V Position
- Clock
- Phase

[OSD]



OSD

- Language
 - ▶ English
- H Position
- V Position
- Transparency
- OSD Time

[SETUP]



SETUP

- Source
 - ▶ RGB
- Factory reset
 - ▶ To Start
- Aspect
 - ▶ Off

1024x768 60 Hz
Version 1.05

OSD GUI Control Table

MAIN	SUB MENU	CONTROL	
Picture	Brightness	50(0~100)	
	Contrast	50(0~100)	
	Sharpness	2(0 ~ 4)	
Color	Color Status Management	User(User, Warm, Normal, Cool)	
	Red	50(0~100)	PC ONLY
	Green	50(0~100)	
	Blue	50(0~100)	
	Auto Color	To Start	
Auto Configure	To Start		
Screen	H Position	50(0~100)	PC ONLY
	V Position	50(0~100)	
	Clock	50(0~100)	
	Phase	30(0~100)	
	Language	English(English, Deutsch, Francais, Italiano, Espanola, Korean)	
OSD	H Position	50(0~100)	
	V Position	50(0~100)	
	Transparency	33 (0~100)	
	OSD Time	10(3~30)	
	Source	RGB, DVI, AUTO	
SETUP	Factory reset	To Start	
	Aspect	Off(On/Off)	

8. Driver software touch screen (150TFTS2303MU)

3M TouchSystems provides driver software that allows your touch monitor to work with your computer. Drivers are located on “3M Touch Systems” web site for the following operating systems:

- Windows
- Linux (2.6/3.0 Kernel)
- Mac OSX

The latest versions of drivers and driver information for other operating systems are available on the “3M Touch Systems” web site at:

http://solutions.3m.com/wps/portal/3M/en_US/TouchSystems/TouchScreen/

Your monitor is Plug-and-Play compliant. Information on the video capabilities of your monitor is sent to your video display adapter when Windows starts. If Windows detects your monitor, follow the instructions on the screen to install a generic Plug-and-Play monitor.

Depending upon whether you connected the USB communication cable, you should install only the USB driver.

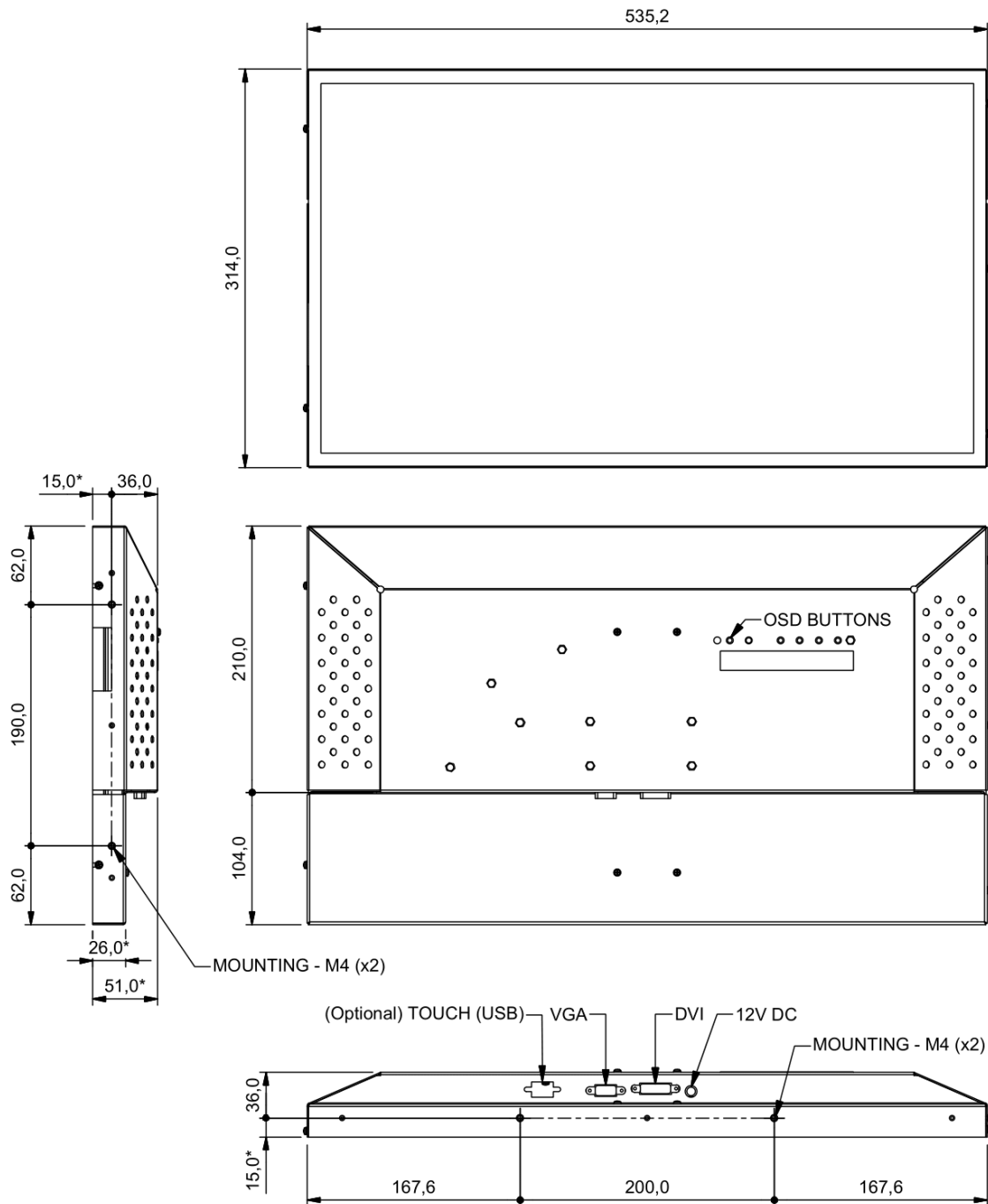
9. Mounting instructions

Monitor Mounting

This monitor can be mounted with eight M4 mount holes. Follow the steps described below:

Place the monitor into the machine.

Place the M4 screws on all sides of the monitor. Tighten the nuts until the monitor is firmly secured to the machine (do not use screws longer than 5mm in the monitor).



***Dimensions without glass / touch**
With glass standard +5mm
With touch standard +4mm

10. Accessories

Part number	Description	
150-0049	Power supply input 100/240V output 12V 5A	
22-0012-4	Power cable Euro lead 1.80M	
149-0112-11	VGA cable 1.80m	
149-0147	USB cable type a-b m/m 1.80M	
149-0121	DVI-D Cable 2 mtr 18+1	
98-0003-2687-0	23" Touch screen (without controller)	