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First Step

This LCD monitor is a microprocessor controlled multi-frequency system device. The power adapter included in the monitor package supports the monitor on universal supply voltage range. The VGA card included in the package can be driven at various refresh rates, resolution, and image formats.

This monitor package comes with the following:

- ❖ Digital LCD monitor
- ❖ VGA card
- ❖ Power adapter
- ❖ Software CD which includes:
 - VGA driver for Windows95/98
 - VGA driver for Windows NT4.0
 - Control Program driver
- ❖ Signal cable with 26 pin connector
- ❖ Power cable
- ❖ User guidebook (You're reading it now ☺)

Hardware Installation

1. **Turn your computer off. Remove the cabinet cover of your computer.**
2. **Remove the original VGA card from the computer motherboard.**
If your original VGA card is part of the all-in-one computer, **don't** remove it as your computer may automatically detect the display card. If it failed to detect it, please check your computer user manual or contact your retailer.
3. **Remove the slot cover, then insert the VGA card (that comes with the monitor package) into a PCI bus slot on the motherboard.** Press to ensure the board firmly seated. Use the screw to anchor the board mounting bracket.
4. **Place your computer cabinet cover back.**
Connect the computer and monitor with the power cable.
5. **Connect your monitor to the 26 pin VGA card connector on the computer with the signal cable.**

Software Installation

Please choose the LCD monitor VGA program suitable for your platform.

For Windows 95/98 installation:

1. Turn the computer on and run windows 95/98.
2. Insert CD and select video driver for windows 95/98.
3. Go to "Start" and select "Setting" – "Control Panel" – "Display" – "Setting" – "Advanced" – "Adapter" – "Change" – "Next".
4. Select "Display a list of all the drivers in a specific location, so you can select the driver you want".
5. Click "Next" to enter "Update device driver wizard" window and select "Have Disk" – "Browse", then select the destination cd rom drive. If it's D drive, please type: "D:\win95-98" and click "OK". The system thus will copy the driver program.
6. Restart your computer.

For Windows NT4.0 installation:

1. Select "Control Panel " from the main group and click on "Display".
2. Select "Change Display Type".
3. Select "Change..." from the Adapter Type windows.
4. Choose "Others" from the "Select Device" windows.
5. Insert the video driver disk and type "D:\NTdrv, click OK.
6. Click on "Install" then follow the prompts on the screen.
7. Restart the computer.

Control Program Installation Procedure

1. Click "Start" on the desktop toolbar and select "Run...".
2. Select the destination cdrom drive. If it is "D:", type "D:\CTRL\SETUP.exe" and click OK. The system will then copy the driver.
3. When the installation is done, Control Program will be seen on "Display Properties" window and icon tray.
4. After installation of the Control Panel program is complete, the setup program will create a folder in accordance with user input. The setup program will also add the Control Panel icon into the startup folder, so that the program will automatically load every time Windows is started.

Control Panel Information Box

The Control Panel Information box provides the following information:

Chip ID - reports the graphics controller chip ID (e.g. Lynx, LynxE, etc.).

Video Memory - reports amount of video memory (e.g. 2MB)

Panel Information - reports LCD panel information. It includes the panel refresh rate, panel type (TFT or DSTN) and panel resolution. Note that the panel resolution can be different from the current screen resolution. Panel resolution is always fixed, while screen resolution is adjustable.

Control Panel Program Information -reports the version number and build date of the control Panel program that is installed on the system.

Display Driver Information - reports the version number and build date of the display driver that is installed on the system.

Display Switching

Silicon Motion Control Panel program supports three types of displays: LCD, CRT, and TV (NTSC or PAL). Display Switching enables users to switch between these different displays.

The followings are the possible display switching combinations:

LCD only - Display output to LCD panel only.

*Note: If panel type is DSTN, on certain resolution and color depths, users may not be able to switch from CRT to LCD. If an error message is displayed, lower the current resolution and color depth.

CRT only - Display output to CRT only.

*Note: Be sure to connect a CRT first before setting CRT only mode.

TV only - Display output to TV only.

*Notes:

*1) Be sure to turn off any video (e.g. Media Player) before switching to TV only mode.

*2) Be sure to disable any special modes (e.g. Virtual Refresh™, etc) before switching to TV only mode.

*3) For high resolution or high color depth modes, there may not enough memory to switch to TV only mode. For this case, lower the resolution or color depth.

LCD and CRT simultaneous - Display output to LCD and CRT simultaneously.

*Note: If panel type is DSTN, on certain resolution and color depths, users may not be able to switch to LCD and CRT simultaneously. For this case, lower your current resolution.

LCD and TV simultaneous - Display output to LCD and TV simultaneously.

*Notes:

*1) Be sure to turn off any video (e.g. Media Player) before switching to TV only mode.

*2) Be sure to disable any special modes (e.g. Virtual Refresh™, etc) before switching to TV only mode.

*3) For high resolution or high color depth modes, there may not enough memory to switch to TV only mode. For this case, lower the resolution or color depth.

Also see Special Modes.

Special Modes

The Silicon Motion Control Panel program supports the following special modes:

1. DualApp - Display independent applications (graphics or video) on two different displays. See DualApp.
2. DualView - Display a selectable rectangular portion of the primary display full screen on a secondary display. See DualView.
3. Stretch Mode For LCD display:
 - 1) Stretch a lower resolution graphics mode (e.g. 800x600 on a 1024x768 panel) to fill the display.
 - 2) Display lower resolution screen content (e.g. DOS game) in full screen mode. See Stretch Mode.

Notes:

- 1) For operating systems which natively support multi-display capability (e.g. Windows 98), DualApp and DualView capabilities will be handled via the native support mechanism, instead of the Control Panel program.
- 2) When in any of the special modes: Display switching is disabled. Turn off the special mode first before display switching.
- 3) Do not disable the Control Panel program while in any of the special modes. Closing the Control Panel program will turn off special modes automatically.

DualApp

DualApp allows the user to select two active applications display them on two different displays, e.g.: LCD and CRT. To active DualApp, click on the Control Panel program menu item (see Control Panel Menu Items) or select via hot key (see Hot Keys).

Figure 2 shows the DualApp dialog box.

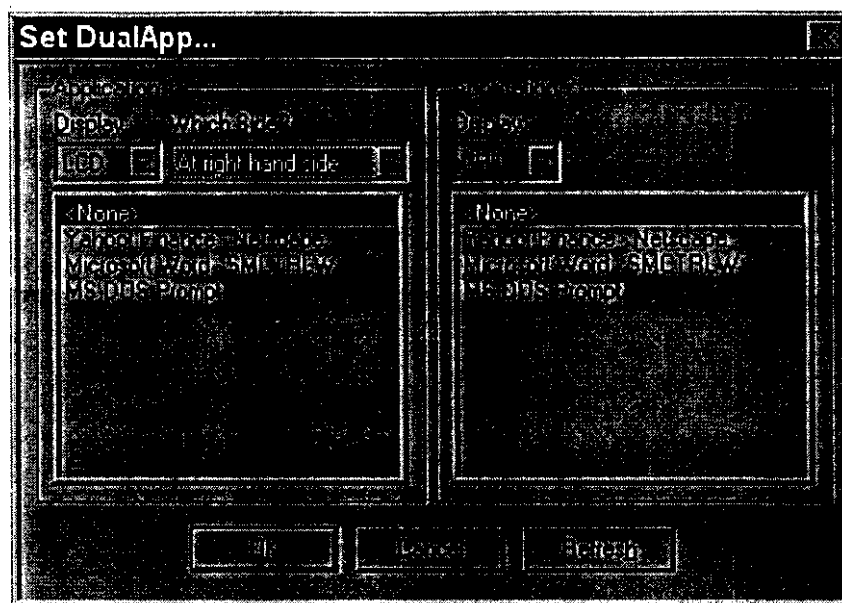


Figure 2. DualApp Dialog Box

The DualApp dialog box lists the current active Windows applications. All available applications are listed for each display. If there are any applications that are activated after the dialog box is invoke, click on Refresh to have the newly activated applications added to the list boxes.

The Application 1 box selects the application to display on the LCD. Application 2 selects the application to display on the CRT (or TV). Both Application boxes 1 and 2 will default to none. This means no application is currently selected.

To indicate if the LCD display is to the left or to the right of the secondary display, use the mouse to select "At right hand side" or "At left hand side".

After you have selected applications (or none) and the LCD location, press OK button to initiate DuapApp mode. The applications selected from Application box 1 will display full screen on the LCD. The

applications selected from Application box 2 will display full screen on the CRT (or TV).

While in DualApp mode, it is possible to swap applications such that the application on the LCD will go to CRT, and the application on the CRT will go to LCD. Swapping application can be performed through Control Panel Program Menu or via the user defined hot keys.

DualApp mode may be deactivated through Control Panel Program Menu or via user defined hot keys. The display state prior to invoking DualApp mode will be restored. There is no need to close open applications prior to exiting DualApp mode.

Notes:

1) DualApp mode will automatically be turned off if:

- *the Control Panel program is deactivated.
- *the current display resolution or color depth is changed.
- *exit Windows.

2) DualApp mode cannot be activated if:

- *you're already in any of the special modes.
- *more than one hardware video window is playing. For Lynx product, no hardware video windows should be playing.
- *current resolution setting does not match LCD panel resolution.
- *selected color depth is greater than 16-bit.

DualView

DualView allows the user to select a rectangular portion of the LCD display's content and map this portion only to the secondary display. e.g.: CRT or TV. To activate DualView, click on the Control Panel Program menu item (see Control Panel Menu Items), or select via hot key (see Hot Keys).

Figure 3 shows DualView dialog box.

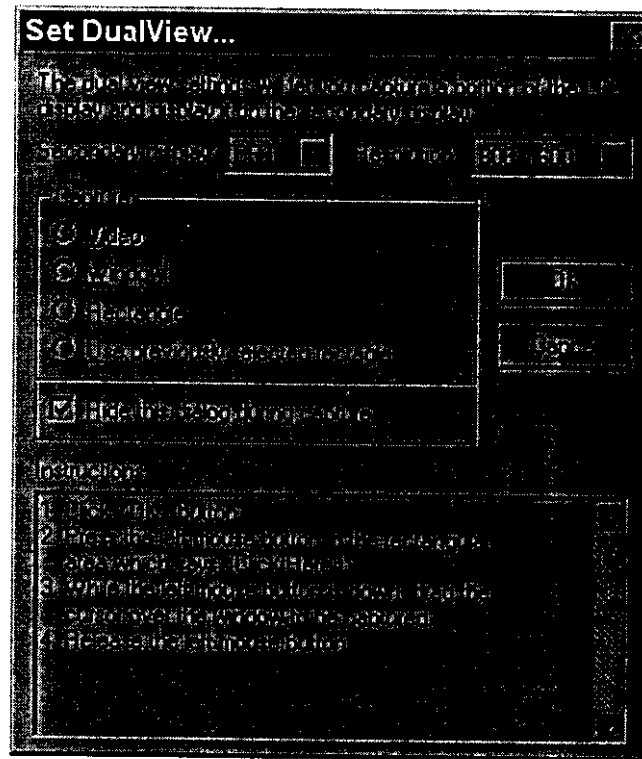


Figure 3. DualView Dialog Box

First select the secondary display. The mapping of the selected image will go to the secondary display. CRT and TV are the options for secondary display. If CRT is selected, specify the CRT resolution by clicking on the desired display size listed under Resolution. If TV is selected, specify NTSC or PAL.

Select the portion of the LCD display by one four methods.
For graphics:

1. Select an active window.
2. Select a rectangular area.
3. Select a previously selected rectangular area.

For video:

1. Select a video window (note: the video window must be open playing prior to invoking DualView).

Follow the instructions in the dialog box to complete image selection for the secondary display.

If you do not want this dialog box to be shown after the capture method has been selected, check to hide the dialog box during capture.

DualView mode may be deactivated through the Control Panel Program Menu or via user defined hot keys.

Notes:

1) DualView mode will automatically be turned off if:

- *the Control Panel program is deactivated.
- *exit Windows
- *the video being mapped to the secondary display is closed.

2) DualView mode cannot be activated if:

- *you're already in any of the special modes.
- *more than one hardware video window is playing.
- *current resolution setting does not match LCD panel resolution.

3) For Lynx chipset:

- *You must be in 16-bit high color mode to activate DualView.
- *When DualView is activated for video, the video on LCD side will become a black box.

4) For all chipsets:

- *Closing the video on LCD side will cause the mapped video to stop playing. Some media players e.g. Active Movie will suspend video play if the media player is minimized or if the video is fully covered by some other window.

Stretch Mode

Stretch mode expands resolutions less than the LCD panel size to fill the entire panel. To activate Stretch Mode, click on the Control Panel Program menu item (see Control Panel Menu Items), or select via hot key (see Hot Keys).

Stretch mode cannot be activated if:

- *you're already in any of the special modes.

- *a hardware video is playing.

- *the current resolution setting already matches the panel size

Hot Keys

The "Enable Hot Key" check box is used to enable the hot key settings. When enabled, all hot key settings specified will take effect whenever the Control Panel program is running. The "Hot Key Settings" button allows the user to specify the hot key settings. When disabled, there will be no hot keys in effect. The "Hot Key Settings" button will also be disabled.

Figure 4 show the Hot Key Settings dialog box.

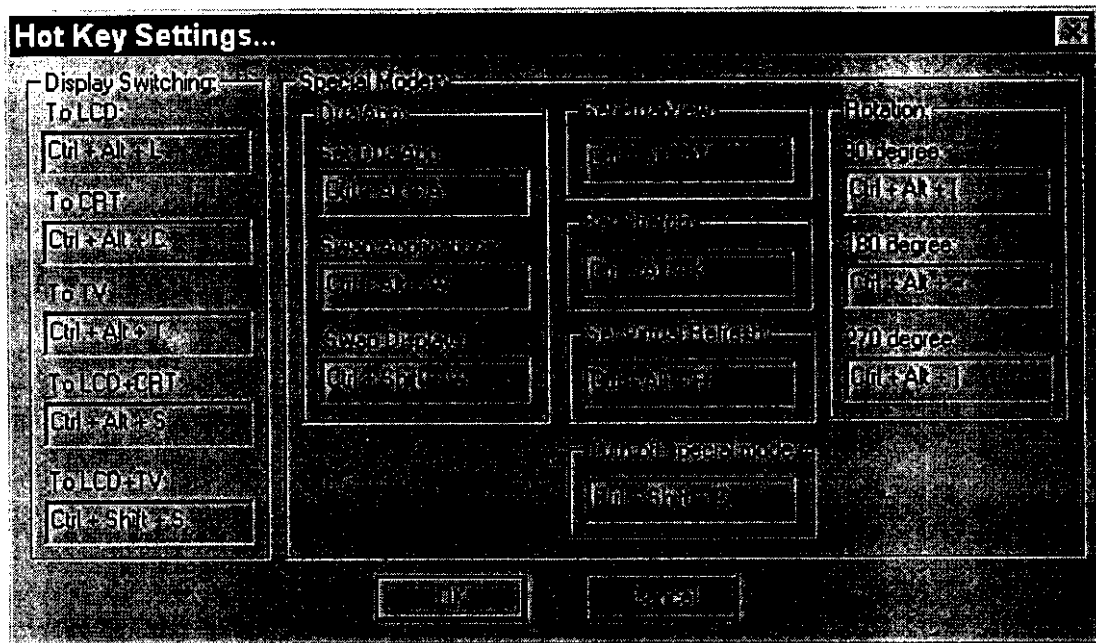


Figure 4. Hot Key Settings Dialog Box

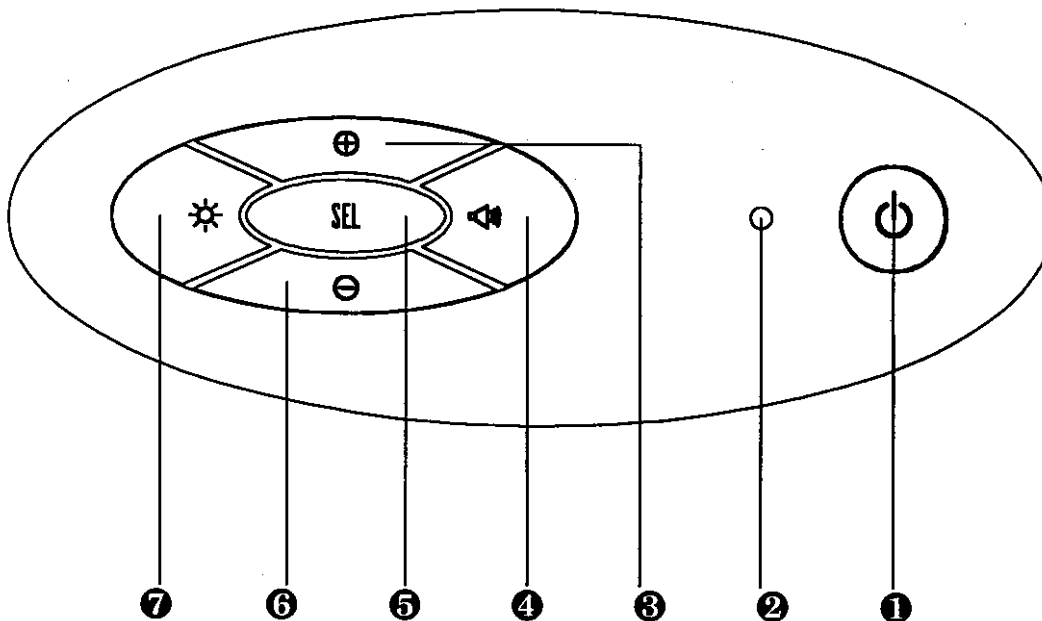
Hot Key Setting Example: Set "Ctrl-Alt-L" as the hot key to switch the display to LCD only mode.

- *Click on the hot key entry area under "To LCD:"
- *Press Control, Alt, and L key at the same time. The entry area will automatically show the "Ctrl+Alt+L" string.
- *Release all keys and the hot key is set for this function.
- *Press OK for the hot key settings to take effect.

Notes: Please do not assign the same hot key for different functions. Doing so will cause the second function to not be accessible through the hot keys.

Features

A. Front Exterior

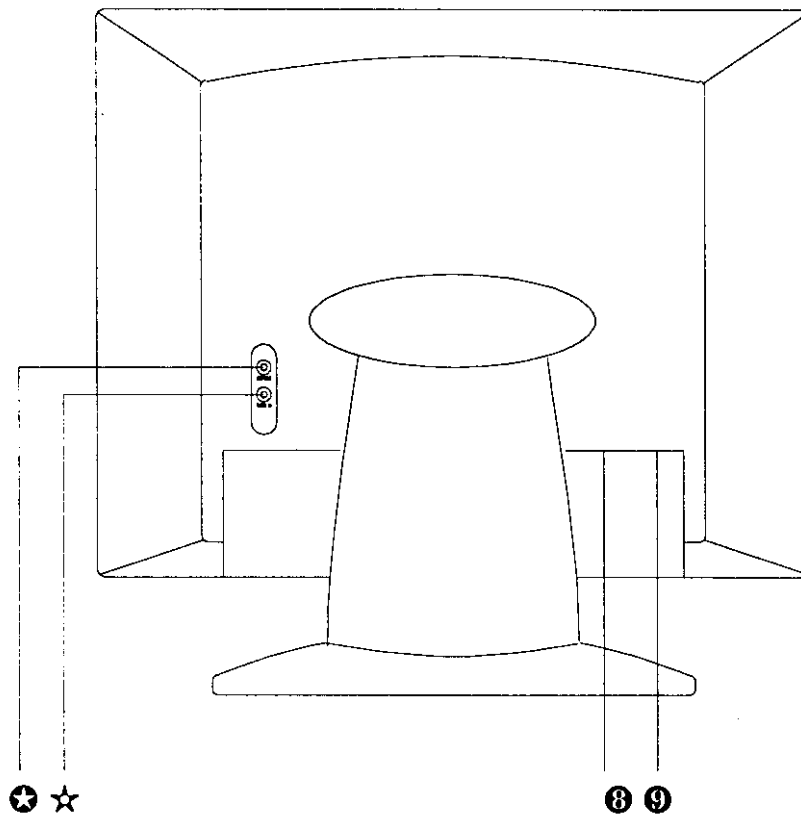


- ❶ Power On/Off
- ❷ Power Indicator
- ❸ Increase

- ❹ Audio Led
- ❺ Brightness/ Audio Control
- ❻ Decrease
- ❼ Brightness Led

- Press SEL to activate brightness and audio volume control and switch between them. The LED will light to indicate the function item. Then press + or - (❸ and ❻) to adjust the value.
- Press + and - together to mute the audio volume.

B. Rear Cover



⑧ 12 V Dc Supply Input (Power Adapter)

⑨ Signal Cable (Computer Cable)

★ Earphone

☆ Audio In

Signal Timing

This monitor has 10 factory preset timing modes.

Horizontal Resolution	Vertical Resolution	Horizontal Refresh rate	Vertical Refresh rate	Pixel
640	480	31.5 Khz	60 Hz	25.175 Mhz
640	480	37.9 Khz	72 Hz	31.500 Mhz
640	480	37.5 Khz	75 Hz	31.500 Mhz
800	600	35.1 Khz	56 Hz	36.000 Mhz
800	600	37.9 Khz	60 Hz	40.000 Mhz
800	600	48.1 Khz	72 Hz	50.000 Mhz
800	600	46.9 Khz	75 Hz	49.500 Mhz
1024	768	48.4 Khz	60 Hz	65.000 Mhz
1024	768	56.5 Khz	70 Hz	75.000 Mhz
1024	768	60.0 Khz	75 Hz	78.750 Mhz

*The panel resolution is always fixed (1024 x 768, 60 Hz) while the screen resolution is adjustable at preset mode.

Safety Precautions

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as to the user. Carefully go over the following WARNINGS before installing and keep this guide handy.

WARNINGS:

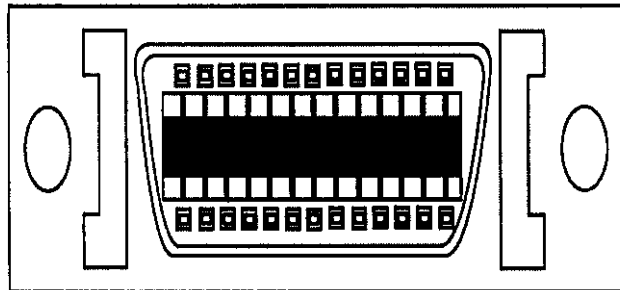
- ◆ This monitor should be operated only at the correct power sources indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your residence, consult your local dealer or power company.
- ◆ Use only the special power adapter that comes with this monitor for power input.
- ◆ Do not try to repair the monitor yourself as it contains no user-serviceable parts. This monitor should only be repaired by a qualified technician.
- ◆ Do not remove the monitor cabinet. There is high-voltage parts inside that may cause electric shock to human bodies, even when the power cord is unplugged.
- ◆ Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- ◆ Put your monitor only in a clean, dry environment. If it gets wet, unplug the power cable immediately and consult your service technician.
- ◆ Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.
- ◆ Keep the monitor away from magnetic objects, motors, TV sets, and transformer.
- ◆ Do not place heavy objects on the monitor or power cord.

26 Pin D-Sub Connector

LVDS Connector

1. DDC SDA
2. DDC SCL
3. GND
4. T1CLK 0 -
5. T1CLK 0 +
6. T1OUT2 -
7. T1OUT2+

21. T2OUT1 -
22. T2OUT1 +
23. T2OUT0 -
24. T2OUT0 +
25. GND
26. GND



8. T1OUT1 -
9. T1OUT1 +
10. T1OUT0 -
11. T1OUT0 +
12. GND
13. GND

14. FPVDD
15. GND
16. GND
17. T2CLKO -
18. T2CLKO +
19. T2OUT2 -
20. T2OUT2 +

Specifications

LCD Panel	14.5" TFT 15.1" TFT									
Power Management	Energy Star compliant VESA DPMS compatible < 5 W									
Displayable Resolution	XVGA 1024 x 768 max									
Pixel Dimension	0.288 x 0.288 mm (14.5") 0.300 x 0.300 mm (15.1")									
LCD Display Color	262,144 Color Max (18 bit)									
Viewing Angle	<table><tr><td></td><td>14.5" (typical) CR ≥ 5</td><td>14.5" (typical) CR ≥ 10</td></tr><tr><td>Horizontal</td><td>-80° ~ +80°</td><td>-60° ~ +60°</td></tr><tr><td>Vertical</td><td>-55° ~ +60°</td><td>-50° ~ +55°</td></tr></table>		14.5" (typical) CR ≥ 5	14.5" (typical) CR ≥ 10	Horizontal	-80° ~ +80°	-60° ~ +60°	Vertical	-55° ~ +60°	-50° ~ +55°
	14.5" (typical) CR ≥ 5	14.5" (typical) CR ≥ 10								
Horizontal	-80° ~ +80°	-60° ~ +60°								
Vertical	-55° ~ +60°	-50° ~ +55°								
Tilt	+20°, -5°									
Contrast Ratio	200 : 1 (14.5"), 300 : 1 (15.1")									
Brightness	200 cd/m ² (14.5"), 250 cd/m ² (15.1")									
Response Time	28 ms (typical)									
Active Display Area	294.9 mm x 251.2 mm (14.5") 307.2 mm x 260.4 mm (15.1")									
Temperature	Operating: 0°C ~ +35°C Storage: -20°C ~ +60°C									
Compliance	UL, FCC, CE, FCC-B, Energy Star, TCO (check back label)									
Power	<table><tr><td>Voltage</td><td>100-240 V</td></tr><tr><td>Consumption</td><td>30 Watts (TYP)</td></tr></table>	Voltage	100-240 V	Consumption	30 Watts (TYP)					
Voltage	100-240 V									
Consumption	30 Watts (TYP)									
Weight	<table><tr><td>Net</td><td>3.5 kgs</td></tr><tr><td>Gross</td><td>7.5 kgs</td></tr></table>	Net	3.5 kgs	Gross	7.5 kgs					
Net	3.5 kgs									
Gross	7.5 kgs									