User's Guide



Make sure to read the **Important Precautions** before using the product. Keep the User's Guide(CD) in an accessible place for future reference. See the label attached on the product and give the information to your dealer when you ask for service.



This unit has been engineered and manufactured to ensure your personal safety, however improper use may result in potential electrical shock or fire hazards. In order to allow the proper operation of all safeguards incorporated in this display, observe the following basic rules for its installation, use, and servicing.

On Safety

Use only the power cord supplied with the unit. In case you use another power cord, make sure that it is certified by the applicable national standards if not being provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

The power supply cord is used as the main disconnection device. Ensure that the socket-outlet is easily accessible after installation.

Operate the display only from a power source indicated in the specifications of this manual or listed on the display. If you are not sure what type of power supply you have in your home, consult with your dealer.

Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

Do not Open the Display.

- There are no user serviceable components inside.
- There are Dangerous High Voltages inside, even when the power is OFF.
- Contact your dealer if the display is not operating properly.

To Avoid Personal Injury :

- Do not place the display on a sloping shelf unless properly secured.
- Use only a stand recommended by the manufacturer.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.
 It can cause injury to human, problem to product and damage the display.

To Prevent Fire or Hazards:

- Always turn the display OFF if you leave the room for more than a short period of time. Never leave the display ON when leaving the house.
- Keep children from dropping or pushing objects into the display's cabinet openings. Some internal parts carry hazardous voltages.
- Do not add accessories that have not been designed for this display.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous. It can cause electric shock.

On Installation

Do not allow anything to rest upon or roll over the power cord, and do not place the display where the power cord is subject to damage.

Do not use this display near water such as near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Displays are provided with ventilation openings in the cabinet to allow the release of heat generated during operation. If these openings are blocked, built-up heat can cause failures which may result in a fire hazard. Therefore, NEVER:

- Block the bottom ventilation slots by placing the display on a bed, sofa, rug, etc.
- Place the display in a built-in enclosure unless proper ventilation is provided.
- Cover the openings with cloth or other material.
- Place the display near or over a radiator or heat source.
- Main power breaker is the power cord and this breaking device must be located at a location where it is easy to operate.

Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mar, or damage the Active Matrix LCD permanently.

Do not press the LCD screen with your finger for a long time as this may cause some afterimages.

Some dot defects may appear as Red, Green or Blue spots on the screen. However, this will have no impact or effect on the display performance.

If possible, use the recommended resolution to obtain the best image quality for your LCD display. If used under any mode except the recommended resolution, some scaled or processed images may appear on the screen. However, this is characteristic of the fixed-resolution LCD panel.

On Cleaning

- Unplug the display before cleaning the face of the display screen.
- Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the display screen because over-spraying may cause electrical shock.

On Repacking

 Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

On Disposal

- The fluorescent lamp used in this product contains a small amount of mercury.
- Do not dispose of this product with general household waste.
 Disposal of this product must be carried out in accordance to the regulations of your local authority.

NOTE

• THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTRERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT.SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE

This epuipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and the receiver.

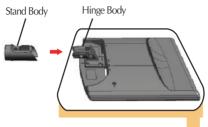
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

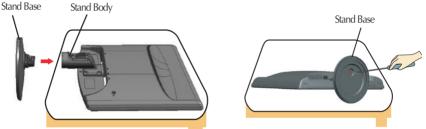
 Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

Connecting the stand

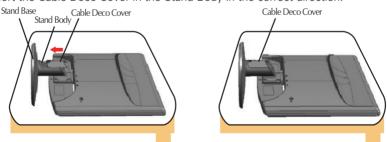
- 1. Place the monitor with its front facing downward on a soft cloth.
- 2. Assemble the Stand Body into the product in the correct direction as shown in the picture.



3. Assemble the Stand Base (Front, Rear) into the Stand Body in the correct direction, then tighten the screw as shown in the picture.



4. Insert the Cable Deco Cover in the Stand Body in the correct direction.



 $\mathbf{5.}$ Once assembled take the monitor up carefully and face the front side

Important

- This illustration depicts the general model of connection. Your monitor may differ from the items shown in the picture.
- Do not carry the product upside down holding only the stand base. The product may fall and get damaged or injure your foot.

Disassembling the stand

- $1{\color{black}{\cdot}}$ Put a cushion or soft cloth on a flat surface.
- 2. Place the monitor face down on the cushion or soft cloth.



 $\mathbf{3.}$ Slide the Cable Deco Cover out from the stand body.





4. Loosen the screw, then take off the stand base from stand body.





5. Please pull the stand body lightly to separate it from the hinge body.



Important

• Your monitor may differ from the items shown in the picture.



 Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

Positioning your display

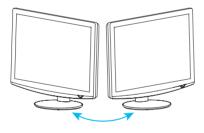
- 1. Adjust the position of the panel in various ways for maximum comfort.
 - Tilt Range: -5°~20°







Swivel: 355°

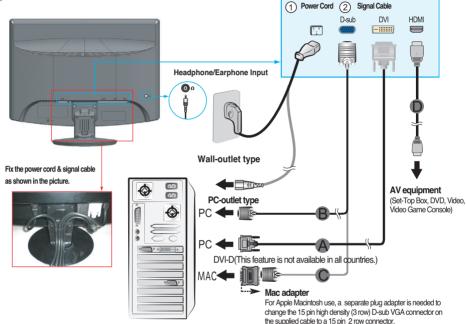


Ergonomic

It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.

Using the Computer

- 1. Make sure to turn off the computer and product. Connect the cable as below sketch map form 1 to 2.
- A Connect DVI Cable
- B Connect Dsub Cable (PC)
- Connect Dsub Cable (Mac)
- D Connect HDMI Cable



2. Insert the Cable Deco Cover in the Stand Body in the correct direction.





3. Press button on the front switch panel to turn the power on. When monitor power is turned on, the 'Self Image Setting Function' is executed automatically. (Only RGB Mode)

PROCESSING SELF

NOTE

Self Image Setting Function? This function provides the user with optimal display settings. When the user connects the monitor for the first time, this function automatically adjusts the display to optimal settings for individual input signals.
Support Function? When you encounter problems such as blurry screen, blurred letters, screen flicker or tilted screen while using the device or after changing screen resolution, press the AUTO/SET function button to improve resolution.



4. Press the **SOURCE** button at the front side of the monitor.



When connecting with a DVI signal input cable. • Select **DVI**: DVI digital signal.

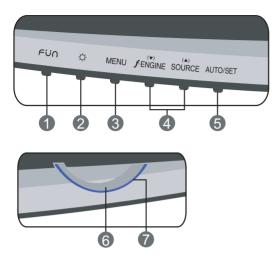
When connecting with a D-sub signal cable. • Select **RGB**: D-sub analogue signal.

When connecting with a HDMI cable.

• Select HDMI

8	INPUT	
	▶ RGB	
	DVI	
	HDMI	

Front Panel Controls



Control	Function
f UN Button	Use this button to enter EZ ZOOMING , 4:3 IN WIDE , PHOTO EFFECT , SOUND items, for more information, refer to page A16-A17.
2 ¢	Use this button to enter On Screen Display Sub-menu to adjust BRIGHTNESS directly.
MENU Button	Use this button to enter or exit from the On Screen Display.
	OSD LOCKED/UNLOCKED
OSD LOCKED	This function allows you to lock the current control settings, so that these settings are not inadvertently changed. To lock the OSD settings, press and hold the MENU button for several seconds. The message " OSD LOCKED " appears.
OSD UNLOCKED	You can unlock the OSD settings at any time by pushing the MENU button for several seconds. The message " OSD UNLOCKED " appears.

Control	Function
4 VA Buttons	Use these buttons to select or adjust functions in the On Screen Display.
▼ Button (f•ENGINE)	For more information, refer to page A18~A19.
Button (SOURCE)	Use this button to make RGB, DVI or HDMI connector active. This feature is used when two computers are connected to the display. The default setting is RGB. *HDMI is optimized on the AV equipment.
6 AUTO/SET Button	Use this button to select an icon in the On Screen Display.
	AUTO IMAGE ADJUSTMENT When adjusting your display settings, always press the AUTO/SET button prior to entering the On Screen Display(OSD). This will automatically adjust your display image to the ideal settings for the current screen resolution size (display mode).
PROCESSING AUTO	The best display mode is: W2452V : 1920 x 1200
6 Power Button	Use this button to turn the display on or off.
Power Indicator	This Indicator lights up as blue when the display is operating normally(On Mode). If the display is in Sleep Mode (Energy Saving), this indicator color changes to amber.

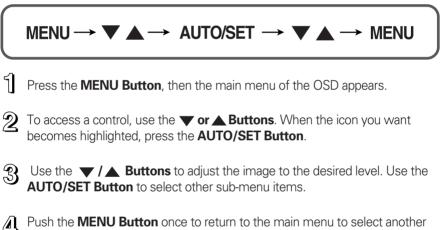
Screen Adjustment

Making adjustments to the image size, position and operating parameters of the display is quick and easy with the On Screen Display Control system. A short example is given below to familiarize you with the use of the controls. The following section is an outline of the available adjustments and selections you can make using the OSD.

NOTE

Allow the display to stabilize for at least 30 minutes before making image adjustments.

To make adjustments in the On Screen Display, follow these steps:



Push the **MENU Button** once to return to the main menu to select another function. Push the **MENU Button** twice to exit from the OSD.

The following table indicates all the On Screen Display control, adjustment, and setting menus.

Main menu	Sub-menu		R	D	н	Reference
EZ ZOOMING						To adjust the resolution
4:3 IN WIDE						To adjust the image size
	NORMAL					
рното	GAUSSIAN E	BLUR				To adjust series a color mode
EFFECT	SEPIA					To adjust screen color mode
	MONOCHRC	ME				
SOUND						To select or turn off the sound
	BRIGHTNES	S				To adjust the brightness,
PICTURE	CONTRAST					contrast and gamma of the
	GAMMA					screen
	**BLACK LE\	/EL				To set offset level
		sRGB				
	PRESET	6500K				
COLOR		9300K				To customize the color of the
	RED					screen
	GREEN					
	BLUE					
HORIZONTA		ZONTAL				To adjust the position of the
	VERTICAL					screen
TRACKING	CLOCK					To improve the clarity and stability of the screen
	PHASE					
	SHARPNESS					
	LANGUAGE					
	OSD	HORIZONTAL				
	POSITION	VERTICAL				T
SETUP	*WHITE BAL	ANCE				To customize the screen status for a user's operating
SETUP	**OVERSCAN					environment
	RTC					
	POWER IND					
	FACTORY R	ESET				
	MOVIE					
FLATRON	*INTERNET					
	**GAME	_				
	USER					To select or customize desired
F-ENGINE	*NORMAL					image settings
	**STANDARE)				
	*DEMO					
	**SPORTS					

: Adjustable
: only for RGB/DVI Input

** : only for HDMI Input

R : RGB Input

D : DVI Input

H : HDMI Input

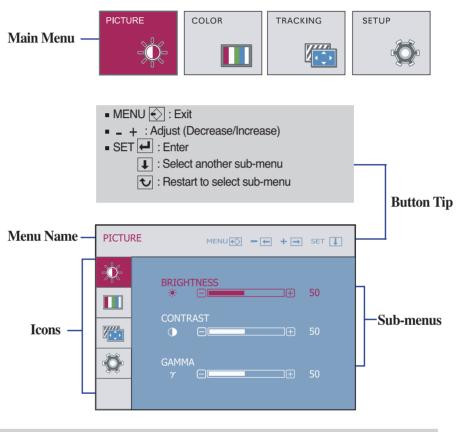
NOTE

The order of icons may differ depending on the model (A11~A19).



You were introduced to the procedure of selecting and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the all items shown on the Menu.

Press the MENU Button, then the main menu of the OSD appears.



NOTE

• OSD (On Screen Display) menu languages on the monitor may differ from the manual.

Main menu	Sub menu	Description
PICTURE PICTURE		
RGB/DVI input		
	BRIGHTNESS	To adjust the brightness of the screen.
BRIGHTNESS 50	CONTRAST	To adjust the contrast of the screen.
CONTRAST CONTRAST 50 50 50 50 50 50 50 50 50 5	GAMMA	Set your own gamma value. : -50/0/50
GAMMA 7 ₽ <u></u> 30		On the monitor, high gamma values display whitish images and low gamma values display high contrast images.
HDMI input		valace alepiay high certifact inagee.
	BLACK LEVEL	To set high or low offset level.
BRIGHTNESS		(only for HDMI input)
CONTRAST CONTRAST		
GAMMA		
BLACK LEVEL LOW		
 MENU : Exit - : Decrease + : Increase SET : Select another sub-r 	menu	

COLOR HERDED - E + III SET IIII Image: Source Image: Sou	PRESET	 sRGB: Set the screen color to fit the SRGB standard color specification. 6500K: Slightly reddish white. 9300K: Slightly bluish white.
	RED	Set your own red color levels.
• MENU : Exit	GREEN	Set your own green color levels.
 - : Decrease + : Increase SET : Select another sub-r 	BLUE menu	Set your own blue color levels.



Main menu	Sub menu	Description
TRACKING MENUE	HORIZONTAL	To move image left and right.
HORIZONTAL 50	VERTICAL	To move image up and down.
VERTICAL So VERTICAL So So		
TRACKING MENUE - (m) Set I Image: Cook in the set Image: Cook in the set Image: Set	CLOCK	To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.
SHARPNESS s	PHASE	To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.
 - : Decrease + : Increase SET : Select another sub-men 	SHARPNESS u	To adjust the clearness of the screen.

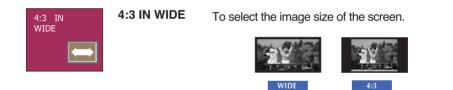
Main menu	Sub menu	Description
SETUP SETUP	LANGUAGE	To choose the language in which the control names are displayed.
SETUP MENDES - E + M SET L K LANGUAGE - ENGLISH OSD POSITION HORIZONTAL	OSD POSITION	To adjust position of the OSD window on the screen.
VERTICAL S0 VERTICAL S0 AAALOG 1220 × 1024 60H2	WHITE BALANCE	If the output of the video card is different the required specifications, the color level may deteriorate due to video
RGB/DVI input		signal distortion. Using this function, the signal level is adjusted to fit into the
Image: Second		standard output level of the video card in order to provide the optimal image. Activate this function when white and black colors are present in the screen. (only for RGB/DVI input)
HDMI input	OVERSCAN	To select the range of output image for DTV timing in HDMI input. (only for HDMI input)
OVERSCAN > ON R TC > ON FACTORY RESET > NO ANALOG 1280 x 1024 60Hz	RTC	If you set ON , you enable the Response Time Control function. If you set OFF , you disable the Response Time Control function.
 MENU : Exit - : Adjust + : Adjust Select another sub-metric sub	POWER INDICATOR	Use this function to set the power indicator on the front side of the monitor to ON or OFF . If you set OFF , it will go off. If you set ON at any time, the power indicator will automatically be turned on.
	FACTORY RESET	Restore all factory default settings except "LANGUAGE." Press the ♥, ▲ buttons to reset immediately.

If this does not improve the screen image, restore the factory default settings. If necessary, perform the white balance function again. This function will be enabled only when the input signal is an analog signal.

The OSD screen will appear when you touch the **FUN** button on the left bottom of the monitor.



Main menu	Sub menu	Description
EZ ZOOMING	EZ ZOOMING	At the current display, use ' AUTO/SET ' button to select 'EZ ZOOMING', then the display resolution is transferred to the one step low resolution. Select 'EZ ZOOMING' one more, the display is back to the original display.
		*This function is operated only if the forteManager is installed to PC. *ForteManager is not supported in HDMI input.



*4:3 : Depending on the input video signal ratio, it is automatically changed to an optimized screen ratio.

Main menu	Sub menu	Description
PHOTO EFFECT	PHOTO EFFECT	 NORMAL: The PhotoEffect function is disabled. GAUSSIAN BLUR: This option is to add the effect to the screen that the dark and sharp image becomes brighter and more blurred.
Image: Photo Effect Image: Photo	SET I MENU	 SEPIA: This option changes the screen to be Sepia tone. The Sepia tone is brown color tone.
► NC	DRMAL	- MONOCHROME: This option changed the screen to be Gray tone. The screen image is displayed with just white, black, gray colors.



To select or turn off the Buzzer sound. The Buzzer sound operates in below cases:

- DC power On
- DC power Off
- Main Button Menu On
- Fun Button Menu On
- Menu Off

Use 'AUTO/SET' button to select sound (two kinds of Buzzer sound) or turn off the sound, and use 'MENU' button to save the selection and exit the OSD menu.



The OSD screen will appear when you touch the *f*ENGINE button on the left bottom of the monitor.

Menu Name —	Ĵ . ENGINE	
Icons —	⊗ .	
Sub-menu Name —	•	MOVIE
Main menu	Sub menu	Description
FINGINE - IM + IM SET MENUE	MOVIE	This is for animation images in videos or movies.
	INTERNET GAME	This is for text images (Word processing etc). (only for RGB/DVI input) This is for game images. (only for HDMI input)
\frac{1}{2} \frac{1}{2}	NORMAL STANDARD	This is under normal operating conditions. (only for RGB/DVI input) This is under standard operating conditions. (only for HDMI input)
	DEMO SPORTS	This is just for advertising to customer in the shops. It's setting is same with Movie mode and screen is divided by half. (only for RGB/DVI input) This is for sports image. (only for HDMI input)
		*These features let you easily select the best desired image condition optimized to the environment (ambient illumination, image types etc).

SAT

Main menu	Sub men	u Description
JENGINE - Image: Amage: Amag	1	You can manually adjust brightness, ACE or RCM (only for RGB/DVI input), HUE or SATURATION (only for HDMI input). You can save or restore the adjusted value even when using a different environment.
RGB/DVI input		🗝 🛎 (Brightness): Adjusts screen brightness.
		ACE(Adaptive Clarity Enhancer): Selects the clarity mode.
		RCM(Real Color Management): Selects the color mode.
BRIGHTNESS ★ □		Not applied
ACE └		Flesh tone
RCM ## 0 ## 2		Color Enhance
SAVE ► NO		HUE: Adjust the screen hue.
HDMI input		SATURATION: Adjust the screen saturation.
		Select the save sub-menu using the AUTO/SET button and save the YES value using the $\mathbf{\Psi}$,
BRIGHTNESS		buttons.

Check the following before calling for service.

No image appears		
Is the power cord of the display connected?	 Check and see if the power cord is connected properly to the power outlet. 	
Is the power indicator light on?	Press the Power button.	
Is the power on and the power indicator blue or green?	 Adjust the brightness and the contrast. 	
Is the power indicator amber?	 If the display is in power saving mode, try moving the mouse or pressing any key on the keyboard to bring up the screen. Try to turn on the PC. 	
Do you see an "OUT OF RANGE" message on the screen?	• This message appears when the signal from the PC (video card) is out of horizontal or vertical frequency range of the display. See the 'Specifications' section of this manual and configure your display again.	
Do you see a "CHECK SIGNAL CABLE" message on the screen?	 This message appears when the signal cable between your PC and your display is not connected. Check the signal cable and try again. 	

Do you see a "OSD LOCKED" message on the screen?		
Do you see "OSD LOCKED" when you push MENU button?	• You can secure the current control settings, so that they cannot be inadvertently changed. You can unlock the OSD controls at any time by pushing the MENU button for several seconds: the message "OSD UNLOCKED " will appear.	

Display image is incorrect		
Display Position is incorrect.	 Press the AUTO/SET button to automatically adjust your display image to the ideal setting. If the results are unsatisfactory, adjust the image position using the H position and V position icon in the on screen display. 	
 On the screen background, vertical bars or stripes are visible. 	• Press the AUTO/SET button to automatically adjust your display image to the ideal setting. If the results are unsatisfactory, decrease the vertical bars or stripes using the CLOCK icon in the on screen display.	
 Any horizontal noise appearing in any image or characters are not clearly portrayed. 	 Press the AUTO/SET button to automatically adjust your display image to the ideal setting. If the results are unsatisfactory, decrease the horizontal bars using the PHASE icon in the on screen display. Check Control Panel> Display> Settings and adjust the display to the recommended resolution or adjust the display image to the ideal setting. Set the color setting higher than 24 bits (true color). 	

Important

- Check Control Panel --> Display --> Settings and see if the frequency or the resolution were changed. If yes, readjust the video card to the recommend resolution.
- Reasons for Recommending Optimal Resolution : The aspect ratio is 16:10.
 If the input resolution is not 16:10 (for instance, 16:9, 5:4, 4:3), you might encounter problems such as blurred letters, blurry screen, cut-off screen display or tilted screen.
- The setting method can differ by computer and O/S (Operation System), and resolution mentioned above may not be supported by the video card performance. In this case, please ask to the computer or the video card manufacturer.
- When HDMI PC interleaved signal (1920 x 1080i) input, static picture will be shaking, however moveable picture is not. So the recommend resolution is 1920 x 1200 @ 60Hz.

Display image is incorrect		
 The screen color is mono or abnormal. 	 Check if the signal cable is properly connected and use a screwdriver to fasten if necessary. Make sure the video card is properly inserted in the slot. Set the color setting higher than 24 bits (true color) at Control Panel - Settings. 	
The screen blinks.	 Check if the screen is set to interlace mode and if yes, change it to the recommend resolution. 	

Have you installed the display driver?		
Have you installed the display driver?	• Be sure to install the display driver from the display driver CD (or diskette) that comes with your display. Or, you can also download the driver from our web site: http://www.lge.com.	
 Do you see an "Unrecognized monitor, Plug&Play (VESA DDC) monitor found" message? 	 Make sure to check if the video card supports Plug&Play function. 	

Display	24 inches (61.13 cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating 24 inches viewable 0.270*0.270 mm pixel pitch			
Sync Input	Horizontal Freq. Vertical Freq.	Analog : 30 - 83 kHz (Automatic) Digital : 30 - 83 kHz (Automatic) 56 - 75 Hz (Automatic)		
	Input Form	Separate TTL, Positive/Negative SOG (Sync On Green) Digital (HDCP)		
Video Input	Signal Input	15 pin D-Sub 0 DVI - D connec		
	Input Form	RGB Analog (0.7	7 Vp-p/ 75 ohm), Digital, HDMI	
Resolution Max		Analog : VESA 1920 x 1200 @60 Hz Digital : VESA 1920 x 1200 @60 Hz		
	Recommend	mmend VESA 1920 x 1200 @60 Hz		
Plug&Play	DDC 2B			
Power Consumption	On Mode Sleep Mode Off Mode	: 80 W(Typ.) ≤ 2 W ≤ 1 W		
Dimensions	With S	stand	Without Stand	
&Weight	Height 46.29 cm	/ 22.58 inches / 18.22 inches / 9.55 inches	57.36 cm / 22.58 inches 40.55 cm / 15.96 inches 8.70 cm / 3.43 inches	
Tilt Range	Tilt	6.1 kg (13.45 lbs) -5°~20°		
Swivel Range	Swivel	-5 ~20 355°		
Power Input	AC 100-240V~ 50/			
•	Operating Conditions			
Environmental Conditions	Temperature Humidity	10°C to 35 °C	non-Condensing	
	Storage Conditions Temperature Humidity			
Stand Base	Attached(), Detached (O)			
Signal cable	Attached(), Detached (O)			
Signal cable	7			

NOTE

Information in this document is subject to change without notice.



Preset Modes (Resolution)

RGB/DVI Timing

Displa	y Modes (Resolution)	Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1 2 3 4 5	640 x 480 640 x 480 720 x 480 720 x 400 800 x 600	31.469 37.500 35.162 31.500 37.879 40.875	60 75 60 70 60
6 7 8 9 10 11 12 13 14	800 x 600 1024 x 768 1024 x 768 1152 x 864 1280 x 768 1280 x 768 1280 x 1024 1280 x 1024 1600 x 1200	46.875 48.363 60.023 67.500 47.776 60.289 63.981 79.976 75.000 64.674	75 60 75 75 60 75 60 75 60 75 60
15 16 *17	1680 x 1050 1680 x 1050 1920 x 1200	64.674 65.290 74.038	60 60 60

* Recommend Mode

HDMI Timing

Display /	Modes (Resolution)	Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1	480P	31.50	60
2	576P	31.25	50
3	720P	37.50	50
4	720P	45.00	60
5	1080i	28.12	50
6	1080i	33.75	60
7	1080P	56.25	50
8	1080P	67.50	60

Indicator

MODE	LED Color
On Mode	blue
Sleep Mode	amber
Off Mode	Off

Digitally yours

