



OWNER'S MANUAL

LG UltraGear™

Gaming Monitor

(LED Monitor*)

* LG LED Monitor applies LCD screen with LED backlights.

Please read this manual carefully before operating your set and retain it for future reference.

32GK650G

www.lg.com

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LICENSE

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ASSEMBLING AND PREPARING



CAUTION

- Always use genuine LG components to ensure safety and product performance.
- The product warranty will not cover damage or injury caused by the use of unauthorized components.
- It is recommended to use the supplied components.
- If you use generic cables not certified by LG, the screen may not display or there may be image problems.
- Illustrations in this document represent typical procedures, so they may look different from the actual product.
- Do not apply foreign substances (oils, lubricants, etc.) to the screw parts when assembling the product. (Doing so may damage the product.)
- Applying excessive force when tightening screws may cause damage to the monitor. Damage caused in this way will not be covered by the product warranty.
- Do not carry the monitor upside down by just holding the base. This may cause the monitor to fall off the stand and could result in personal injury.
- When lifting or moving the monitor, do not touch the monitor screen. The force applied to the monitor screen may cause damage to it.



NOTE

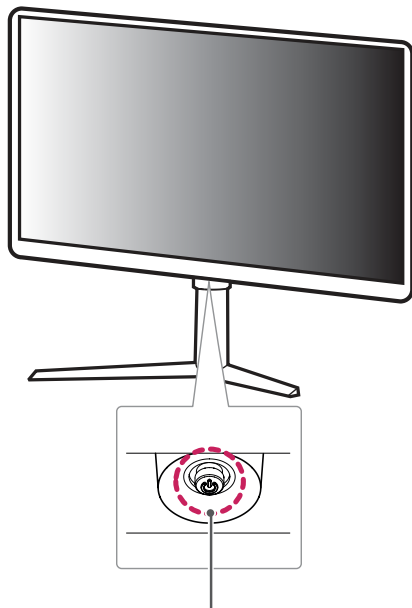
- The components may look different from those illustrated here.
- Without prior notice, all product information and specifications contained in this manual are subject to change to improve the performance of the product.
- To purchase optional accessories, visit an electronics store or an online shopping site, or contact the retailer from which you purchased the product.
- The power cord provided may differ depending upon the region.

Supported Drivers and Software

You can download and install the latest version from the enclosed CD or from the LGE website (www.lg.com).

Drivers and Software	Installation Priority
Monitor Driver	Recommended
OnScreen Control	Recommended

Product and Button Description



Joystick Button / Power LED

- On: Power on
- Off: Power off

How to Use the Joystick Button

You can easily control the functions of the monitor by pressing the joystick button or moving it left/right/up/down with your finger.

Basic Functions

		Power on	Press the joystick button once with your finger to turn on the monitor.
		Power off	Press and hold the joystick button once more than 5 seconds with your finger to turn off the monitor.
		Volume control	You can control the volume by moving the joystick button left/right.
		Controls screen brightness	You can control the screen's brightness by moving the joystick button up/down.

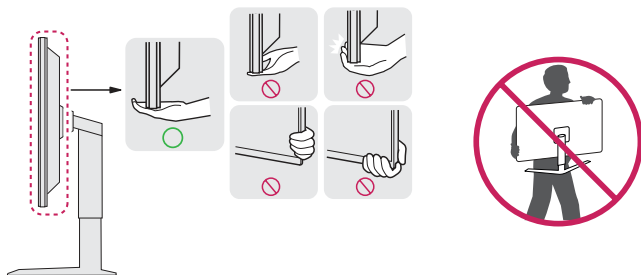
NOTE

- The joystick button is located at the bottom of the monitor.

Moving and Lifting the Monitor

When moving or lifting the monitor, follow these instructions to prevent the monitor from being scratched or damaged and to ensure safe transportation, regardless of its shape or size.

- Place the monitor in the original box or packing material before attempting to move it.
- Before moving or lifting the monitor, disconnect the power cord and all other cables.
- Hold the bottom and side of the monitor frame firmly. Do not hold the panel itself.
- When holding the monitor, the screen should face away from you to prevent it from being scratched.
- When transporting the monitor, do not expose the monitor to shock or excessive vibration.
- When moving the monitor, keep it upright and never turn the monitor on its side or tilt it sideways.

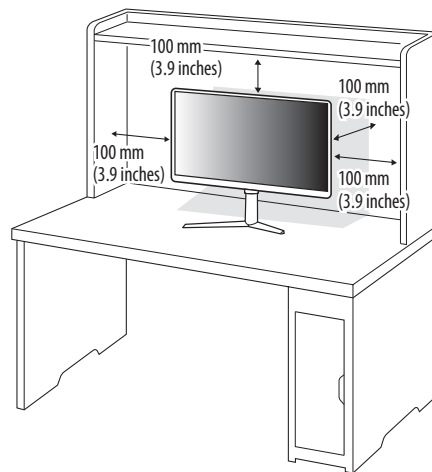


CAUTION

- Avoid touching the monitor screen as much as possible.
 - This may result in damage to the screen or some of the pixels used to create images.
- If you use the monitor panel without the stand base, its joystick button may cause the monitor to become unstable and fall, resulting in damage to the monitor or human injury. In addition, this may cause the joystick button to malfunction.

Installing on a Table

- Lift the monitor and place it on the table in an upright position. Place the monitor at least 100 mm (3.9 inches) away from the wall to ensure sufficient ventilation.

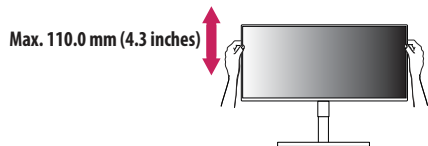


CAUTION

- Unplug the power cord before moving or installing the monitor. There is risk of electric shock.
- Make sure to use the power cord that is provided in the product package and connect it to a grounded power outlet.
- If you need another power cord, please contact your local dealer or the nearest retail store.

Adjusting the Stand Height

- 1 Place the monitor mounted on the stand base in an upright position.
- 2 Handle the monitor with both hands for safety.



! WARNING

- When adjusting the screen height, do not place your hand on the stand body to avoid injury to your fingers.

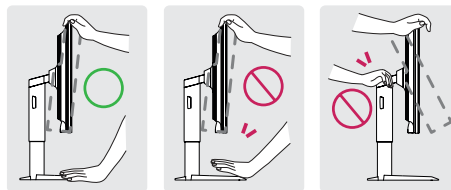
Adjusting the Angle

- 1 Place the monitor mounted on the stand base in an upright position.
- 2 Adjust the angle of the screen.

The angle of the screen can be adjusted forward or backward from -5° to 15° for a comfortable viewing experience.

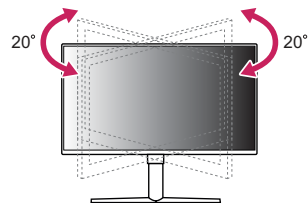
! WARNING

- To avoid injury to the fingers when adjusting the screen, do not hold the lower part of the monitor's frame as illustrated below.
- Be careful not to touch or press the screen area when adjusting the angle of the monitor.



! NOTE

- Swivel 20 degrees to the left or right and adjust the angle of the monitor to suit your view.

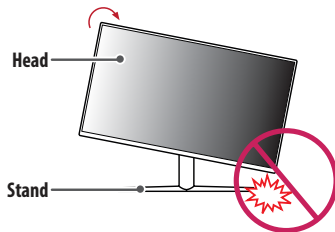


Pivot Feature

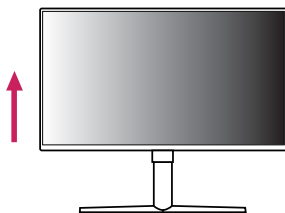
The pivot feature allows the monitor to rotate 90° clockwise.

WARNING

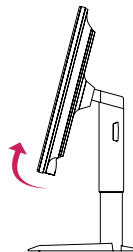
- When you rotate the screen using the pivot feature, make sure that you do not rotate the screen with excessive force or speed.
 - The head may come in contact with the stand and scratch the base.
 - Be careful as you may injure your finger by jamming it between the head and the stand.



- 1 Raise the monitor to the maximum height.



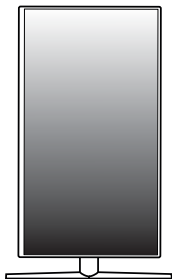
- 2 Adjust the angle of the monitor in the direction of the arrow as shown in the figure.



- 3 Rotate the monitor clockwise as shown in the figure.



- 4 Complete the installation by rotating the monitor 90° as shown below.



! NOTE

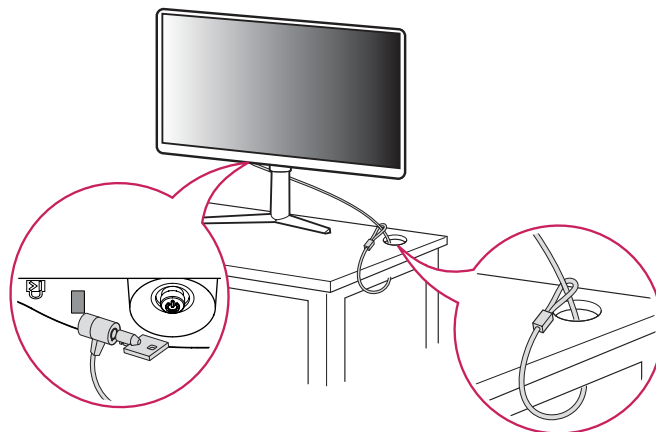
- Auto Pivot feature of the display is not supported.
- The screen can be rotated easily using the screen pivot shortcut key provided with your Windows operating system. Note that some Windows versions and some graphics card drivers may use different settings for the screen pivot key or may not support the pivot key at all.

Using the Kensington Lock

The connector for the Kensington security system is located at the bottom of the monitor.

For more information on installation and usage, refer to the Kensington lock owner's manual or visit the website at <http://www.kensington.com>.

Connect the monitor to a table using the Kensington security system cable.



! NOTE

- The Kensington security system is optional. You can obtain optional accessories from most electronics stores.

Installing the Wall Mount Plate

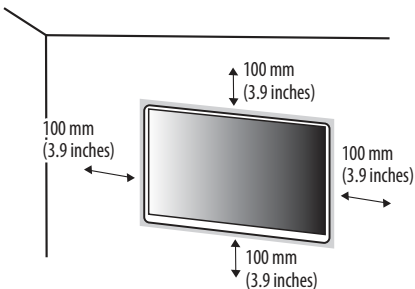
This monitor meets the specifications for the wall mount plate or other compatible devices.

! NOTE

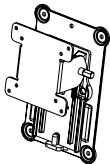
- The wall mount plate is sold separately.
- For more information on installation, refer to the wall mount plate's installation guide.
- Be careful not to apply too much force while mounting the wall mount plate as it may cause damage to the screen.
- Remove the stand before installing the monitor on a wall mount by performing the stand attachment in reverse.

Installing on the Wall

Install the monitor at least 100 mm (3.9 inches) away from the wall and leave about 100 mm (3.9 inches) of space at each side of the monitor to ensure sufficient ventilation. Detailed installation instructions can be obtained from your local retail store. Alternatively, please refer to the manual for how to install and set up a tilting wall mounting bracket.



To install the monitor to a wall, attach a wall mounting bracket (optional) to the back of the monitor. Make sure that the wall mounting bracket is securely fixed to the monitor and to the wall.

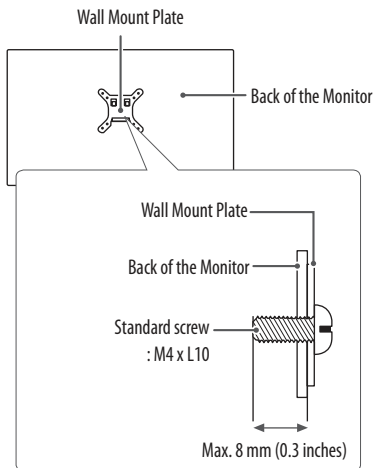
Wall Mount (mm)	100 x 100
Standard screw	M4 x L10
Number of screws	4
Wall Mount Plate (Optional)	RW120 

! NOTE

- A non-VESA standard screw may damage the product and cause the monitor to fall. LG Electronics is not liable for any accidents relating to the use of non-standard screws.
- The wall mount kit includes the installation guide and all necessary parts.
- The wall mounting bracket is optional. You can obtain optional accessories from your local dealer.
- The length of the screw may differ for each wall mounting bracket. If you use screws longer than the standard length, it may damage the inside of the product.
- For more information, please refer to the user manual for the wall mounting bracket.

⚠ CAUTION

- Unplug the power cord before moving or installing the monitor to avoid electric shock.
- Installing the monitor on the ceiling or on a slanted wall may result in the monitor falling off, which could lead to injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- To prevent injury, this apparatus must be securely attached to the wall in accordance with the installation instructions.
- Applying excessive force when tightening screws may cause damage to the monitor. Damage caused in this way will not be covered by the product warranty.
- Use the wall mounting bracket and screws that conform to VESA standards. Damage caused by the use or misuse of inappropriate components will not be covered by the product warranty.
- When measured from the back of the monitor, the length of each installed screw must be 8 mm (0.3 inches) or less.



USING THE MONITOR

- Illustrations in this manual may differ from the actual product.
- Press the joystick button, go to [Settings] → [Input], and then select the input option.

⚠ CAUTION

- Do not press the screen for a prolonged time. This may cause image distortion.
- Do not display a still image on the screen for a prolonged time. This may cause image retention. Use a PC screensaver if possible.
- When connecting the power cord to the outlet, use a grounded (3-hole) power strip or a grounded power outlet.
- The monitor may flicker when turned on in an area where the temperature is low. This is normal.
- Sometimes red, green, or blue spots may appear on the screen. This is normal.

Connecting to a PC

- This monitor supports the *Plug and Play feature.

* Plug and Play: A feature that allows you to add a device to your computer without having to reconfigure anything or install any manual drivers.

HDMI Connection

Transmits digital video and audio signals from your PC to the monitor.

⚠ CAUTION

- In HDMI input, only the RGB 4:4:4 Color Format is supported. YCbCr (YUV) is not supported.
- Using a DVI to HDMI / DP (DisplayPort) to HDMI cable may cause compatibility issues.
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
 - High-Speed HDMI™ cable
 - High-Speed HDMI™ cable with Ethernet

DisplayPort Connection

Transmits digital video and audio signals from your PC to the monitor.

! NOTE

- There may be no video or audio output depending on the DP (DisplayPort) version of the PC.
- Make sure to use the supplied DisplayPort cable of the product. Otherwise, this may cause the device to malfunction.
- If you are using a Mini DisplayPort output graphics card, use a Mini DP to DP (Mini DisplayPort to DisplayPort) cable or gender that supports DisplayPort1.2. (Sold separately)

Connecting AV Devices

HDMI Connection

HDMI transmits digital video and audio signals from your AV device to the monitor.

! NOTE

- In HDMI input, only the RGB 4:4:4 Color Format is supported. YCbCr (YUV) is not supported.
- Using a DVI to HDMI / DP (DisplayPort) to HDMI cable may cause compatibility issues.
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
 - High-Speed HDMI™ cable
 - High-Speed HDMI™ cable with Ethernet

Connecting Peripherals

Headphones Connection

Connect peripherals to the monitor via the headphones port.

! NOTE

- Peripheral devices are sold separately.
- Depending on the audio settings of the PC and external device, headphones and speaker functions may be limited.
- If you use angled earphones, it may cause a problem with connecting another external device to the monitor. Therefore, it is recommended to use straight earphones.



Angled



Straight
(Recommend)

Service only port

This port is used only for 'Service'.

USER SETTINGS

NOTE

- Your monitor's OSD (On Screen Display) may differ slightly from that shown in this manual.

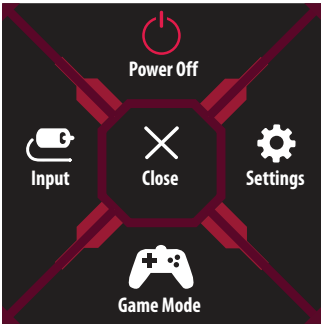
Activating the Main Menu



- 1 Press the joystick button on the bottom of the monitor.
- 2 Move the joystick up/down and left/right to set the options.
- 3 Press the joystick button once more to exit the main menu.

Button	Menu Status		Description
	Main menu disabled		Enables the main menu.
	Main menu enabled		Exits the main menu. (Holding down the button more than 5 seconds to turn off the monitor. You can turn off the monitor this way at any time, including when the OSD is on.)
	◀	Main menu disabled	Adjusts the monitor volume level.
		Main menu enabled	Enters the [Input] features.
	▶	Main menu disabled	Adjusts the monitor volume level.
		Main menu enabled	Enters the [Settings] feature.
	▲	Main menu disabled	Adjusts the monitor brightness level.
		Main menu enabled	Turns off the monitor.
	▼	Main menu disabled	Adjusts the monitor brightness level.
		Main menu enabled	Enters the [Game Mode] feature.

Main Menu Features



Main Menu	Description
[Input]	Sets input mode.
[Power Off]	Turns off the monitor.
[Settings]	Configures the screen settings.
[Game Mode]	Sets the game mode for gaming.
[Close]	Closes the main menu.

Menu Settings

- 1 To view the OSD menu, press the joystick button at the bottom of the monitor and then enter the [Settings].
- 2 Move the joystick up/down and left/right to set the options.
- 3 To return to the upper menu or set other menu items, move the joystick to ◀ or pressing (⏮) it.
- 4 If you want to exit the OSD menu, move the joystick to ▶ until you exit.



[Game Mode]



[Game Adjust]



[Picture Adjust]



[Input]



[General]

Game Mode

[Settings] > [Game Mode]		Description
[Game Mode]	[Gamer 1]	In [Gamer 1] and [Gamer 2] mode, you can save customized settings for [Black Stabilizer] and [Response Time]. Select the desired mode for use.
	[Gamer 2]	
	[FPS]	This mode is optimized for FPS games. It is suitable for very dark FPS games.
	[RTS]	This mode is optimized for RTS Game.
	[Reader]	Optimizes the screen for viewing documents. You can brighten the screen in the OSD menu.

Game Adjust

[Settings] > [Game Adjust]		Description
[Game Adjust]	[Overclock]	[On] Sets [Overclock] to a higher refresh rate than specified by the panel specification.
		[Off] Disables the [Overclock] improvement feature.
		! NOTE <ul style="list-style-type: none"> After the monitor reboots, change the maximum refresh rate setting in the NVIDIA control panel. If the screen display appears abnormal, turn off the [Overclock] setting. The function can only be used through DisplayPort. The [Overclock] function's features/performance may vary depending on the graphics card or gaming content. We do not guarantee the performance of the function and are not responsible for any side effects that may occur from its activation.
	[Black Stabilizer]	You can control the black contrast to have better visibility in dark scenes. You can easily distinguish objects on dark game screens.
		[High] Sets the black stabilizer to [High].
		[Middle] Sets the black stabilizer to [Middle].
		[Low] Sets the black stabilizer to [Low].
		[Off] Does not use the black stabilizer improvement feature.

[Settings] > [Game Adjust]		Description
[Game Adjust]	[Response Time]	Sets a response time for displayed pictures based on the speed of the screen. For a normal environment, it is recommended that you use [Fast]. For a fast-moving picture, it is recommended that you use [Faster]. Setting to [Faster] may cause image sticking.
		[Faster] Sets the response time to [Faster].
		[Fast] Sets the response time to [Fast].
		[Normal] Sets the response time to [Normal].
		[Off] Does not use the response time improvement feature.
	[Cross Hair]	Cross hair provides a mark on the center of the screen for First Person Shooter (FPS) games. Users can select the cross hair that fits their gaming environment among four different cross hairs. <ul style="list-style-type: none"> When the monitor is off or enters energy saving mode, the cross hair feature is automatically turned off.
	[Game Reset]	Returns game to the default settings.

Picture Adjust

[Settings] > [Picture Adjust]		Description
[Picture Adjust]	[Brightness/Contrast]	Adjusts the color contrast and brightness of the screen.
	[Gamma]	Custom gamma settings: [Mode 1], [Mode 2], [Mode 3]. The higher the gamma value, the darker the image becomes. Likewise, the lower the gamma value, the lighter the image becomes.
	[Color Temp]	[Custom] The user can adjust it to red, green, or blue by customization.
		[Warm] Sets the screen color to a reddish tone.
		[Medium] Sets the screen color to between a red and blue tone.
		[Cool] Sets the screen color to a bluish tone.
	[R/G/B]	You can customize the picture color using red, green, and blue colors.
	[Picture Reset]	Returns picture and color to the default settings.

Input

[Settings] > [Input]		Description	
[Input]	[Input List]	Selects the input mode.	
	[Aspect Ratio]	Adjusts the aspect ratio of the screen.	
		[Full Wide]	Displays the video in widescreen, regardless of the video signal input.
		[Original]	Displays video according to the aspect ratio of the video signal input.
		[Just Scan]	The aspect ratio is not adjusted from the original.
		<p>! NOTE</p> <ul style="list-style-type: none"> The display may look the same for [Full Wide], [Original], and [Just Scan] options at the recommended resolution. 	

General

[Settings] > [General]		Description	
[General]	[Language]	Sets the menu screen to the desired language.	
	[Power LED]	Turns the power LED on the bottom of the monitor on or off.	
		[On]	<p>The power LED turns on automatically.</p> <ul style="list-style-type: none"> On Mode: Red Sleep Mode: Flashing Red Off Mode: Off
		[Off]	The power LED turns off.
	[Automatic Standby]	<p>Feature that automatically turns off the monitor when there is no movement on the screen for a period of time. You can set a timer for the auto-off function. ([Off], [4H], [6H], and [8H])</p>	

[Settings] > [General]		Description
[General]	[OSD Lock]	This feature disables the configuration and adjustment of menus.
		[On] Enables [OSD Lock].
		[Off] Disables [OSD Lock].
		<p>! NOTE</p> <ul style="list-style-type: none"> The menus except the menus below are disabled. <ul style="list-style-type: none"> [Picture Adjust] → [Brightness/Contrast] [Input] [General] → [OSD Lock], [Information]
	[Deep Sleep]	This feature turns the monitor off when there is no signal detected from the HDMI or DisplayPort input after a certain amount of time.
		[On] Enables [Deep Sleep].
		[Off] Disables [Deep Sleep].
	[Information]	The following display information will be shown; the model, total power on time, resolution, refresh rate, mode and input source.
	[Reset to Initial Settings]	Restores the default settings.

TROUBLESHOOTING

Nothing is displayed on the screen.	
Is the monitor's power cord plugged in?	<ul style="list-style-type: none"> • Check if the power cord is correctly plugged into the power outlet.
Is the monitor's adapter plugged in?	<ul style="list-style-type: none"> • Make sure to use the adapter that is provided in the product package
Is the power LED on?	<ul style="list-style-type: none"> • Check the power cable connection and press the power button.
Is the power on and the power LED displaying red?	<ul style="list-style-type: none"> • Check that the connected input is enabled ([Settings] → [Input]).
Is the [The screen is not currently set to the recommended resolution. If you have no video or the screen flickers, see the troubleshooting guide in the product owner's manual.] message being displayed?	<ul style="list-style-type: none"> • This occurs when signals transferred from the PC (graphics card) are out of the recommended horizontal or vertical frequency range of the monitor. Please see the Product Specification section of this manual to set the appropriate frequency.
Is the [No Signal] message being displayed?	<ul style="list-style-type: none"> • This is displayed when the signal cable between the PC and the monitor is missing or disconnected. Check the cable and reconnect it.
Screen display is unstable and shaky. / Images displayed on the monitor leave shadow trails.	
Did you select the appropriate resolution?	<ul style="list-style-type: none"> • If the selected resolution is HDMI 1080i 60/50 Hz (interlaced), the screen may be flickering. Change the resolution to 1080p or the recommended resolution. • Not setting the graphics card to the recommended (optimal) resolution may result in blurred text, a dimmed screen, a truncated display area or misalignment of the display. • The setting methods may be different depending on the computer or operating system, and some resolutions may not be available depending on the performance of the graphics card. If this is the case, contact the manufacturer of the computer or graphics card for assistance.
Does image sticking occur even when the monitor is turned off?	<ul style="list-style-type: none"> • Displaying a still image for a prolonged time may cause damage to the screen, resulting in the retention of the image. • To extend the lifetime of the monitor, use a screensaver.
Are there spots on the screen?	<ul style="list-style-type: none"> • When using the monitor, pixilated spots (red, green, blue, white, or black) may appear on the screen. This is normal for an LCD screen. It is not an error, nor is it related to the monitor's performance.

Some features are disabled.	
Are some functions not available when you press the Menu button?	<ul style="list-style-type: none"> • The OSD is locked. Disable [OSD Lock] in [General].
Do you see an "Unrecognized monitor, Plug and Play (VESA DDC) monitor found" message?	
Have you installed the display driver?	<ul style="list-style-type: none"> • 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: www.lg.com. • Make sure to check if the graphics card supports Plug and Play function.
No sound from the headphone port.	
Are images displayed without sound?	<ul style="list-style-type: none"> • Make sure that the headphone port connections are made properly. • Try increasing the volume with the joystick. • Set the audio output of the PC to the monitor you are using. (The settings may differ depending on the operating system (OS) you use.)

PRODUCT SPECIFICATION

ENGLISH

Color Depth	8-bit color is supported.		
Resolution	HDMI	Max Resolution	2560 x 1440 @ 60 Hz
		Recommended Resolution	2560 x 1440 @ 60 Hz
	DP	Max Resolution	2560 x 1440 @ 144 Hz
			2560 x 1440 @ 165 Hz ([Overclock] : [On])**
		Recommended Resolution	2560 x 1440 @ 60 Hz
Power Sources	Power Rating	19 V --- 3.3 A	
	Power Consumption	Operating Mode: 55 W (Typical)* Sleep Mode: ≤ 0.5 W ([Deep Sleep] : [On]) Off Mode: ≤ 0.3 W ([Deep Sleep] : [On])	
AC/DC Adapter	DA-65G19, manufactured by Asian Power Devices Inc. Output: 19 V --- 3.42 A		
	LCAP39, manufactured by LIEN CHANG ELECTRONIC ENTERPRISE Output: 19 V --- 3.42 A		

Environmental Conditions	Operating Conditions	Temperature	0 °C to 40 °C (32 °F to 104 °F)
		Humidity	Less than 80 %
	Storing Conditions	Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
		Humidity	Less than 85 %
Dimensions	Monitor Size (Width x Height x Depth)		
	With Stand	715.2 x 603.9 x 272.2 (mm) 28.1 x 23.7 x 10.7 (inches)	
	Without Stand	715.2 x 423.9 x 57.1 (mm) 28.1 x 16.6 x 2.2 (inches)	
Weight (Without Packaging)	With Stand	8.3 kg (18.3 lbs)	
	Without Stand	6.5 kg (14.3 lbs)	

Specifications are subject to change without notice.

* The Operating Mode of Power Consumption is measured with LGE test standard. (Full White pattern, Maximum resolution)

* The Power Consumption level can be different by operating condition and monitor setting.

** The [Overclock] function's features/performance may vary depending on the graphics card or gaming content.

We do not guarantee the performance of the function and are not responsible for any side effects that may occur from its activation.

Factory Support Mode

(Preset Mode, HDMI/ DisplayPort PC)

Preset Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Polarity (H/V)	Remarks
640 x 480	31.469	59.94	-/-	HDMI/ DisplayPort
800 x 600	37.879	60.317	+/+	HDMI/ DisplayPort
1024 x 768	48.363	60.0	-/-	HDMI/ DisplayPort
2560 x 1440	88.79	59.95	+/-	HDMI/ DisplayPort
2560 x 1440	127.39	84.98	+/-	DisplayPort
2560 x 1440	150.92	99.95	+/-	DisplayPort
2560 x 1440	183.00	120.00	+/-	DisplayPort
2560 x 1440	222.19	144.00	+/-	DisplayPort
2560 x 1440	240.73	165.00	+/-	DisplayPort ([Overclock])

G-SYNC Monitor

- The monitor is purposely supporting the NVIDIA G-SYNC technology and targeting NVIDIA GPU.
- Requirement for using G-SYNC
 - Supported Interface: DisplayPort (System must support DisplayPort 1.2 directly from the GPU.)
 - Supported Graphic Card: A graphic card that supports NVIDIA's G-SYNC is necessary.
 - Supported Version: Make sure to update the graphic card to the latest driver.
- For more information and requirement, refer to NVIDIA website at <http://www.geforce.com/hardware/technology/g-sync>.



This device can be used in all regions. Read the owner's manual (CD) carefully and keep it at hand.
Please note that the label attached to the product provides information for technical support.

Model _____

Serial No. _____

Supplier's Declaration of Conformity

Trade Name	LG
Responsible Party	LG Electronics USA, Inc.
Address	1000 Sylvan Ave Englewood Cliffs, NJ 07632
Telephone	(201)266-2215