

## www.philips.com/welcome

EN	User manual		
	Customer care and warranty	23	
	Troubleshooting & FAQs	29	



## **Table of Contents**

1.	Important1
	1.1 Safety precautions and maintenance1
	1.2 Notational Descriptions2
	1.3 Disposal of product and packing
	material3
_	
2.	Setting up the monitor4
	2.1 Installation4
	2.2 Operating the monitor5
	2.3 Remove Base Stand and Base7
	2.4 Remove the protective glass8
3.	lucasa Ostinaisatian
٥.	Image Optimization9 3.1 SmartContrast9
	3.2 Philips SmartControl Lite9
	3.2 Thinps SmartControl Lite
4.	Technical Specifications16
	4.1 Resolution & Preset Modes18
5.	Power Management19
6.	Regulatory Information20
7.	Customer care and warrant23
٠.	7.1 Philips' Flat Panel Monitors Pixel
	Defect Policy23
	7.2 Customer Care & Warranty25
	7.2 Customer Care a vvarianty23
8.	Troubleshooting & FAQs29
	8.1 Troubleshooting29
	8.2 General FAOs30

## 1. Important

This electronic user's guide is intended for anyone who uses the Philips monitor. Take time to read this user manual before you use your monitor. It contains important information and notes regarding operating your monitor.

The Philips guarantee applies provided the product is handled properly for its intended use, in accordance with its operating instructions and upon presentation of the original invoice or cash receipt, indicating the date of purchase, dealer's name and model and production number of the product.

## 1.1 Safety precautions and maintenance

## Warnings

Use of controls, adjustments or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards and/or mechanical hazards.

Read and follow these instructions when connecting and using your computer monitor.

#### Operation

- Please Keep the monitor out of direct sunlight, very strong bright lights and away from any other heat source. Lengthy exposure to this type of environment may result in discoloration and damage to the monitor.
- Remove any object that could fall into ventilation holes or prevent proper cooling of the monitor's electronics.
- Do not block the ventilation holes on the cabinet.
- When positioning the monitor, make sure the power plug and outlet are easily accessible.
- If turning off the monitor by detaching the power cable or DC power cord, wait for 6 seconds before attaching the power cable or DC power cord for normal operation.

- Please use approved power cord provided by Philips all the time. If your power cord is missing, please contact with your local service center. (Please refer to Customer Care Consumer Information Center)
- Do not subject the monitor to severe vibration or high impact conditions during operation.
- Do not knock or drop the monitor during operation or transportation.

#### Maintenance

- To protect your monitor from possible damage, do not put excessive pressure on the LCD panel. When moving your monitor, grasp the frame to lift; do not lift the monitor by placing your hand or fingers on the LCD panel.
- Unplug the monitor if you are not going to use it for an extensive period of time.
- Unplug the monitor if you need to clean it with a slightly damp cloth. The screen may be wiped with a dry cloth when the power is off. However, never use organic solvent, such as, alcohol, or ammonia-based liquids to clean your monitor.
- To avoid the risk of shock or permanent damage to the set, do not expose the monitor to dust, rain, water, or excessive moisture environment.
- If your monitor gets wet, wipe it with dry cloth as soon as possible.
- If foreign substance or water gets in your monitor, please turn the power off immediately and disconnect the power cord. Then, remove the foreign substance or water, and send it to the maintenance center.
- Do not store or use the monitor in locations exposed to heat, direct sunlight or extreme cold.
- In order to maintain the best performance of your monitor and use it for a longer lifetime, please use the monitor in a location that falls within the following temperature and humidity ranges.

#### l. Important

- Temperature: 0-40°C 32-95°F
- Humidity: 20-80% RH

## Important information for Burn-in/Ghost image

Always activate a moving screen saver program when you leave your monitor unattended. Always activate a periodic screen refresh application if your monitor will display unchanging static content. Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "after-imaging" or "ghost imaging", on your screen. "Burn-in", "after-imaging", or "ghost imaging" is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "after-imaging" or "ghost imaging" will disappear gradually over a period of time after the power has been switched off.

## Warning

Failure to activate a screen saver, or a periodic screen refresh application may result in severe" burn-in" or "after-image" or "ghost image" symptoms will not disappear and cannot be repaired. The damage mentioned above is not covered under your warranty.

#### Service

- The casing cover should be opened only by qualified service personnel.
- If there is any need for any document for repair or integration, please contact with your local service center. (please refer to the chapter of "Consumer Information Center")
- For transportation information, please refer to "Technical Specifications".
- Do not leave your monitor in a car/trunk under direct sun light.

### ■ Note

Consult a service technician if the monitor does not operate normally, or you are not sure what procedure to take when the operating instructions given in this manual have been followed.

## 1.2 Notational Descriptions

The following subsections describe notational conventions used in this document.

#### Notes, Cautions and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold or italic type. These blocks contain notes, cautions or warnings. They are used as follows:

## **⊜** Note

This icon indicates important information and tips that help you make better use of your computer system.

## Caution

This icon indicates information that tells you how to avoid either potential damage to hardware or loss of data.

### Warning

This icon indicates the potential for bodily harm and tells you how to avoid the problem.

Some warnings may appear in alternate formats and may not be accompanied by an icon. In such cases, the specific presentation of the warning is mandated by the relevant regulatory authority.

# 1.3 Disposal of product and packing material

#### Waste Electrical and Electronic Equipment-WEEE



This marking on the product or on its packaging illustrates that, under European Directive 2002/96/EC governing used electrical and electronic appliances, this product may not be disposed of with normal household waste. You are responsible for disposal of this equipment through a designated waste electrical and electronic equipment collection. To determine the locations for dropping off such waste electrical and electronic, contact your local government office, the waste disposal organization that serves your household or the store at which you purchased the product.

Your new monitor contains materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and to minimize the amount to be disposed of.

All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into mono materials.

Please find out about the local regulations on how to dispose of your old monitor and packing from your sales representative.

## Taking back/Recycling Information for Customers

Philips establishes technically and economically viable objectives to optimize the environmental performance of the organization's product, service and activities.

From the planning, design and production stages, Philips emphasizes the important of making products that can easily be recycled. At Philips, end-of-life management primarily entails participation in national take-back initiatives and recycling programs whenever possible, preferably in cooperation with competitors, which recycle all materials (products and related packaging material) in accordance with all Environmental Laws and taking back program with the contractor company.

Your display is manufactured with high quality materials and components which can be recycled and reused.

To learn more about our recycling program please visit

http://www.philips.com/sites/philipsglobal/about/sustainability/ourenvironment/productrecyclingservices.page

## 2. Setting up the monitor

### 2.1 Installation

#### Package contents











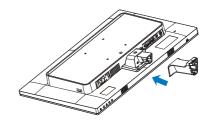


#### 2 Install base stand

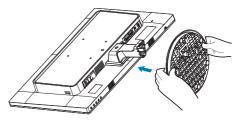
1. Place the monitor face down on soft and smooth surface taking care to avoid scratching or damaging the screen.



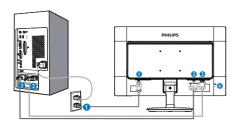
2. Attach the base column with the monitor until it clicks into position.



3. Hold the monitor base stand with both hands and firmly insert the base stand into the base column.



### Connecting to your PC



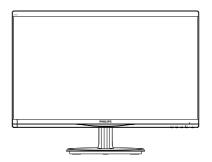
- 1 AC power input
- 2 VGA input
- 3 DVI-D input
- 4 Kensington anti-theft lock

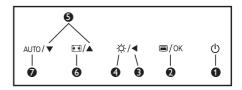
#### Connect to PC

- 1. Connect the power cord to the back of the monitor firmly.
- 2. Turn off your computer and unplug its power cable.
- 3. Connect the monitor signal cable to the video connector on the back of your computer.
- 4. Plug the power cord of your computer and your monitor into a nearby outlet.
- 5. Turn on your computer and monitor. If the monitor displays an image, installation is complete.

## 2.2 Operating the monitor

### 1 Front view product description



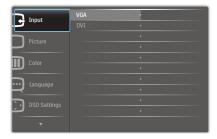


0	Ф	Switch monitor's power ON and OFF.
2	■/OK	Access the OSD menu. Confirm the OSD adjustment.
3	•	Return to previous OSD level.
4	Ö	Adjust the brightness level.
6	<b>A V</b>	Adjust the OSD menu.
6		Change display format.
0	AUTO	Automatically adjust the monitor.

#### Description of the On Screen Display

#### What is On-Screen Display (OSD)?

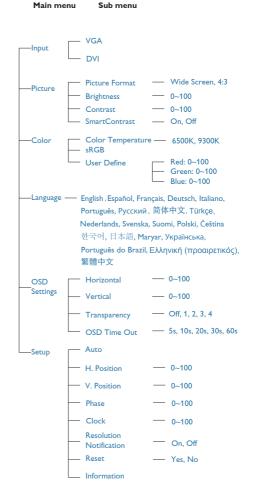
On-Screen Display (OSD) is a feature in all Philips LCD monitors. It allows an end user to adjust screen performance or select functions of the monitors directly through an on-screen instruction window. A user friendly on screen display interface is shown as below:



## Basic and simple instruction on the control keys

#### The OSD Menu

Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.



#### 2. Setting up the monitor

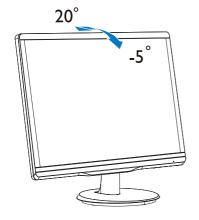
#### 3 Resolution notification

This monitor is designed for optimal performance at its native resolution, 1920 × 1080 @ 60 Hz. When the monitor is powered on at a different resolution, an alert is displayed on screen: Use 1920 × 1080 @ 60 Hz for best results.

Display of the native resolution alert can be switched off from Setup in the OSD (On Screen Display) menu.

#### 4 Physical Function

Tilt



#### 2.3 Remove Base Stand and Base

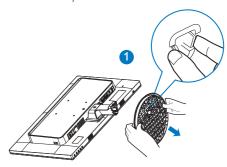
#### Remove the Base Stand

Before you start disassembling the monitor base, please follow the instructions below to avoid any possible damage or injury.

 Place the monitor face down on a smooth surface, taking care to avoid scratching or damaging the screen.



2. Press the locking clips to detach the base stand away from the base column.

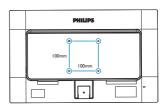


Press the release button to detach the base column.



### **⊜** Note

This monitor accepts a 100mm × 100mm mounting interface.



## Caution

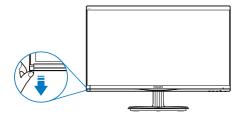
For use only with UL Listed Wall Mount Bracket with minimum weight/load 3.5Kg

## 2.4 Remove the protective glass

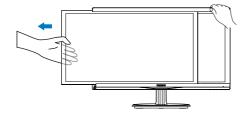
### Remove the protective glass

Before you start to remove the protective glass, please follow the instructions below to avoid any possible damage or injury.

1. Pull out the stopper on the left hand side of the monitor.



2. Slide out the glass.



## 3. Image Optimization

#### 3.1 SmartContrast

#### 1 What is it?

A unique technology that dynamically analyzes displayed content and automatically optimizes an LCD monitor's contrast ratio for maximum visual clarity and viewing enjoyment, stepping up backlighting for clearer, crisper and brighter images or dimming backlighting for clear display of images on dark backgrounds.

#### 2 Why do I need it?

You want the very best visual clarity and viewing comfort for every type of content. SmartContrast dynamically controls contrast and adjusts backlighting for clear, crisp, bright gaming and video images or displays clear, readable text for office work. By reducing your monitor's power consumption, you save on energy costs and extend the lifetime of your monitor.

#### 3 How does it work?

When you activate SmartContrast, it will analyse the content you are displaying in real time to adjust colors and control backlight intensity. This function will dynamically enhance contrast for a great entertainment experience when viewing videos or playing games.

## 3.2 Philips SmartControl Lite

The new SmartControl Lite software by Philips allows you to control your monitor via an easy to use on-screen graphic interface. Complicated adjustments are a thing of the past as this user friendly software guides you through fine-tuning resolution, Color calibration, Clock/Phase adjustments, RGB White point adjustment, etc.

Equipped with latest technology in core algorithm for fast processing and response, this Windows 7 compliant eye catching animated Icon based software is ready to enhance your experience with Philips monitors!

#### Installation

- Follow the instruction and complete the installation.
- You can launch after installation is completed.
- If you want to launch later, you can either click the shortcut on desktop or toolban



#### First launch -Wizard

- The first time after installation of SmartControl Lite, it will automatically go to Wizard for first time launch.
- The wizard will guide you through adjusting your monitor performance step by step.
- You can go to Plug-in menu to launch wizard later on as well.
- You can adjust more options without wizard by Standard pane.



### 2 Start with Standard pane:

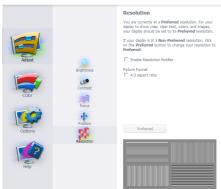
### Adjust menu:

- Adjust Menu allow you to adjust Brightness, Contrast, Focus, Position and Resolution.
- You can follow the instruction and do the adjustment.
- Cancel prompts user if you want to cancel installation.









#### Color menu:

- Color Menu allow you to adjust RGB, Black Level, White Point, and Color Calibration.
- You can follow the instruction and do the adjustment.
- Refer to below table for sub-menu item base on your input.
- Example for Color Calibration:



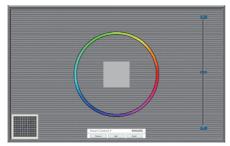






- 1. "Show Me" starts color calibration tutorial.
- 2. Start starts the 6-step color calibration sequence.
- 3. Quick View loads the before/after images.
- 4. To return to Color home pane, click the **Cancel** button.
- 5. Enable color calibration by default is on. If unchecked, does not allow for color calibration to happen, dimes out start and quick view buttons.
- 6. Must have patent info in calibration screen.

#### First color Calibration Screen:



- Previous button is disabled until the second color screen.
- Next goes to the succeeding target (6-targets).
- Final next goes File>Presets pane.

• Cancel closes the UI and returns to the plug in page.

Options>Preferences - Will only be active when selecting Preferences from the dropdown Options menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available.



- Displays current preference settings.
- A checked box enables the feature. The check box is a toggle.
- Enable Context Menu on desktop is checked (On) by default. Enable Context menu displays SmartControl Lite selections for Select Preset and Tune Display in the desktop right-click context menu. Disabled removes SmartControl Lite from the right click context menu.
- Enable Task Tray icon is checked (On) by default. Enable context menu shows the task tray menu for SmartControl Lite. A right click on the task tray icon displays the menu options for Help, Technical Support, Check for Upgrade, About, and Exit. When Enable task tray menu is disabled, the task tray icon will only display EXIT.
- Run at Startup is checked (On) by default.
  When disabled, SmartControl Lite will not
  launch at start or be in the task tray. The
  only way to launch SmartControl Lite is
  either from the desktop short cut or from

3. Image Optimization

the program file. Any preset set to run at startup will not load when this box is unchecked (Disabled).

• Enable transparency mode (Windows 7, Vista, XP). Default is 0% Opaque.

Options>Input - Will only be active when selecting Input from the drop-down Options menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available. All other SmartControl Lite tabs are not available.



- Display the Source instruction pane and current input source setting.
- On single input displays, this pane will not be visible.

Options>Audio - Will only be active when selecting Audio from the drop-down Options menu.

On a non-supported display capable of DDC/Cl, only the Help and Options tabs are available.



Help>User Manual - Will only be active when selecting User Manual from the drop-down Help menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available.



Help>Version - Will only be active when selecting Version from the drop- down Help menu. On a non-supported display capable of

3. Image Optimization

DDC/Cl, only the Help and Options tabs are available.



#### Context Sensitive menu

The Context Sensitive menu is Enabled by default. If Enable Context Menu has been checked in the Options>Preferences pane, then the menu will be visible.



#### The Context Menu has three entries:

- SmartControl Lite When selected the About Screen is displayed.
- Select Preset Provides a hierarchical menu of saved presets for immediate use.
   A check mark shows the currently selected

- preset. Factory Preset can also be called from the drop down menu.
- Tune Display Opens the SmartControl Lite control panel.

#### Task Tray Menu Enabled

The task tray menu can be displayed by rightclicking on the SmartControl Lite icon from the task tray. Left Click will launch the application.



#### The task tray has five entries:

- Help Access to User Manual file: Open User Manual file using the default browser window.
- Technical Support displays the tech support page.
- Check for Update takes the user to PDI Landing and checks the user's version against the most current available.
- About Displays detailed reference information: product version, release information, and product name.
- Exit Close SmartControl Lite.

To run SmartControl Lite again either select SmartControl Lite from Program menu, doubleclick the desktop PC icon or restart the system.



#### Task Tray Menu Disabled

When the Task Tray is disabled in the preference folder, only the EXIT selection is available. To completely remove SmartControl Lite from the task tray, disable Run at Startup in Options>Preferences.



All the illustrations in this section are for reference only. SmartControl software version might be changed without notification. Please always check official Portrait website <a href="https://www.portrait.com/dtune/phl/enu/index">www.portrait.com/dtune/phl/enu/index</a> to download the latest version of SmartControl software.

## 4. Technical Specifications

Monitor Panel Type	Picture/Display				
Panel Size   23.6" W (59.9 cm)	Monitor Panel Type	TFT-LCD			
Aspect Ratio 16:9  Pixel Pitch 0.272 × 0.272 mm  Brightness 250 cd/m²  SmartContrast 10,000,000:1  Contrast Ratio (typ.) 1000:1  Response Time (typ.) 5ms  Optimum Resolution 1920 × 1080 @ 60Hz  Viewing Angle 170° (H) / 160° (V) @ C/R > 10  Display Colors 16:7M  Vertical Refresh Rate 56Hz - 76Hz  Horizontal Frequency 30kHz - 83kHz  sRGB YES  Connectivity  Signal Input DVI (digital),VGA (Analog) Input Signal Separate Sync, Sync on Green  Convenience  User Convenience  User Convenience  AUTO/▼ ■/▲ ❖/◀ ■/OK ♠  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience Kensington Lock  Plug & Play Compatibility  Stand  Tilt -5/+20  Protective glass  Glass screen Tempered  Surface hardness >8H  Transmission rate >=88%  Power  On Mode 20.98 W (typ.), 23.42 W (max.)  Sleep (Standby) 0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	Backlight	LED			
Pixel Pitch  Brightness  250 cd/m²  SmartContrast  10,000,000:1  Response Time (typ.)  Optimum Resolution  1920 × 1080 @ 60Hz  Viewing Angle  170° (H) / 160° (V) @ C/R > 10  Display Colors  16.7M  Vertical Refresh Rate  Horizontal Frequency  Signal Input  DVI (digital),VGA (Analog)  Input Signal  Separate Sync, Sync on Green  Convenience  User Convenience  User Convenience  Auto/▼ □/A ※/◀ □/OK ♦  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock  Plug & Play Compatibility  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  209.8 W (typ.), 23.42 W (max.)  Simple Convenience Mode  Sleep (Standby)  O.5W  Power LED indicator  On Mode  Source Auto/Vp.), 23.42 W (max.)  OSD Convenience  On mode: White, Standby/Sleep mode: White (blinking)	Panel Size	23.6" W (59.9 cm)			
Brightness 250 cd/m² SmartContrast 10,000,000:1 Contrast Ratio (typ.) 1000:1 Response Time (typ.) 5ms Optimum Resolution 1920 × 1080 @ 60Hz Viewing Angle 170° (H) / 160° (V) @ C/R > 10 Display Colors 16.7M Vertical Refresh Rate 56Hz - 76Hz Horizontal Frequency 30kHz - 83kHz sRGB YES Connectivity Signal Input DVI (digital),VGA (Analog) Input Signal Separate Sync, Sync on Green Convenience User Convenience  User Convenience  User Convenience  Autro/▼ □/A ❖/◀ □/OK ௴ English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience Kensington Lock Plug & Play Compatibility DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux Stand Tilt -5 / +20 Protective glass Glass screen Tempered Surface hardness >8H Transmission rate >=88%  Power On Mode 20.98 W (typ.), 23.42 W (max.) Sleep (Standby) 0.5W Off 0.5W Power LED indicator On mode:White, Standby/Sleep mode: White (blinking)	Aspect Ratio	16:9			
SmartContrast Contrast Ratio (typ.) Contrast Ratio (typ.) Response Time (typ.) Sms Optimum Resolution 1920 × 1080 @ 60Hz Viewing Angle 170° (H) / 160° (V) @ C/R > 10 Display Colors Vertical Refresh Rate 56Hz - 76Hz Horizontal Frequency 30kHz - 83kHz sRGB YES Connectivity Signal Input Input Signal Separate Sync, Sync on Green Convenience User Convenience  User Convenience  Auto/▼ □/▲ ※/◀ 圖/OK ⑤ English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Rensington Lock Plug & Play Compatibility DDC/Cl, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand Tilt -5/+20 Protective glass Glass screen Tempered Surface hardness >8H Transmission rate >=88%  Power On Mode 20.98 W (typ.), 23.42 W (max.) Sleep (Standby) 0.5W Power LED indicator On mode:White, Standby/Sleep mode: White (blinking)	Pixel Pitch	0.272 × 0.272 mm			
Contrast Ratio (typ.)  Response Time (typ.)  Optimum Resolution  1920 × 1080 @ 60Hz  Viewing Angle  170° (H) / 160° (V) @ C/R > 10  Display Colors  Vertical Refresh Rate  56Hz - 76Hz  Horizontal Frequency  30kHz - 83kHz  sRGB  YES  Connectivity  Signal Input  Input Signal  Convenience  User Convenience  User Convenience  DSD Languages  OSD Languages  Other Convenience  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	Brightness	250 cd/m <sup>2</sup>			
Response Time (typ.)  Optimum Resolution  1920 × 1080 @ 60Hz  Viewing Angle  170° (H) / 160° (V) @ C/R > 10  Display Colors  16.7M  Vertical Refresh Rate  Horizontal Frequency  30kHz - 83kHz  \$RGB  YES  Connectivity  Signal Input  DVI (digital),VGA (Analog)  Input Signal  Separate Sync, Sync on Green  Convenience  User Convenience  User Convenience  Auto/▼ □/▲ ☆:/◀ 圖/OK ⊕  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock  Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  >=88%  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  O.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	SmartContrast	10,000,000:1			
Optimum Resolution 1920 × 1080 @ 60Hz   Viewing Angle 170° (H) / 160° (V) @ C/R > 10   Display Colors 16.7M   Vertical Refresh Rate 56Hz - 76Hz   Horizontal Frequency 30kHz - 83kHz   sRGB YES   Connectivity Signal Input DVI (digital),VGA (Analog)   Input Signal Separate Sync, Sync on Green   Convenience AUTO/▼ □/A ❖ /◄ 圖/OK ♠   User Convenience AUTO/▼ □/A ❖ /◄ 圖/OK ♠   OSD Languages English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese   Other Convenience Kensington Lock   Plug & Play Compatibility DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux   Stand Tilt -5 / +20   Protective glass Seas screen Tempered   Surface hardness >8H   Transmission rate >=88%   Power On Mode 20.98 W (typ.), 23.42 W (max.)   Sleep (Standby) 0.5W   Off 0.5W   Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	Contrast Ratio (typ.)	1000:1			
Viewing Angle 170° (H) / 160° (V) @ C/R > 10   Display Colors 16.7M   Vertical Refresh Rate 56Hz - 76Hz   Horizontal Frequency 30kHz - 83kHz   sRGB YES   Connectivity Signal Input DVI (digital), VGA (Analog)   Signal Input Signal Separate Sync, Sync on Green   Convenience AUTO/▼ □/A ❖/◄ 圖/OK ⑤   User Convenience AUTO/▼ □/A ❖/◄ 圖/OK ⑥   English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese   Other Convenience Kensington Lock   Plug & Play Compatibility DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux   Stand Tilt -5 / +20   Protective glass Glass screen Tempered   Surface hardness >8H   Transmission rate >=88%   Power On Mode 20.98 W (typ.), 23.42 W (max.)   Sleep (Standby) 0.5W   Off 0.5W   Power LED indicator On mode:White, Standby/Sleep mode:White (blinking)	Response Time (typ.)	5ms			
Display Colors  Vertical Refresh Rate  56Hz - 76Hz  Horizontal Frequency 30kHz - 83kHz  sRGB YES  Connectivity Signal Input DVI (digital),VGA (Analog) Input Signal Separate Sync, Sync on Green  Convenience User Convenience  User Convenience  Auto/▼ □/A ❖/◀ 圖/OK ₺ English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience Flug & Play Compatibility DDC/Cl, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass Glass screen Tempered  Surface hardness >8H  Transmission rate  20.98 W (typ.), 23.42 W (max.) Sleep (Standby) Off  0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	Optimum Resolution	1920 × 1080 @ 60Hz			
Vertical Refresh Rate  Horizontal Frequency 30kHz - 83kHz	Viewing Angle	170° (H) / 160° (V) @ C/R > 10			
Horizontal Frequency sRGB YES  Connectivity Signal Input Input Signal Separate Sync, Sync on Green  Convenience User Convenience  User Convenience  DSD Languages Other Convenience  Plug & Play Compatibility  Stand  Tilt  -5 / +20  Protective glass Glass screen Surface hardness  >8H  Transmission rate  30kHz - 83kHz  yES  Connectivity Separate Sync, Sync on Green  Convenience  AUTO/▼ □/▲ ☼/◀ 圖/0K ᠿ  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock  Plug & Play Compatibility DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen Tempered  Surface hardness >8H  Transmission rate >=88%  Power  On Mode 20.98 W (typ.), 23.42 W (max.)  Sleep (Standby) 0.5W  Off 0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	Display Colors	16.7M			
SRGB  Connectivity  Signal Input Input Signal  DVI (digital),VGA (Analog)  Input Signal  Separate Sync, Sync on Green  Convenience  User Convenience  User Convenience  Auto/▼ □/▲ ❖/◀ 圖/OK ゆ  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Rensington Lock  Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  >=88%  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  Off  O.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	Vertical Refresh Rate	56Hz - 76Hz			
Connectivity  Signal Input Input Signal Input Signal Separate Sync, Sync on Green  Convenience  User Convenience  User Convenience  Auto/▼ □/▲ ❖/◀ □/OK ₺  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  Off  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	Horizontal Frequency	30kHz - 83kHz			
Signal Input Input Signal Separate Sync, Sync on Green  Convenience User Convenience  User Convenience  Auto/▼ □/♠ ❖/◀ □/OK  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience Flug & Play Compatibility  DDC/Cl, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  Off  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	sRGB	YES			
Input Signal   Separate Sync, Sync on Green	Connectivity				
User Convenience  User Convenience  Auto/▼ □/▲ ❖/◀ □/OK ₺  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Tempered  Surface hardness  >8H  Transmission rate  >=88%  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	Signal Input	DVI (digital),VGA (Analog)			
User Convenience  AUTO/▼ □/▲ ❖/◀ ■/OK ₺  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Surface hardness  >8H  Transmission rate  >=88%  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  O.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)		Separate Sync, Sync on Green			
OSD Languages  English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience  Kensington Lock Plug & Play Compatibility  DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Surface hardness  >8H  Transmission rate  >=88%  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  Off  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)					
Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese  Other Convenience Kensington Lock Plug & Play Compatibility DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  Stand Tilt -5 / +20  Protective glass Glass screen Tempered Surface hardness >8H  Transmission rate >=88%  Power On Mode 20.98 W (typ.), 23.42 W (max.) Sleep (Standby) 0.5W Off 0.5W Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)					
Plug & Play Compatibility  Stand  Tilt  -5 / +20  Protective glass  Glass screen  Surface hardness  Transmission rate  >=88%  Power  On Mode  20.98 W (typ.), 23.42 W (max.)  Sleep (Standby)  Off  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)		AUTO/▼ ⊡/A Ö/◀ ⊜/OK (Ů			
Stand   Tilt -5 / +20   Protective glass Surface screen   Surface hardness >8H   Transmission rate >=88%   Power On Mode 20.98 W (typ.), 23.42 W (max.)   Sleep (Standby) 0.5W   Off 0.5W   Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil			
Tilt	User Convenience OSD Languages	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese			
Protective glass  Glass screen Tempered  Surface hardness >8H  Transmission rate >=88%  Power  On Mode 20.98 W (typ.), 23.42 W (max.)  Sleep (Standby) 0.5W  Off 0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience OSD Languages Other Convenience	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock			
Glass screen Tempered  Surface hardness >8H  Transmission rate >=88%  Power  On Mode 20.98 W (typ.), 23.42 W (max.)  Sleep (Standby) 0.5W  Off 0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	OSD Languages Other Convenience Plug & Play Compatibility	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock			
Surface hardness >8H  Transmission rate >=88%  Power  On Mode 20.98 W (typ.), 23.42 W (max.)  Sleep (Standby) 0.5W  Off 0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience OSD Languages Other Convenience Plug & Play Compatibility Stand	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux			
Transmission rate >=88%  Power On Mode 20.98 W (typ.), 23.42 W (max.) Sleep (Standby) 0.5W Off 0.5W Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux			
Power On Mode 20.98 W (typ.), 23.42 W (max.) Sleep (Standby) 0.5W Off 0.5W Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience OSD Languages Other Convenience Plug & Play Compatibility Stand Tilt Protective glass	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20			
On Mode 20.98 W (typ.), 23.42 W (max.)  Sleep (Standby) 0.5W  Off 0.5W  Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience OSD Languages Other Convenience Plug & Play Compatibility Stand Tilt Protective glass Glass screen	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20 Tempered			
Sleep (Standby)  Off  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt  Protective glass Glass screen Surface hardness	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20  Tempered >8H			
Sleep (Standby)  Off  0.5W  Power LED indicator  On mode: White, Standby/Sleep mode: White (blinking)	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt  Protective glass Glass screen Surface hardness Transmission rate	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20  Tempered >8H			
Off 0.5W Power LED indicator On mode: White, Standby/Sleep mode: White (blinking)	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt  Protective glass Glass screen Surface hardness Transmission rate  Power	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20  Tempered >8H >=88%			
	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt  Protective glass Glass screen Surface hardness Transmission rate  Power On Mode	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20  Tempered >8H >=8%			
	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt Protective glass Glass screen Surface hardness Transmission rate  Power On Mode Sleep (Standby)	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20  Tempered >8H >=88%			
	User Convenience  OSD Languages  Other Convenience Plug & Play Compatibility  Stand Tilt  Protective glass Glass screen Surface hardness Transmission rate  Power On Mode Sleep (Standby) Off	English, French, German, Spanish, Italian, Russian, Simplified Chinese, Portuguese, Turkish, Dutch, Swedish, Finnish, Polish, Czech, Korean, Japanese, Hungarian, Ukraine, Brazil Portuguese, Greek, Traditional Chinese Kensington Lock DDC/CI, sRGB, Windows 8/7/Vista/XP, Mac OSX, Linux  -5 / +20  Tempered >8H >=88%  20.98 W (typ.), 23.42 W (max.) 0.5W 0.5W			

#### 4. Technical Specifications

Dimension				
Product with stand (W×H×D)	565.4× 434.6 × 238.0 mm			
Product without stand (W×H×D)	565.4 × 353.8 × 72.4 mm			
Weight				
Product with stand	5.30kg			
Product without stand	4.87kg			
Product with packaging	6.75kg			
Operating Condition				
Temperature range (operation)	0°C to 40 °C			
Temperature range (Non-operation)	-20°C to 60°C			
Relative humidity	20% to 80%			
MTBF	30,000hrs			
Environmental				
ROHS	YES			
EPEAT	Silver (www.epeat.net)			
Packaging	100% recyclable			
Specific Substances	100% PVC BFR free housing			
Energy Star	YES			
Compliance and standards				
Regulatory Approvals	CCC, CECP			
Cabinet				
Color	Black			
Finish	Glossy			

## **⊜** Note

- 1. EPEAT Gold or Silver is valid only where Philips registers the product. Please visit <a href="https://www.epeat.net">www.epeat.net</a> for registration status in your country.
- 2. This data is subject to change without notice. Go to <a href="www.philips.com/support">www.philips.com/support</a> to download the latest version of leaflet.

## 4.1 Resolution & Preset Modes

## 1 Maximum Resolution

1920 × 1080 @ 60 Hz (analog input) 1920 × 1080 @ 60 Hz (digital input)

#### 2 Recommended Resolution

1920 × 1080 @ 60 Hz (digital input)

H. freq (kHz)	Resolution	V. freq (Hz)
31.47	720 × 400	70.09
31.47	640 × 480	59.94
35.00	640 × 480	66.67
37.86	640 × 480	72.81
37.50	640 × 480	75.00
37.88	800 × 600	60.32
46.88	800 × 600	75.00
48.36	1024 × 768	60.00
60.02	1024 × 768	75.03
44.77	1280 × 720	59.86
63.89	1280 × 1024	60.02
79.98	1280 × 1024	75.03
55.94	1440 × 900	59.89
70.64	1440 × 900	74.98
65.29	1680 × 1050	59.95
67.50	1920 × 1080	60.00

## **⊜** Note

Please notice that your display works best at native resolution of  $1920 \times 1080$  @ 60Hz. For best display quality, please follow this resolution recommendation.

## 5. Power Management

If you have VESA DPM compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. If an input from a keyboard, mouse or other input device is detected, the monitor will 'wake up' automatically. The following table shows the power consumption and signaling of this automatic power saving feature:

Power Management Definition						
VESA Mode	Video	H-sync	V-sync	Power Used	LED Color	
Active	ON	Yes	Yes	20.98 W (typ.) 23.42 W (max.)	White	
Sleep (Standby)	OFF	No	No	0.5W (typ.)	White (blink)	
Switch Off	OFF	-	-	0.5W (typ.)	OFF	

The following setup is used to measure power consumption on this monitor:

• Native resolution: 1920 × 1080

Contrast: 50%

• Brightness: 250 nits

• Color temperature: 6500k with full white pattern



This data is subject to change without notice.

## 6. Regulatory Information

#### Lead-free Product



Lead free display promotes environmentally sound recovery and disposal of waste from electrical and electronic equipment. Toxic

substances like Lead has been eliminated and compliance with European community's stringent RoHs directive mandating restrictions on hazardous substances in electrical and electronic equipment have been adhered to in order to make Philips monitors safe to use throughout its life cycle.

#### EN 55022 Compliance (Czech Republic Only)

This device belongs to category B devices as described in EN 55022, unless it is specifically stated that it is a Class A device on the specification label. The following applies to deviose in Class A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud není na typovém štitku počítače uvedeno, že spadá do do třídy A podle EN 55022, spadá automatický do třídy B podle EN 55022. Pro zařízení zalazená do třídy A (chramé pásmo 30m) podle EN 55022 platí následující. Dojde-li k rušení telekomunikačních nebo jíných zařízení je užívatel povinnen provést taková opatřgní, aby rušení odstranil.

## Polish Center for Testing and Certification Notice

The equipment should draw power from a socket with an attached protection circuit (a three-prong socket). All equipment that works together (computer, monitor, printer, and so on) should have the same power supply source.

The phasing conductor of the room's electrical installation should have a reserve short-circuit protection device in the form of a fuse with a nominal value no larger than 16 amperes (A).

To completely switch off the equipment, the power supply cable must be removed from the power supply socket, which should be located near the equipment and easily accessible.

A protection mark "B" confirms that the equipment is in compliance with the protection usage requirements of standards PN-93/T-42107 and PN-89/E-06251.

#### Wymagania Polskiego Centrum Badań i Certyfikacji

Urządzenie powinno być zasilane z gniazda z przyłączonym obwodem ochronnym (gniazdo z kolkiem). Współpracujące ze sobą urządzenia (komputer, monitor, drukarka) powinny być zasilane z tego samego źródła.

Instalacja olektyczna poniesczenia powinta zawienak w przewodzie fatowym rezerwoną ochono prozed zwarcinia, w potacia bezpiecznika o watości zamieniowogi nie większej ziż 16.6 (amerika W colu calkowitego wyłączenia urządzenia z sieci zasilania, należy wyjęk wyczek alabła zasilającego z granadka, które powinen znajdować sie w politiku urządzenia tyk fatwo dostępne. Znak bezpieczeństwa "B" potwierdza zgodność urządzenia z wymaganiami bezpieczeństwa użytkowania zawarymi w PN-947-2107 i PN-895-26-265.

#### Pozostałe instrukcje bezpieczeństwa

- Nie należy używać wtyczek adapterowych lub usuwać kołka obwodu ochronnego z wtyczki. Jeżeli końseczne jest użycie przedłużacza to należy użyć przedłużacza 3-żyłowego z prawidłowo połączonym przewodem ochronnym.
- System komputerowy należy zabezpieczyć przed nagłymi, chwilowymi wzrostami lub spadkami napięcia, używając eliminatora przepięć, urządzenia dopasowującego lub bezzakłościniowego źródza zasilania.
- Należy upewnić się, aby nie nie leżało na kabłach systemu komputerowego, oraz aby kable nie były umieszczone w miejscu, gdzie można byłoby na nie nadeptywać lub potykać się o nie.
- Nie należy rozlewać napojów ani innych płynów na system komputerowy.
- Nie należy wpychać żadnych przedmiotów do otworów systemu komputerowego, gdyż może to spowodować pożar lub porażenie prądem, poprzez zwarcie elementów wewnętrznych.
- System komputerowy powinien znajdować się z dala od grzejnkow iźrodeł ciejna. Ponadto, nie należy błokować etworów wentylacyjnych. Należy unikać kładzenia lużnych papierów pe komputer oraz unieszczania komputera w cisanym miejscu bez możliwości cyrkulacji powicirza wokól niego.

#### North Europe (Nordic Countries) Information

Placering/Ventilation

#### VARNING:

FÖRSÄKRA DIG OM ATT HUVUDBRYTARE OCH UTTAG ÄR LÄTÅTKOMLIGA, NÄR DU STÄLLER DIN UTRUSTNING PÅPLATS.

#### Placering/Ventilation

#### ADVARSEL:

SØRG VED PLACERINGEN FOR, AT NETLEDNINGENS STIK OG STIKKONTAKT ER NEMTTILGÆNGELIGE.

#### Paikka/Ilmankierto

#### **VAROITUS:**

SIJOITA LAITE SITEN, ETTÄ VERKKOJOHTO VOIDAAN TARVITTAESSA HELPOSTI IRROTTAA PISTORASIASTA.

#### Plassering/Ventilasjon

#### ADVARSEL:

når dette utstyret plasseres, må du passe på at kontaktene for stømtilførsel er lette å nå.

#### Ergonomie Hinweis (nur Deutschland)

Der von uns gelieferte Farbmonitor entspricht den in der "Verordnung über den Schutz vor Schäden durch Röntgenstrahlen" festgelegten Vorschriften.

Auf der Rückwand des Gerätes befindet sich ein Aufkleber, der auf die Unbedenklichkeit der Inbetriebnahme hinweist, da die Vorschriften über die Bauart von Störstrahlern nach Anlage III ¤ 5 Abs. 4 der Röntgenverordnung erfüllt sind.

Damit Ihr Monitor immer den in der Zulassung geforderten Werten entspricht, ist darauf zu achten, daß

- 1. Reparaturen nur durch Fachpersonal durchgeführt werden.
- 2. nur original-Ersatzteile verwendet werden.
- 3. bei Ersatz der Bildröhre nur eine bauartgleiche eingebaut wird.

Aus ergonomischen Gründen wird empfohlen, die Grundfarben Blau und Rot nicht auf dunklem Untergrund zu verwenden (schlechte Lesbarkeit und erhöhte Augenbelastung bei zu geringem Zeichenkontrast wären die Folge). Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 beträgt 70dB (A) oder weniger.

ACHTUNG: BEIM AUFSTELLEN
DIESES GERÄTES DARAUF
ACHTEN, DAß NETZSTECKER UND
NETZKABELANSCHLUß LEICHT
ZUGÄNGLICH SIND.

#### China RoHS

The People's Republic of China released a regulation called "Management Methods for Controlling Pollution by Electronic Information Products" or commonly referred to as China RoHS. All products including CRT and Monitor which are produced and sold for China market have to meet China RoHS request.

#### 中国大陆RoHS

根据中国大陆《电子信息产品污染控制管理办法》(也称为中国大陆RoHS)、 以下部分列出了本产品中可能包含的有毒有害物质或元素的名称和含量

#### 本表适用之产品

显示器(液晶及CRT)

有毒有害物质或元素

有毒有害物质或元素					
苯醚 E)					

- \*: 电路板组件包括印刷电路板及其构成的零部件、如电阻、电容、集成电路、连接器等 ○:表示该有毒有害物质在该部件所有均质材料中的含量均在 《电子信息产品中有毒有害物质的限量要求标准》规定的限量要求以下

- ·表示该有离有害物质至少在该部件的其一均原材料中的含量超出 《电子情息产品中有毒有害物质的限量要求标准》规定的限量要求;但是上表中打"×"的部件, 符合数图形CHS法规度家(属于新段的部分)



#### 环保使用期限

此标识指期限(十年),电子信息产品中含有的有毒有害物 质或元素在正常使用的条件下不会发生外泄或突变, 电 子信息产品用户使用该电子信息产品不会对环境造成严 重污染或对其人身、 财产造成严重损害的期限:

#### 中国能源效率标识

根据中国大陆《能源效率标识管理办法》,本显示器符合以下要求:

能源效率(cd/W)	> 1.05
关闭状态能耗 (W)	< 0.5
能效等级	1级
能效标准	GB 21520-2008

详细有关信息请查阅中国能效标识网:http://www.energylabel.gov.cn/

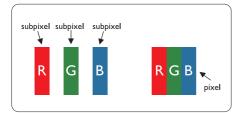
《废弃电器电子产品回收处理管理条例》提示性 说明

为了更好地关爱及保护地球,当用户不再需要此产品或 产品寿命终止时,请遵守国家废弃电器电子产品回收处 理相关法律法规,将其交给当地具有国家认可的回收处 理资质的厂商进行回收处理。

## Customer care and warrant

# 7.1 Philips' Flat Panel Monitors Pixel Defect Policy

Philips strives to deliver the highest quality products. We use some of the industry's most advanced manufacturing processes and practice stringent quality control. However, pixel or sub pixel defects on the TFT Monitor panels used in flat panel monitors are sometimes unavoidable. No manufacturer can guarantee that all panels will be free from pixel defects, but Philips guarantees that any monitor with an unacceptable number of defects will be repaired or replaced under warranty. This notice explains the different types of pixel defects and defines acceptable defect levels for each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT Monitor panel must exceed these acceptable levels. For example, no more than 0.0004% of the sub pixels on a monitor may be defective. Furthermore, Philips sets even higher quality standards for certain types or combinations of pixel defects that are more noticeable than others. This policy is valid worldwide.



### Pixels and Sub pixels

A pixel, or picture element, is composed of three sub pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub pixels of a pixel are lit, the three colored sub pixels together appear as a single white pixel. When all are dark, the three colored sub pixels together appear as a single

black pixel. Other combinations of lit and dark sub pixels appear as single pixels of other colors.

#### Types of Pixel Defects

Pixel and sub pixel defects appear on the screen in different ways. There are two categories of pixel defects and several types of sub pixel defects within each category.

#### **Bright Dot Defects**

Bright dot defects appear as pixels or sub pixels that are always lit or 'on'. That is, a bright dot is a sub-pixel that stands out on the screen when the monitor displays a dark pattern. There are the types of bright dot defects.



One lit red, green or blue sub pixel.



Two adjacent lit sub pixels:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)



Three adjacent lit sub pixels (one white pixel).

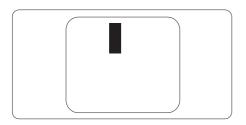
### 7. Customer care and warranty



A red or blue bright dot must be more than 50 percent brighter than neighboring dots while a green bright dot is 30 percent brighter than neighboring dots.

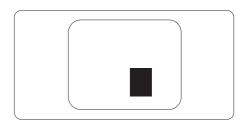
#### Black Dot Defects

Black dot defects appear as pixels or sub pixels that are always dark or 'off'. That is, a dark dot is a sub-pixel that stands out on the screen when the monitor displays a light pattern. These are the types of black dot defects.



#### Proximity of Pixel Defects

Because pixel and sub pixels defects of the same type that are near to one another may be more noticeable, Philips also specifies tolerances for the proximity of pixel defects.



#### Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFT Monitor panel in a Philips flat panel monitor must have pixel or sub pixel defects exceeding the tolerances listed in the following tables.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
1 lit subpixel	3
2 adjacent lit subpixels	1
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects*	>15mm
Total bright dot defects of all types	3
BLACK DOT DEFECTS	ACCEPTABLE LEVEL
1 dark subpixel	5 or fewer
2 adjacent dark subpixels	2 or fewer
3 adjacent dark subpixels	0
Distance between two black dot defects*	>15mm
Total black dot defects of all types	5 or fewer
TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
Total bright or black dot defects of all types	5 or fewer



- 1. 1 or 2 adjacent sub pixel defects = 1 dot defect
- 2. This monitor is ISO9241-307 compliant, Class-I compliant.(ISO9241-307: Ergonomic requirement, analysis and compliance test methods for electronic visual displays)
- 3. ISO9241-307 is the successor of formerly known ISO13406 standard, which is withdrawn by the International Organisation for Standardisation (ISO) per: 2008-11-13.

## 7.2 Customer Care & Warranty

For warranty coverage information and additional support requirement valid for your region, please visit <a href="https://www.philips.com/support">www.philips.com/support</a> website for details. You may also contact your local Philips Customer Care Center number listed below.

### Contact Information for WESTERN EUROPE region:

Country	CSP	Hotline Number	Price	Opening hours
Austria	RTS	+43 0810 000206	€ 0.07	Mon to Fri : 9am - 6pm
Belgium	Ecare	+32 078 250851	€ 0.06	Mon to Fri : 9am - 6pm
Cyprus	Alman	800 92 256	Free of charge	Mon to Fri : 9am - 6pm
Denmark	Infocare	+45 3525 8761	Local call tariff	Mon to Fri : 9am - 6pm
Finland	Infocare	+358 09 2290 1908	Local call tariff	Mon to Fri : 9am - 6pm
France	Mainteq	+33 082161 1658	€ 0.09	Mon to Fri : 9am - 6pm
Germany	RTS	+49 01803 386 853	€ 0.09	Mon to Fri : 9am - 6pm
Greece	Alman	+30 00800 3122 1223	Free of charge	Mon to Fri : 9am - 6pm
Ireland	Celestica	+353 01 601 1161	Local call tariff	Mon to Fri : 8am - 5pm
Italy	Anovo Italy	+39 840 320 041 € 0.08	€ 0.08	Mon to Fri : 9am - 6pm
Luxembourg	Ecare	+352 26 84 30 00	Local call tariff	Mon to Fri : 9am - 6pm
Netherlands	Ecare	+31 0900 0400 063	€ 0.10	Mon to Fri : 9am - 6pm
Norway	Infocare	+47 2270 8250	Local call tariff	Mon to Fri : 9am - 6pm
Poland	MSI	+48 0223491505	Local call tariff	Mon to Fri : 9am - 6pm
Portugal	Mainteq	800 780 902	Free of charge	Mon to Fri : 8am - 5pm
Spain	Mainteq	+34 902 888 785	€ 0.10	Mon to Fri : 9am - 6pm
Sweden	Infocare	+46 08 632 0016	Local call tariff	Mon to Fri : 9am - 6pm
Switzerland	ANOVO CH	+41 02 2310 2116	Local call tariff	Mon to Fri : 9am - 6pm
United Kingdom	Celestica	+44 0207 949 0069	Local call tariff	Mon to Fri : 8am - 5pm

#### 7. Customer care and warranty

### Contact Information for CENTRAL AND EASTERN EUROPE region:

Country	Call center	CSP	Consumer care number	
Belarus	N/A	IBA	+375 17 217 3386 +375 17 217 3389	
Bulgaria	N/A	LAN Service	+359 2 960 2360	
Croatia	N/A	MR Service Ltd	+385 (01) 640 1111	
Czech Rep.	N/A	Asupport	420 272 188 300	
Estonia	N/A	FUJITSU	+372 6519900(General) +372 6519972(workshop)	
Georgia	N/A	Esabi	+995 322 91 34 71	
Hungary	N/A	Profi Service	+36 1 814 8080(General) +36 1814 8565(For AOC&Philips only)	
Kazakhstan	N/A	Classic Service I.I.c.	+7 727 3097515	
Latvia	N/A	ServiceNet LV	+371 67460399 +371 27260399	
Lithuania	N/A	UAB Servicenet	+370 37 400160(general) +370 7400088 (for Philips)	
Macedonia	N/A	AMC	+389 2 3125097	
Moldova	N/A	Comel	+37322224035	
Romania	N/A	Skin	+40 21 2101969	
Russia	N/A	CPS	+7 (495) 645 6746	
Serbia&Montenegro	N/A	Kim Tec d.o.o.	+381 11 20 70 684	
Slovakia	N/A	Datalan Service	+421 2 49207155	
Slovenia	N/A	PC H.and	+386 1 530 08 24	
the republic of Belarus	N/A	ServiceBy	+ 375 17 284 0203	
Turkey	N/A	Tecpro	+90 212 444 4 832	
Ukraine	N/A	Topaz	+38044 525 64 95	
ON all le	N/A	Comel	+380 5627444225	

## Contact Information for LATIN AMERICA region:

Country	Call center	Consumer care number
Brazil	Vermont	0800-7254101
Argentina		0800 3330 856

#### Contact Information for China:

China

Consumer care number: 4008 800 008

## Contact Information for NORTH AMERICA:

Country	Call center	Consumer care number
U.S.A.	EPI - e-center	(877) 835-1838
Canada	EPI - e-center	(800)479-6696

## Contact Information for APMEA region:

Country	ASP	Consumer care number	Opening hours
Australia	AGOS NETWORK PTY LTD	1300 360 386	Mon.~Fri. 8:00am-7:30pm
New Zealand	Visual Group Ltd.	0800 657447	Mon.~Fri. 8:30am-5:30pm
Hong Kong Macau	Company: Smart Pixels Technology Ltd.	Hong Kong: Tel: +852 2619 9639 Macau: Tel: (853)-0800-987	Mon.~Fri. 9:00am-6:00pm Sat. 9:00am-1:00pm
India	REDINGTON INDIA LTD	Tel: 1 800 425 6396 SMS: PHILIPS to 56677	Mon.~Fri. 9:00am-5:30pm
Indonesia	PT. CORMIC SERVISINDO PERKASA	+62-21-4080-9086 (Customer Hotline) +62-8888-01-9086 (Customer Hotline)	Mon.~Thu, 08:30-12:00; 13:00- 17:30 Fri. 08:30-11:30; 13:00-17:30"
Korea	Alphascan Displays, Inc	1661-5003	Mon.~Fri. 9:00am-5:30pm Sat. 9:00am-1:00pm
Malaysia	R-Logic Sdn Bhd	+603 5102 3336	Mon.~Fri. 8:15am-5:00pm Sat. 8:30am-12:30am
Pakistan	TVONICS Pakistan	+92-213-6030100	Sun,~Thu, 10:00am-6:00pm
Singapore	Philips Electronics Singapore Pte Ltd (Philips Consumer Care Center)	(65) 6882 3966	Mon.~Fri, 9:00am-6:00pm Sat. 9:00am-1:00pm
Taiwan	FETEC.CO	0800-231-099	Mon.~Fri. 09:00 - 18:00
Thailand	Axis Computer System Co., Ltd.	(662) 934-5498	Mon.~Fri. 08:30am~05:30pm
South Africa	Computer Repair Technologies	011 262 3586	Mon.~ Fri. 08:00am~05:00pm
Israel	Eastronics LTD	1-800-567000	Sun.~Thu. 08:00-18:00

## 7. Customer care and warranty

Vietnam	FPT Service Informatic Company Ltd Ho Chi Minh City Branch	+84 8 38248007 Ho Chi Minh City +84 5113.562666 Danang City +84 5113.562666 Can tho Province	Mon.~Fri. 8:00-12:00, 13:30-17:30 Sat. 8:00-12:00
Philippines	EA Global Supply Chain Solutions ,Inc.	(02) 655-7777; 6359456	Mon.~Fri. 8:30am~5:30pm
Armenia Azerbaijan Georgia Kyrgyzstan Tajikistan	Firebird service centre	+97 14 8837911	Sun.~Thu. 09:00 - 18:00
Uzbekistan	Soniko Plus Private Enterprise Ltd	+99871 2784650	Mon.~Fri. 09:00 - 18:00
Turkmenistan	Technostar Service Centre	+(99312) 460733, 460957	Mon.~Fri. 09:00 - 18:00
Japan	フィリプスモニター・サポートセンター	'03-5676-6022	Mon.~Fri. 09:00 - 18:00

## 8. Troubleshooting & FAQs

### 8.1 Troubleshooting

This page deals with problems that can be corrected by a user. If the problem still persists after you have tried these solutions, contact Philips customer service representative.

#### 1 Common Problems

#### No Picture (Power LED not lit)

- Make sure the power cord is plugged into the power outlet and into the back of the monitor.
- First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.

#### No Picture (Power LED is White)

- Make sure the computer is turned on.
- Make sure the signal cable is properly connected to your computer.
- Make sure the monitor cable has no bent pins on the connect side. If yes, repair or replace the cable.
- The Energy Saving feature may be activated

#### Screen says



- Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Start Guide).
- Check to see if the monitor cable has bent pins.
- Make sure the computer is turned on.

#### AUTO button doesn't function

 The auto function is applicable only in VGA-Analog mode. If the result is not satisfactory, you can do manual adjustments via the OSD menu.

#### ■ Note

The Auto Function is not applicable in DVI-Digital mode as it is not necessary.

#### Visible signs of smoke or sparks

- Do not perform any troubleshooting steps
- Disconnect the monitor from mains power source immediately for safety
- Contact with Philips customer service representative immediately.

#### 2 Imaging Problems

#### Image is not centered

- Adjust the image position using the "Auto" function in OSD Main Controls.
- Adjust the image position using the Phase/ Clock of Setup in OSD Main Controls. It is valid only in VGA mode.

#### Image vibrates on the screen

 Check that the signal cable is properly securely connected to the graphics board or PC.

#### Vertical flicker appears



- Adjust the image using the "Auto" function in OSD Main Controls.
- Eliminate the vertical bars using the Phase/ Clock of Setup in OSD Main Controls. It is valid only in VGA mode.

#### Horizontal flicker appears



- Adjust the image using the "Auto" function in OSD Main Controls.
- Eliminate the vertical bars using the Phase/ Clock of Setup in OSD Main Controls. It is valid only in VGA mode.

#### Image appears blurred, indistinct or too dark

 Adjust the contrast and brightness on On-Screen Display.

## An "after-image", "burn-in" or "ghost image" remains after the power has been turned off.

- Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "after-imaging " or "ghost imaging", on your screen. "Burn-in", "after-imaging", or "ghost imaging" is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "after-imaging" or "ghost imaging" will disappear gradually over a period of time after the power has been switched off.
- Always activate a moving screen saver program when you leave your monitor unattended.
- Always activate a periodic screen refresh application if your LCD monitor will display unchanging static content.
- Severe" burn-in" or "after-image" or "ghost image" symptoms will not disappear and cannot be repaired. The damage mentioned above is not covered under your warranty.

## Image appears distorted. Text is fuzzy or blurred.

 Set the PC's display resolution to the same mode as monitor's recommended screen native resolution.

## Green, red, blue, dark, and white dots appears on the screen

 The remaining dots are normal characteristic of the liquid crystal used in today's technology, Please refer the pixel policy for more detail.

## The "power on" light is too strong and is disturbing

• You can adjust "power on" light using the power LED Setup in OSD main Controls.

For further assistance, refer to the Consumer Information Centers list and contact Philips customer service representative.

### 8.2 General FAQs

# Q1: When I install my monitor what should I do if the screen shows 'Cannot display this video mode'?

**Ans.:** Recommended resolution for this monitor: 1920 × 1080 @ 60 Hz.

- Unplug all cables, then connect your PC to the monitor that you used previously.
- In the Windows Start Menu, select Settings/ Control Panel. In the Control Panel Window, select the Display icon. Inside the Display Control Panel, select the 'Settings' tab. Under the setting tab, in box labelled 'desktop area', move the sidebar to 1920 × 1080 pixels.
- Open 'Advanced Properties' and set the Refresh Rate to 60 Hz, then click OK.
- Restart your computer and repeat step 2 and 3 to verify that your PC is set at 1920 × 1080 @ 60 Hz.
- Shut down your computer, disconnect your old monitor and reconnect your Philips LCD monitor.
- Turn on your monitor and then turn on your PC.

## Q2: What is the recommended refresh rate for LCD monitor?

Ans.: Recommended refresh rate in LCD monitors is 60 Hz, In case of any disturbance on screen, you can set it up to 75 Hz to see if that removes the disturbance.

# Q3: What are the .inf and .icm files on the CD-ROM? How do I install the drivers (.inf and .icm)?

Ans.: These are the driver files for your monitor. Follow the instructions in your user manual to install the drivers. Your computer may ask you for monitor drivers (inf and .icm files) or a driver disk when you first install your monitor. Follow the instructions to insert the (companion CD-ROM) included in this package.

#### 8.Troubleshooting & FAOs

Monitor drivers (.inf and .icm files) will be installed automatically.

#### Q4: How do I adjust the resolution?

Ans.: Your video card/graphic driver and monitor together determine the available resolutions. You can select the desired resolution under Windows® Control Panel with the "Display properties".

## Q5: What if I get lost when I am making monitor adjustments via OSD?

Ans.: Simply press the OK button, then select 'Reset' to recall all of the original factory settings.

#### Q6: Is the LCD screen resistant to scratches?

Ans.: In general it is recommended that the panel surface is not subjected to excessive shocks and is protected from sharp or blunt objects. When handling the monitor, make sure that there is no pressure or force applied to the panel surface side. This may affect your warranty conditions.

#### Q7: How should I clean the LCD surface?

Ans.: For normal cleaning, use a clean, soft cloth. For extensive cleaning, please use isopropyl alcohol. Do not use other solvents such as ethyl alcohol, ethanol, acetone, hexane, etc.

## Q8: Can I change the color setting of my monitor?

Ans.: Yes, you can change your color setting through OSD control as the following procedures,

- Press "OK" to show the OSD (On Screen Display) menu
- Press "Down Arrow" to select the option "Color" then press "OK" to enter color setting, there are three settings as below.
  - 1. Color Temperature; The two settings are 6500K and 9300K. With settings in the 6500K range the panel appears "warm, with a red-white color tone", while a 9300K temperature yields "cool, bluewhite toning".

- 2. sRGB; this is a standard setting for ensuring correct exchange of colors between different device (e.g. digital cameras, monitors, printers, scanners, etc)
- User Define; the user can choose his/ her preference color setting by adjusting red, green blue color.

#### Note

A measurement of the color of light radiated by an object while it is being heated. This measurement is expressed in terms of absolute scale, (degrees Kelvin). Lower Kevin temperatures such as 2004K are red; higher temperatures such as 9300K are blue. Neutral temperature is white, at 6504K.

## Q9: Can I connect my LCD monitor to any PC, workstation or Mac?

Ans.: Yes. All Philips LCD monitors are fully compatible with standard PCs, Macs and workstations. You may need a cable adapter to connect the monitor to your Mac system. Please contact your Philips sales representative for more information.

#### Q10: Are Philips LCD monitors Plug-and-Play?

Ans.: Yes, the monitors are Plug-and-Play compatible with Windows 8/7/Vista/XP/NT. Mac OSX, Linux

# Q11: What is Image Sticking, or Image Burn-in, or After Image, or Ghost Image in LCD panels?

Ans.: Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "afterimaging" or "ghost imaging", on your screen. "Burn-in", "after-imaging", or "ghost imaging" is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "atter-imaging" or "ghost imaging" will disappear gradually over a

### 8.Troubleshooting & FAQs

period of time after the power has been switched off.

Always activate a moving screen saver program when you leave your monitor unattended. Always activate a periodic screen refresh application if your LCD monitor will display unchanging static content.

## Warning

Failure to activate a screen saver, or a periodic screen refresh application may result in severe "burn-in" or "after-image" or "ghost image" symptoms that will not disappear and cannot be repaired. The damage mentioned above is not covered under your warranty.

## Q12: Why is my Display not showing sharp text, and is displaying jagged characters?

**Ans.:** Your LCD monitor works best at its native resolution of 1920 × 1080 @ 60 Hz. For best display, please use this resolution.



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