Samsung’s OMS (Optical Media Solution) Customer Support Website (www.samsung-ODD.com) offers the latest versions of firmware for ODD products, user instructions and product information.

Related links
- http://www.samsung-ODD.com
- http://www.samsung.com

Select languages
- Select your language

Firmware Update
- Check your firmware version.

Warranty Statement
- Warranty statement for your product
Safety precautions

Important to read and understand at all times

<table>
<thead>
<tr>
<th></th>
<th>Warning</th>
<th>This symbol indicates explanations about extremely dangerous matters. If users ignore this symbol and handle the device the wrong way, this can cause serious injury or death.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caution</td>
<td>This symbol indicates explanations about dangerous matters. If users ignore this symbol and handle the device the wrong way, this can cause damage to the product.</td>
</tr>
<tr>
<td></td>
<td>Important</td>
<td>Important to read and understand at all times.</td>
</tr>
<tr>
<td></td>
<td>Caution</td>
<td>Do not disassemble.</td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td>Note</td>
</tr>
</tbody>
</table>

Important

IF A SOFTWARE PROGRAM IS TO BE BUNDLED WITH THE OPTICAL DISC DRIVE PROVIDED BY SAMSUNG, THEN YOU MUST HAVE A SEPARATE, VALID LICENSE FOR SUCH BUNDLED SOFTWARE WITH RESPECT TO THE MANUFACTURE, SALE OR DISTRIBUTION OF THE PRODUCT (SUCH AS A PERSONAL COMPUTER) CONTAINING THE OPTICAL DISC DRIVE AND THE BUNDLED SOFTWARE AS ITS COMPONENTS. OTHER THAN THOSE THIRD PARTY LICENSES EXPRESSLY STATED TO BE INCLUDED, SAMSUNG PROVIDES NO OTHER THIRD PARTY LICENSES, AND HEREBY DISCLAIMS ANY AND ALL LIABILITY WITH RESPECT THERETO.
Safety precautions

During Installation

Installation

Do not install the drive on the unstable surface.

Do not place the drive in direct sunlight.

Avoid very low or high temperatures.

Avoid high humidity.
During Operation

- **Operation**

  - **Handle the drive carefully to prevent damage from an external shock.**

  - **Do not drop the drive. Protect the drive from severe shocks.**
    - If you do not protect it, this can cause damage to the drive.

  - **Do not move the drive while in operation. Do not attempt to open the disc tray by force.**
    - Make sure that you close all open applications before you open the tray. Always use the Eject button to open and close the tray.
    - Do not insert a pin into the emergency hole while the drive is in operation.
    - Keep your hand away from the tray while the drive is in operation.
    - This can result in damage to the product or human body.

  - **Do not use cracked, distorted or damaged discs.**
    - A disc with a crack can break while you use it, especially when the crack is near the center of the disc.
    - Before you use the disc, always make sure that it does not have a crack. If the disc has a crack, we recommend to make a copy of the disc and use the copy. When you continue to use a cracked disc, the size of the crack will increase. This will cause irreparable damage to the disc.
    - Do not use low-quality discs (illegal, scratched, damaged, etc.).
    - If you use such discs, Samsung is not responsible for the damage that this
Do not put any heavy items on the drive.
Safety precautions

- Make sure that no foreign material enters the drive casing.

- To protect against fire, do not use any flammable liquids such as alcohol or benzene on the drive.

- Do not disassemble, repair or modify the device without our approval.
  - To reduce the risk of damage, electric shock and fire.
RoHS and WEEE

RoHS

**Planet First logo**

This logo shows consumers that Samsung develops eco-friendly products and demonstrates Samsung’s continuous efforts to develop eco-friendly products.

**RoHS (Restriction of the use of certain hazardous substances in electrical and electronic equipment)**

The RoHS, the environmental regulation announced by European Union, restricts the use of lead, mercury, cadmium, hexavalent chromium, PBB, and PBDE in products put on the market in the European Union after July 1, 2006.

WEEE

**Correct Disposal of This Product (Waste Electrical & Electronic Equipment)**

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

Related links

http://www.samsung-ODD.com

http://www.samsung.com

Select languages

Select your language

Firmware Update

Check your firmware version.

Warranty Statement

Warranty statement for your product
### Exterior

#### Front

1. LED
2. Eject button
3. Emergency hole

#### Back

1. USB interface port

#### Components

- Ultra Thin portable DVD Writer
- Quick installation guide
- Application software & user manual CD
- USB cable

**Note**

- The type of accessories varies depending on a product model. Some accessories are subject to change without notice.
- Software for Macintosh not included.
System requirements

- **Item**
  - **OS**: Microsoft Windows XP (SP1.0 or above) / Vista / 7, MAC OS X (10.4.6 or above)
  - **CPU**: Pentium 4 2.33 GHz or above
  - **RAM**: 2 GB or more
  - **Interface**: USB 2.0 / 3.0 Interface connector

**Note**
- The drive will not always be able to achieve its maximum performance. This depends on the PC system environment.

System requirements for using the AV connectivity function

- **Item**
  - **OS**: Linux, WinCE, Android Tablet (Honeycomb 3.1 or above with USB Port)
  - **Device function**: Video, photo & music file playing function through a USB interface
  - **USB port current**: 1.4A or higher

**Note**
- Even if the above requirements are satisfied, the function may not work on some devices.
- Using the function with a device to which an external HDD can be connected, is recommended.
Recommended discs

- **Recommended DVD disc types**
  - **DVD-R Media**
    TAIYO-YUDEN, SONY, MKM(VERBATIM, MITSUBISHI), RITEK, CMC
  - **DVD-RW Media**
    TDK, MKM(VERBATIM, MITSUBISHI), JVC, RITEK, CMC
  - **DVD+R Media**
    TAIYO-YUDEN, MKM(VERBATIM, MITSUBISHI), RITEK, CMC, PRODIS
  - **DVD+RW Media**
    MKM(VERBATIM, MITSUBISHI), RITEK, CMC
  - **DVD+R DL**
    MKM(VERBATIM, MITSUBISHI), RITEK, CMC
  - **DVD-R DL**
    MKM(VERBATIM, MITSUBISHI), TAIYO-YUDEN
  - **DVD-RAM**
    MAXELL, MKM(VERBATIM, MITSUBISHI)

- **Recommended CD disc types**
  - **CD-R Media**
    TAIYO-YUDEN, MKM(VERBATIM, MITSUBISHI), RITEK, MBI, CMC
  - **CD-RW Media**
    MKM(VERBATIM, MITSUBISHI), CMC
  - **HS CD-RW Media**
    MKM(VERBATIM, MITSUBISHI)
MKM(VERBATIM, MITSUBISHI), CMC, MBI

US CD-RW Media
MKM(VERBATIM, MITSUBISHI)

Buffer underrun free technology

What is “buffer underrun prevention technology”?
A technology to prevent “buffer underrun” errors in which the data transmission speed is not as fast as the data writing speed when you record data.
How to install the drive

1. Connect the necessary cable, then switch on the drive.
   - Connect the USB cable to the USB connector on the drive.

2. Connect the other end of the USB cable to your PC, TV, Tablet or other devices.
   - Connecting to the PC
   - Connecting to the TV
   - Connecting to the Tablet
3. Normal operation is not guaranteed if you use a USB hub or unspecified cables.

4. **PCs, TVs and other devices with insufficient USB bus power will not work correctly if you use only one USB port.**

   To avoid this, connect the drive to 2 USB ports.

   a. Y-Cable (Option)

---

**Caution**

If your computer does not have a USB connector, install a USB interface card.
How to confirm the installation of the device driver

How to use Device Manager to confirm

Windows 7

1. Click **Start - Control Panel - System and Security - System Device Manager**.
2. Click the drive in the **Device Manager** window.

Windows Vista

1. Click **Start - Control Panel - System - Device Manager**.
2. Click the drive in the **Device Manager** window.

Windows XP

1. Click **Start - Settings - Control Panel - Performance and Maintenance**.
2. Click the **Administrative Tools** icon in the **Performance and Maintenance** window.
3. Click the **Computer Management** icon in the **Administrative Tools** window.
4. Click **Device Manager** icon in the **Administrative Tools** window and then click the drive.

Macintosh

1. Click **Macintosh - More Info**.
2. Click the **Device Manager** button.
How to confirm USB 2.0 and install the USB driver

How to confirm USB 2.0

If your PC does not have a USB 2.0 port and you want to use the drive at its highest speed, you must install a USB 2.0 adapter card. The drive can also operate with USB 1.1, but at a lower speed. You can check the type of USB 2.0 adapter card for your PC as follows.

How to install the USB driver

Windows XP/Vista/7

1. Right-click the My Computer icon on your desktop and select Properties.
2. Click on the Hardware tab. Click the Device Manager button.
3. Look at the Universal Serial Bus Controller entry. If a yellow exclamation point shows next to this entry, contact the manufacturer of the USB card or PC.

Macintosh

1. Click on About This Mac. Click on More Info....
2. Look at the Universal Serial Bus Controller entry. If a yellow exclamation point shows next to this entry, contact the manufacturer of the USB card or PC.
Firmware update

2. Click Firmware on the menu bar (in the upper right corner).
3. Click Firmware Downloads. Find your drive model and start the download.
How to remove the USB cable

**Warning**
Do not disconnect the USB cable while the drive is in operation or the computer starts.

### For Windows

This drive supports Windows Plug & Play.

To remove the USB cable:

1. Close all active software programs.
2. Click the icon in the lower right part of the screen. See the picture.
3. Disconnect the USB cable.

### For Macintosh

This drive supports Macintosh Plug & Play.

To remove the USB cable:

1. Click the icon in the left menu. See the picture.
2. Disconnect the USB cable.
How to use the drive

Caution
Do not switch off the PC while the LED indicator blinks. Also do not disconnect the drive.
This can cause damage to the drive.

How to use a drive that is installed horizontally

You can use 3.15 inch or 4.72 inch (80 mm or 120 mm) discs.
The drive can only read the disc correctly if the disc is placed inside the tray guiding line.

Caution
Do not use the drive vertically.
How to use DVD±R/RW and other discs

**Important**
The Slim portable DVD Writer lets you write DVD±RW discs with Nero Express and enables "packet writing" (high-speed recording) with InCD. The drive also lets you write DVD±R discs with Nero Express.

**Caution**
*It is illegal to make unauthorized copies of DVD or software titles. A person who makes illegal copies can be held responsible for copyright infringement.*
*If you use low-quality discs, this can increase the recording time or make it impossible to use the disc.*

**How to use DVD±R/RW and other discs**

- You can use the drive to play Audio CD, CD-ROM, CD-R/RW and DVD-ROM discs. If your computer recognizes the [CD-ROM] icon designated to the drive as the 'E:' drive, insert a CD-ROM or a DVD-ROM disc and access the 'E:' drive. (The assigned drive letter can be different in your specific system environment.)
- You can use the drive to play commercial DVD titles:
  - Most DVD titles in the market use the Dolby sound system. It is necessary to install software that supports Dolby decoding on your PC before you can play a DVD title with this drive.
  - How to get commercial software that supports Dolby decoding.
    - Go to the website of Nero: [http://www.nero.com](http://www.nero.com)
    - (You can also use other compliant software)

**DVD Region Protection Coding (RPC)**

**DVD Region Protection Coding (RPC):**
The RPC feature is supported on DVD players and is used with DVD-video discs (such as movies). The motion picture industry has divided the world into different regions that correspond to the regional markets into which the motion picture industry releases movies. Movies worldwide have RPC codes, based on the region of the world in which they are being sold. These RPC codes help to control and prevent pirating of new movies into other motion picture regions before their release within those markets.
This drive supports RPC phase II. In the RPC-2 mode, users can change the local code. RPC-2 is selected by default for this drive.
You can change the region code up to five times via an MPEG application. Please contact your dealer or local SAMSUNG representative if you need to change the local code more than five times.
How to use the AV Connectivity function

What does the "AV Connectivity" mean?
You can use an external type ODD such as a USB memory device by connecting it to an AV device such as a TV or Tablet (Honeycomb 3.1 or higher).

How to use the AV Connectivity function

1. Hold down the Eject button on the ODD for 3 seconds while the ODD tray is open to switch the ODD to AV system support mode. At this time, the LED is lit.
2. If you hold down the button again, ODD mode is toggled between AV system support mode and general ODD mode.

Note
- This product works in ODD mode by default when the power is supplied.
- The supported media file formats are determined by whether they are supported by the AV device.
- In AV Connectivity mode, files cannot be saved and files are accessed in read-only mode.
- Since the product works like an external type HDD in AV Connectivity mode, you cannot burn a disc or play a DVD title.
- AV Connectivity works depending on whether the mode is supported by the connected device and not like a DVD player.

Technical information

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported formats</td>
<td>File formats and codecs supported by the connected device.</td>
</tr>
<tr>
<td>Supported number of photos</td>
<td>About 3000 (supports directory depth of up to 5 levels)</td>
</tr>
<tr>
<td>Supported capacity</td>
<td>No limit (up to 4 GB for the size of a file.)</td>
</tr>
</tbody>
</table>
### Device recognition time

<table>
<thead>
<tr>
<th>Device recognition time 1)</th>
<th>4.3 GB Full Media: Approximately 2 minutes 30 seconds (approximately 30 seconds is required for 1 GB.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported media</td>
<td>CD/DVD(except DVD-RAM)</td>
</tr>
<tr>
<td>Supported disc formats</td>
<td>ISO-9660/Joliet UDF 1.02 ~ 2.5</td>
</tr>
</tbody>
</table>

#### Note

1) The time to recognize the device may differ depending on the number of files and the capacity of the media device.

---

### Supported media types

CD/DVD types of media written in UDF or ISO are supported. (except for DVD-RAM)

The ISO and UDF formats

To understand the ISO and UDF formats, you have to understand the concept of file systems on storage devices. Since ODDs only support the ISO and UDF file systems, the data needs to be converted to a file system that the AV system can recognize for the data on the ODD to be used.

#### Note

- **AV System**: Supports the FAT32 file system.
- **File System**: When an HDD, DVD/CD media or flash memory device is connected to a computer, Windows Explorer shows the file name, the size and the creation date for the files saved on the storage device, by using the information saved on the file system. In addition, the file system stores the locations of the data that make up the files on the media.
- **ISO**: This file system is the most widely used file system for ODDs. This file system is used when users save data onto a media in the ODD by using a disc burning program such as NERO or ROXIO.
- **UDF**: This is a file system for ODD media that enables reading and writing data onto the media such as when using an HDD or USB memory device. For your reference, you can format a RW media in the UDF file system by right-clicking over the media in Windows Explorer in Windows VISTA or later.

---

### Frequently asked questions

**Is there a limit to the number or size of the files?**

Up to 3000 files are supported and the files from root directory up to 5 levels can be recognized. The maximum size of a file is just under 4 GB. There is no limit to the size of data saved onto a single disc.
In AV system support mode, it takes longer to recognize a disc.

It takes longer to recognize the discs as data on the ISO/UDF file system is converted to
the FAT32 file system for AV systems to recognize and transmit the data.
In addition, the time delay due to the conversion is determined by the number and size of
the files saved on the disc. (Approximately 30 seconds is required for 1 GB of data.)

I have connected the ODD but there is no response.

Because the file system conversion takes longer, if you connect a high-capacity disc, the
connected device (such as TV) will require some time to recognize the Samsung external-
type ODD (1G = approximately 30 seconds).

Note

When recognizing the ODD, the LED of the ODD blinks continuously.

I know my TV supports playing images but I cannot display my images on the TV.

The resolution of the images may not be supported by the TV or the codec (JPG, GIF,
BMP, and etc.) may not be supported by the TV. In addition, if the actual image is in a
format other than JPG such as in the BMP format, the image will not be displayed even
though the image file extension is “JPG”.

Does the AV connectivity function allow me to connect to a device such as a TV that
only has video, photo and music playing functions?

The AV connectivity function basically enables connecting an AV device to any device to
which a USB memory device can be connected. However, the AV connectivity device may
be unable to connect to a device due to a power or compatibility problem.
PLEASE NOTE When writing to a device (such as a USB memory device or external HDD
that is connected through the USB interface) is required for some reason, the AV
connectivity function does not work.

Note

Since some AV systems have a timeout scheme for recognizing USB devices, if
recognizing a device is delayed, the process may time out and the device may not
be recognized. This may occur when the disc contains a big file or a number of
files.

My TV works as a Personal Video Recorder when an external-type HDD is
connected. Can I record data by connecting an external-type ODD to the TV?

Since, at present, the AV connectivity function supports reading data only, you cannot
write data to the AV connectivity device.

I cannot play a video file on my TV.

First check if the connected TV supports playing video through a USB interface.
If the TV supports this function, check if the video format is supported by the TV.
The AV connectivity technology is only for recognizing the connected portable ODD, not
for automatically detecting the file format and playing the files on the ODD. The function for
detecting and playing files needs to be supported by the TV or digital frame.
For supported video, photo and music file formats, refer to the user manual of the device
to be connected (e.g. the TV manual).

Can I watch commercial DVD titles on the TV by using the AV connectivity function?
To play DVD titles, you need a recorder that can decrypt the encoded DVD title. However,
since most TVs do not support this function, you cannot watch DVD titles by using the AV
connectivity function. To watch DVD titles, you have to use a DVD player or DVD playing
software that runs on a computer.
## When the LED blinks

<table>
<thead>
<tr>
<th>Status</th>
<th>General ODD mode</th>
<th>AV system support mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disk Lead-In</td>
<td>Blinks every 0.3 seconds.</td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>Blinks every 0.3 seconds.</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>Blinks every 0.3 seconds.</td>
<td></td>
</tr>
<tr>
<td>Standby</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>No Disc</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

**Note**

The indicator light goes off when the drive is not in use (standby) after disc lead-in in the general ODD mode.
How to clean discs

**Important**
This part of the manual gives information to prevent damage or data loss.
Read carefully and use the device correctly.

- Do not touch the surface of the disc.
- Put your fingers on the edge of the disc to hold it.

- Use a soft cotton cloth to clean the disc. Start from the center and move to the edge of the disc.
- Use only disc-cleaning liquids. Do not use benzene, paint thinner or other solvents.

**Note**
If the disc surface becomes dirty with fingerprints, foreign substances or dust, the disc will not function properly.
How to store discs

**Important**
This part of the manual gives information to prevent damage or data loss.
Read carefully and use the device correctly.

- Do not place it in direct sunlight.
- Store discs so that they are lying face down on a flat surface.
- Do not scratch the disc or put a label on it.
- Handle the disc carefully to prevent damage from an external shock.
- Do not expose it to large temperature changes.
  (Exposure to such environment can cause congealing.)
## Troubleshooting

### General problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Meaning / Solution</th>
</tr>
</thead>
</table>
| The Eject button is not working correctly. | Make sure that the drive is on.  
If the disc still does not eject with the power on, remove the USB cable and insert a pin into the emergency eject hole to open. |
| No sound from an audio disc. | Make sure that the sound card is operational.  
Examine the disc and wipe the surface of the disc clean before use. |
| The computer does not recognize the drive. | Make sure that the USB cable is connected correctly between the computer USB port and the drive.  
This can be a problem with your operating system software. Try to reinstall the operating system. |
| The system does not read the disc. | Make sure that the system detects the drive.  
Make sure that you use a disc type that is supported by the drive.  
Make sure that the LED indicator blinks.  
Make sure that you inserted the disc with the label facing up.  
Make sure that you use the correct program to play the disc.  
Make sure that the disc is clean.  
Examine the drive for congealing.  
Make sure that the region code of the drive matches the region code of the disc. |

See Help on our website and the User Manual provided by NERO with regard to the use of our products.
of recording software.
Address: www.samsung-ODD.com

- See SUPPORT > Download Center > User Manual.
- See INFORMATION > Flash Manual > Recording Software.
Caution: Possible errors

The drive uses laser light to write data onto the surface of the disc. Writing errors can occur if you use a damaged disc. Make sure to prevent the conditions below before you start to write a disc.

1. Do not use multitasking. Disable the screen saver.
   - A buffer under-run can occur if the system uses multitasking while the drive writes data.

2. Do not let any outside computer access the host PC while the drive writes data.
   - An error can occur if another user accesses a network printer while the drive writes data.

3. Disable the CD auto-run feature of all drives.
   - If you insert an auto-run CD into another drive within the same system while the drive writes data, this can cause an error.

4. It is recommended that you use the image file format when you write a large number of small-sized files.
   - When there are many small files to write, the transfer rate decreases and the Buffer under run protection feature works at a more frequent rate. This causes a lower writing quality.
   - If you are doing a CD-to-CD copy, it is not necessary to verify if you have available space on your hard disc.
   - However, in the case of image files, we recommend that you make sure you to have at least two times the amount of space needed for the data on your hard disc. This is because image files are copied to the hard disc before they are copied to the media.

5. Do not use more than one type of writing software.
   - Before you install a writing program, make sure to first uninstall existing versions of the program or other writing programs. After you uninstall any software, restart the PC.
   - (The Windows operating system can be damaged if you install different language versions)

Note

We recommend that you use the data recording software provided by Samsung. If you use other recording software, this can cause an error.
The write speed for a disc can be restricted if:

1. **The disc has bad properties, or there are other discs with bad properties under the same ID.**

   The drive examines the disc properties to determine the best write conditions for the type of disc. Because the two types of disc have the same property data but different properties, it is often not possible to use the same settings. It is necessary to decrease the writing speed to make the writing more stable.

   If discs from two different disc makers have the same writing speed according to the labels, but actually have different writing speeds, it is necessary to reduce the writing speed.

2. **Samsung standards to decrease writing speed**

   - **Standard 1:** If there are high-speed discs in the market that have very bad property data, the writing speed is decreased. This also happens if there are low-speed discs with the same ID.

   - **Standard 2:** Discs for which the speed was reduced, will be examined again. If low-speed discs are no longer available in the market under the same ID as a high-speed disc, the decreased writing speed will no longer apply to the high-speed disc.

---

**Note**

It is possible that you do not get good writing quality with discs from manufacturers that are not registered in the drive's firmware.

We thus recommend that you only use discs from recommended companies.

Always make sure that the writing was successful before you put the disc in storage. This is very important when you want to store important data.

(Samsung is not responsible for any loss caused by a backup failure)

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**Note**

We update the list of supported media on a regular basis and make them available in our firmware upgrades.
Product specifications

Related links
http://www.samsung-ODD.com
http://www.samsung.com

Select languages
Select your language

Firmware Update
Check your firmware version.

Warranty Statement
Warranty statement for your product

Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>SE-218BB Ultra Thin portable DVD Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disc</td>
<td>Usable discs</td>
</tr>
<tr>
<td>DVD</td>
<td>DVD-R, DVD-RW, DVD+R, DVD+RW,</td>
</tr>
<tr>
<td></td>
<td>DVD-ROM, DVD-Video, DVD+R DL,</td>
</tr>
<tr>
<td></td>
<td>DVD-R DL, DVD-RAM</td>
</tr>
<tr>
<td>CD</td>
<td>CD-ROM, CD-R, CD-RW, CD-DA, CD+E(G),</td>
</tr>
<tr>
<td></td>
<td>CD-MIDI, CD-TEXT, CD-ROM XA, Mixed</td>
</tr>
<tr>
<td></td>
<td>Mode CD, CD-I, CD-I Bridge (Photo-CD,</td>
</tr>
<tr>
<td></td>
<td>Video-CD), Multisession CD (Photo-CD,</td>
</tr>
<tr>
<td></td>
<td>CD-EXTRA, Portfolio)</td>
</tr>
<tr>
<td>Disc diameter</td>
<td>3.15 inch or 4.72 inch (80 mm or 120 mm)</td>
</tr>
<tr>
<td>Interface support</td>
<td>Interface port USB 2.0 / 3.0 Interface connector</td>
</tr>
<tr>
<td>Access time (random)</td>
<td>DVD-ROM 150 ms</td>
</tr>
<tr>
<td></td>
<td>CD-ROM 150 ms</td>
</tr>
<tr>
<td>Media type</td>
<td>Read</td>
</tr>
<tr>
<td>DVD-R</td>
<td>CAV 8X</td>
</tr>
<tr>
<td>DVD-RW</td>
<td>CAV 8X</td>
</tr>
<tr>
<td>DVD-R DL</td>
<td>CAV 8X</td>
</tr>
<tr>
<td>DVD+R</td>
<td>CAV 8X</td>
</tr>
<tr>
<td>DVD+RW</td>
<td>CAV 8X</td>
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<tr>
<td>DVD+R DL</td>
<td>CAV 8X</td>
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### Specifications

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<td>PCAV 5X</td>
<td>CAV 24X</td>
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<td>PCAV 5X</td>
<td>PCAV 24X</td>
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</tbody>
</table>

| Buffer memory           | 1 MB    |
| Drive installation      | Horizontal |
| Operating environment   |          |
| Temperature             | 32 °F ~ 122 °F (0 °C ~ 50 °C) |
| Humidity                | 5% ~ 80% (RH) |
| Dimensions (width x height x length) | 148 mm X 14 mm X 143 mm |
| Weight                  | 255 g    |

**Note**
- Cannot playback or record on both sides of a dual layer disc simultaneously.
- The read/write capacity of the supported discs depends on the condition of the disc and the recording format of the drive. Therefore, the read/write quality may not be perfect.
- Firmly install the product into the PC before use.
- Specifications are subject to change without notice.

### FCC information to the user

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the...
Consult the dealer or an experienced radio/TV technician for help.

**Caution**
Change or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

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**Laser Standard**

EN 60825-1:2007

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**Important**

*The product specifications above may be changed to improve device performance without prior notice.*
Warranty statement

Select the region where you purchased the product.

Important

The warranty period differs depending on the sales region. Select the region where you purchased the product correctly.
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