



DVD-ROM Drive

TEST SPECIFICATION

Version 1.0₃
June 2005

Amendment for DVD-ROM Drive TS Version 1.03 (June 2005)

The following pages were amended without changing the version number of the TS.

- **Amendment 1 (February 13, 2009)**

Page	Location	Amendment
Pages 7 to 8	Annex A	<ul style="list-style-type: none">• "Royal Philips Electronics" was deleted from the Class-A Lab list.• Class-A Lab information of "Hitachi, Ltd.", "Matsushita Electric Industrial Co., Ltd. (company name)", "PIONEER CORPORATION", "Sony Corporation", "SAMSUNG ELECTRONICS CO., LTD" and "Industrial Technology Research Institute" was updated.
Page 11	Annex D	<ul style="list-style-type: none">• A note regarding Class-A Lab information was added.• The company name "Matsushita Electric Industrial Co., Ltd." was changed to "Panasonic Corporation".

- **Amendment 2 (March 19, 2009)**

Page	Location	Amendment
Page 8	Annex A	<ul style="list-style-type: none">• "Cinram Manufacturing" was deleted from the Class-A Lab list.

- **Minor amendment (January 2010)**

Page	Location	Amendment
Pages 7 to 8	Annex A	<ul style="list-style-type: none">• Class-A Lab information of "Hitachi, Ltd. (company name)", "Panasonic Corporation", "PIONEER CORPORATION" and "SAMSUNG ELECTRONICS CO., LTD" were updated.
Page 11	Annex D	<ul style="list-style-type: none">• Class-A Lab information of "Panasonic Corporation" was updated.

- **Minor amendment (March 2011)**

Page	Location	Amendment
Page 7	Annex A	<ul style="list-style-type: none">• Class-A Lab information of "China Electronics Technology Group Corporation No.3 Research Institute" was updated.

- **Amendment 3 (January 2012)**

Page	Location	Amendment
Page 8	Annex A	<ul style="list-style-type: none">• "Toshiba Corporation" was deleted from the Class-A Lab list.

- **Amendment 4 (June 2012)**

Page	Location	Amendment
Pages 7 to 8	Annex A	<ul style="list-style-type: none">• "Industrial Technology Research Institute" was deleted from the Class-A Lab list.• Class-A Lab information of "Sony Corporation", "LG Electronics Inc." and "SAMSUNG ELECTRONICS CO., LTD" were updated.

Conditions for Publication

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- Hitachi Consumer Electronics Co., Ltd. (Tokyo, Japan)
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Inquiry

For any further explanation of the contents of this document or in case of any perceived inconsistency or ambiguity of interpretation, please consult:

DVD Format/Logo Licensing Corporation

Address: 2F Shibadaimon Makita Bldg., 2-5-8 Shibadaimon, Minato-ku, Tokyo, 105-0012 Japan

Fax: +81-3-5777-2884

E-mail: info@dvdflc.co.jp URL: <http://www.dvdflc.co.jp>

Revision History

- March 1999
PC DVD Player and Components Test Specification was drafted.
- May 1999
PC DVD Player and Components Test Specification Version 1.0 was approved by VTF members.
- August 1999
PC DVD Player and Components Test Specification Version 1.0 was published.
- April 2001
DVD-ROM Drive Test Specification Version 1.01 was drafted by DVD FLIC abstracting the DVD-ROM Drive part from "PC DVD Player and Components Test Specification", and updating the List of Class-A Labs.

"PC DVD Player and Components Test Specification" will be discontinued.
PC DVD Video Player and DVD-Video Decoder should be tested using the DVD Video Player Test Specification.
- April 28, 2001
DVD-ROM Drive Test Specification Version 1.01 was approved by VTF members.
- January 2005
Class-A Labs (China Electronics Technology Group, Hitachi and PIONEER) were added, Lab addresses were updated, and **Form 1B** was modified.
- June 2005
Version 1.03 updated Class-A Lab List (SAMSUNG) and was edited as electronic files.

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Forms for DVD Format verification

Form 1B

Preliminary Information for DVD Format Verification F1

Form 2B

Test Information of DVD Format Verification F2

Form 3B

Test results of Dual Layered Disc readability F3

Form 4B

Confirmation of DVD Format Verification F4

1. General

1.1 Scope

The scope of this Test Specification is for the purpose of testing DVD-ROM Drive for compliance with DVD Specifications for Read-Only Disc Part 1: Version 1.0 and Part 2: Version 1.0. The test procedure described herein could be used by Class-A Verification Labs, Class-B Verification Labs and Quality Assurance Departments of DVD-ROM Drive Licensees.

The scope of this Test Specification is limited to product's compliance to the DVD Specifications and not to evaluate performance of products.

1.2 Normative References

DVD Specifications for Read-Only Disc

Part 1: Physical Specifications Version 1.0

Part 2: File System Specifications Version 1.0

1.3 Scope of Products Covered

DVD-ROM Drive

2. DVD Logo

DVD Format/Logo Licensing Corporation owns the rights to license the DVD Logo. To be able to use the DVD Logo, DVD manufacturer must have:

- a. License to use the Logo and
- b. DVD specification compliance of the product for logo consideration must be validated by the test specifications as defined in this document.

Licensing terms for the DVD Logo are available from the DVD Format/Logo Licensing Corporation. This chapter describes the mechanism to be used for product compliance testing.

2.1 Definition of Terms Used

First Production Model - The **First Production Model** must be tested and approved by any of the appropriate Class-A Verification Labs (see definition of Class-A Labs below) for compliance with DVD Specifications. Class-A Labs will use the test specifications described in this document for compliance verification.

The following parameters must be used to determine a **First Production Model**:

- DVD Specifications Version n.x changing to n+1.x.
- Initial or the latest production model at the start of Logo Program for each licensee.

Next Production Model - A **Next Production Model** does not require compliance verification from a Class-A Verification Lab but must be tested by licensee in its QA department for compliance with DVD Specifications. Licensee's QA department must have the test tools required to perform the tests specified in this document and must, at minimum, use the test procedure referred to in this document (licensee is free to have its own QA procedure, equipment and tools as long as it is a superset of the specification described in this document). A Licensee without own QA department can get the product tested by a certified Third Party Class-B Verification Lab (see definition of Class-B Labs below).

The following parameters must be used to determine a **Next Production Model**:

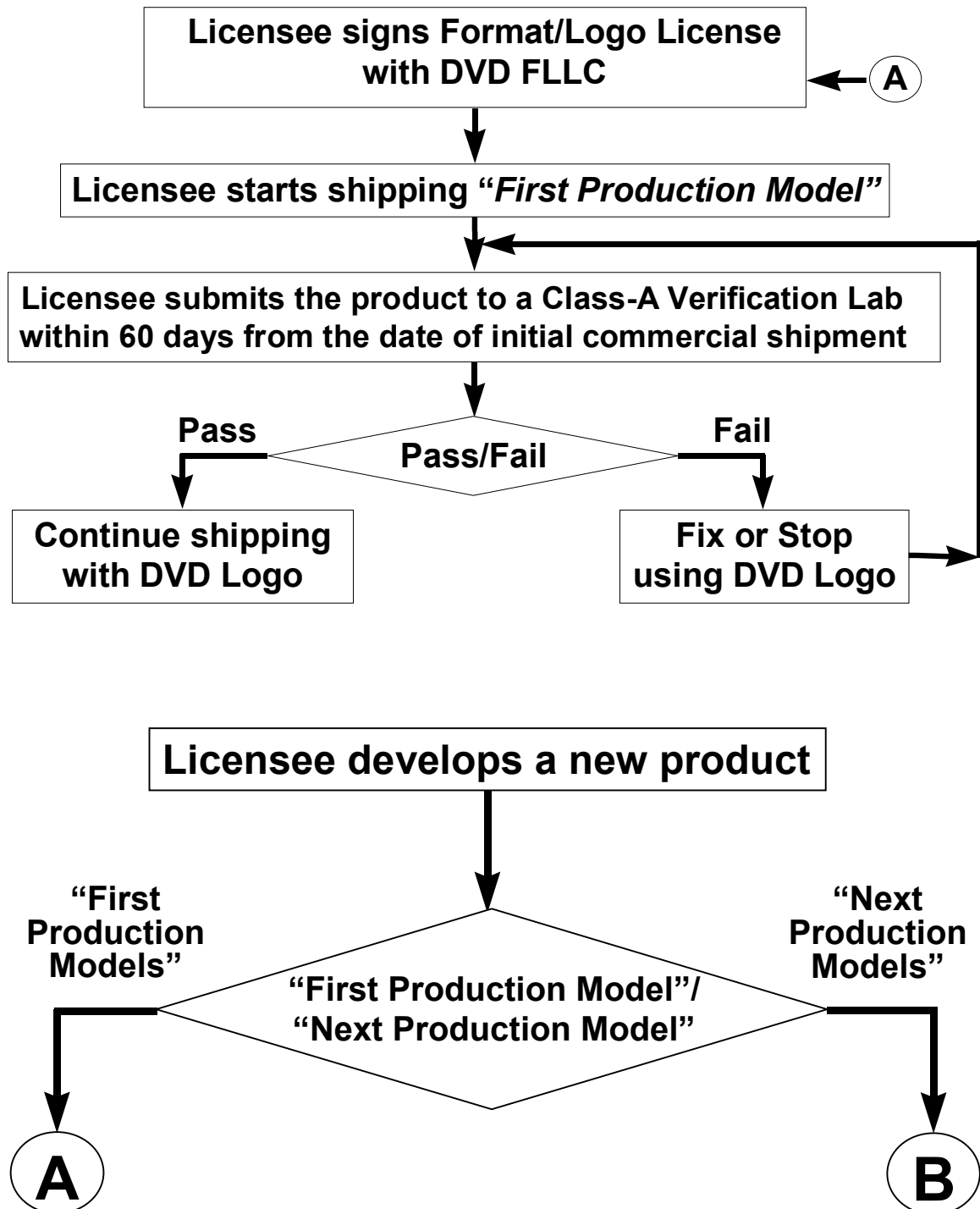
- DVD Specifications Version n.x changing to n.x+1.
- Significant changes at Licensees discretion to Pickup head, LSI and/or firmware related to DVD format.

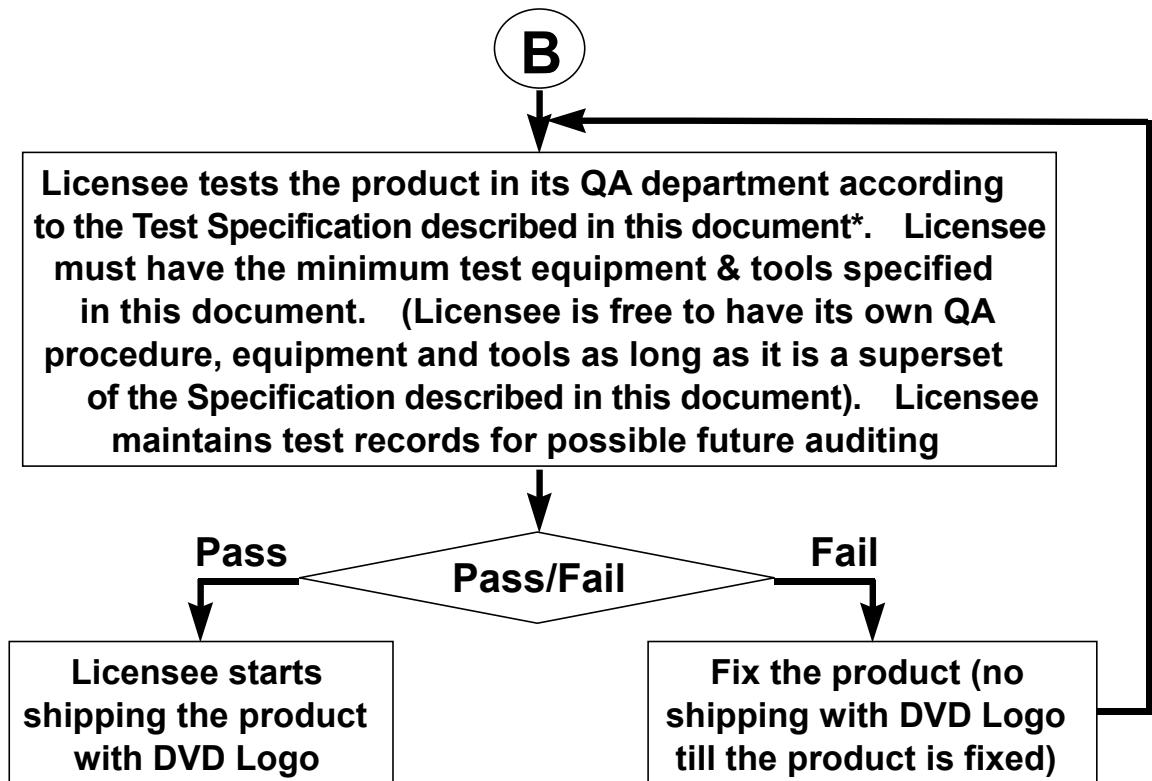
Class-A Verification Labs - Class-A Verification Labs are experts in DVD technology and provide independent expert assessment of Licensee's product compliance with DVD Specifications. Class-A Labs also provide additional services such as interpretation of DVD Specifications, Test Tool development, and Class-B Labs and Licensees auditing, etc.

Class-B Verification Labs - DVD-ROM Drive Class-B Verification Labs provide DVD-ROM Drive testing strictly according to the **DVD-ROM Drive Test Specification** (They can not interpret specifications).

2.2 DVD Logo Mechanism

The DVD Logo mechanism is described in the following flow chart:





*: Licensee without own QA department can get the product tested by a **DVD-ROM Drive Class-B Verification Lab**.

3. Test Tools and Test Specifications

This chapter covers the test specifications and tool requirements for the physical and logical compliance testing.

3.1 Test Tools

The following test discs are used for testing DVD-ROM Drive. As for acquisition, refer to **Annex D**.

- Navigation Files Test Disc Vol. 2: DVD-NF100 (Dual layer, Parallel Track Path)
- Navigation Files Test Disc Vol. 2: DVD-NF150 (Dual layer, Opposite Track Path)

3.2 Test Specifications

The following test procedures are required for verification of DVD-ROM Drive.

3.2.1 Dual Layered Disc readability

1. Layer 0 of PTP

- Put the DVD-NF100 test disc into the untested DVD-ROM Drive.
- Copy the file named "VIDEO_TS.IFO" onto the hard disk drive.
- Compare the original file to the copied file. If the file comparison passed, that means the DVD-ROM drive can read the data of the Layer 0 of Parallel Track Path (PTP) test disc properly and check mark OK in item 1 of **Form 3B**.

2. Layer 1 of PTP

- Copy the file named "VTS_29_0.BUP" onto the hard disk drive.
- Compare the original file to the copied file. If the file comparison passed that means the DVD-ROM drive can read the data of the Layer 1 of Parallel Track Path (PTP) test disc properly and check mark OK in item 2 of **Form 3B**.

3. Layer 0 of OTP

- Remove the DVD-NF100 test disc from the DVD-ROM Drive, and put the DVD-NF150 test disc in.
- Copy the file named "VIDEO_TS.IFO" onto the hard disk drive.
- Compare the original file to the copied file. If the file comparison passed that means the DVD-ROM drive can read the data of the Layer 0 of Opposite Track Path (OTP) test disc properly and check mark OK in item 3 of **Form 3B**.

4. Layer 1 of OTP

- Copy the file named "VTS_29_0.BUP" onto the hard disk drive.
- Compare the original file to the copied file. If the file comparison passed that means the DVD-ROM drive can read the data of the Layer 1 of Opposite Track Path (OTP) test disc properly and check mark OK in item 4 of **Form 3B**.

Note: If the applicant choose to use their own test disc, please follow the same model above to validate proper file access from layer 0 and 1 on both parallel and opposite tracks of the disc.

Annex A

List of Class-A Verification Labs

This List is correct at the time of publication. However, when the Class-A Lab information contained here differs from such information cited in our website www.dvdfllc.co.jp, the List with more current date prevails. Also, please refer to the website for the latest Verification Service of each Class-A Lab.

China

China Electronics Technology Group Corporation No.3 Research Institute

DVD Verification Laboratory

7B North Jiuxianqiao Road, Chaoyang District, Beijing, 100015 P.R.China

Tel: +86-10-59570185

Fax: +86-10-64362837

Japan

Hitachi Consumer Electronics Co., Ltd.

Format Verification Center

292 Yoshida-cho, Totsuka-ku, Yokohama-shi, Kanagawa, 244-0817 Japan

Fax: +81-45-866-5905

Panasonic Corporation

Format Verification Laboratory

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504 Japan

Fax: +81-6-6909-5027

E-mail: fv1-info@ml.jp.panasonic.com URL: <http://panasonic.co.jp/avc/fv1/en/index.html>

PIONEER CORPORATION

Verification Laboratory

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031 Japan

Fax: +81-44-580-4027

Sony Corporation

Verification Laboratory

2-10-1 Osaki, Shinagawa-ku, Tokyo, 141-8610 Japan

Fax: +81-50-3750-6608

(Continued)

Korea

LG Electronics Inc.

DVD Verification Laboratory

19-1 Cheongho-Ri, Jinwi-Myun, Pyungtaik-City, Kyunggi-Do, 451-713 Korea

Tel: +82-31-686-4838 Fax: +82-31-686-4827

E-mail: kyoungtai.koo@lge.com

SAMSUNG ELECTRONICS CO., LTD

DVD Verification Laboratory

VD Division, DM Business

416, Maetan-3Dong, Yeongtong-Gu, Suwon-City, Gyeonggi-Do, 443-742 Korea

Tel: +82-31-277-0875 Fax: +82-31-277-3398

E-mail: bd.tcenter@samsung.com

Annex B

Glossary of Terms used

(This page is left blank intentionally. May be defined in future.)

Annex C

Procedure for Class-A Verification Lab Product Submission

The procedure for submitting a product to a Class-A Verification Lab is as follows:

Preliminary Application

Applicant must complete **Form 1B** to provide preliminary information.

Self Test

Applicant must test the product in accordance with this Test Specification prior to submitting samples to a Class-A Verification Lab. Applicant must complete **Form 2B to 3B** to provide test results.

Mutual Non-Disclosure Agreement (NDA)

Applicant, in order to maintain the confidentiality of the applicant's product and Verification Lab's information, must sign a Mutual Non-Disclosure Agreement.

Application

Applicant must submit 3 product samples along with **Form 2B to 3B** and the NDA.

Test Result

Upon completion of testing, Verification Lab will complete **Form 4B** to inform the applicant and DVD Format/Logo Licensing Corporation of the test results.

Annex D

Test Tool Contact Information

The Contact Information is correct at the time of publication. However, when the Class-A Lab information (marked <>) differs from such information cited in our website www.dvdfllc.co.jp, the List with more current date prevails.*

Navigation Files Test Disc Vol. 2: DVD-NF100 and DVD-NF150 shall be delivered by:

Panasonic Corporation<*>

Format Verification Laboratory

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504 Japan

Fax: +81-6-6909-5027

E-mail: fvl-info@ml.jp.panasonic.com URL: <http://panasonic.co.jp/avc/fvl/en/index.html>

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