

## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Component Recognition
<b>CCN:</b>	NWGQ2, NWGQ8 (Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	DVD Multi-Drive
<b>Model:</b>	UJ8A0A, UJ8B0X (where "X": is any alphanumeric character or blank)
<b>Rating:</b>	5 Vdc
<b>Applicant Name and Address:</b>	PANASONIC CORPORATION OF NORTH AMERICA PRODUCT SAFETY & COMPLIANCE DIV 1 PANASONIC WAY 4B-8 SECAUCUS NJ 07094 UNITED STATES

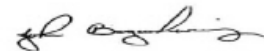
This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of Underwriters Laboratories Inc. ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

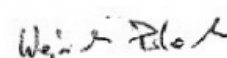
UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Prepared by: John Bogashewicz  
Underwriters Laboratories Inc.



Reviewed by: Wojciech Poleszak  
Underwriters Laboratories Inc.



### Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
  - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
  - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
  - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

### Product Description

This DVD Multi-Drive is a Class I Laser component type disk drive incorporating Class III/IIIb laser diodes and intended for use in product of Information Technology Equipment.

### Model Differences

Model UJ8A0A is the basic model.  
Model UJ8B0X is similar to basic Model except for model number.

### Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : DC product not connected to mains
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : -
- Mains supply tolerance (%) or absolute mains supply values : N/A
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class III (supplied by SELV)
- Considered current rating (A) : -

- Pollution degree (PD) : -
- IP protection class : IP X0
- Altitude of operation (m) : <2000
- Altitude of test laboratory (m) : 50
- Mass of equipment (kg) : Approx. 0.2
- The product was submitted and evaluated for use at the maximum ambient temperature (T<sub>ma</sub>) permitted by the manufacturer's specification of: 50 °C
- The class of laser product is: Class 1 (I)
- The product was investigated to the following additional standards: U.S. Code of Federal Regulations, 21 CFR 1040

**Engineering Conditions of Acceptability**

For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. When installed in an end-product, consideration must be given to the following:

- The investigated Pollution Degree is: 2
- The front bezel complies with the requirements for a: V-1 flame rating
- The following end-product enclosures are required: Mechanical, Fire

**Additional Information**

N/A

**Markings and instructions**

Clause Title	Marking or Instruction Details
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number

Construction details - Laser, 21 CFR, Subchapter J	"Complies with FDA radiation performance standards, 21 CFR Subchapter J."
Laser - mfr./date	"Manufactured (month/year) "
Laser - CAUTION: Do not Stare Into Beam	"CAUTION: Class 3B Visible and Invisible Laser Radiation when open AVOID EXPOSURE TO BEAM." Location: Case exterior.
<b>Special Instructions to UL Representative</b> N/A	

<b>Production-Line Testing Requirements</b>						
<b><u>Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.</u></b>						
Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A	--	--	--	--	--	--
<b><u>Earthing Continuity Test Exemptions - This test is not required for the following models:</u></b>						
UJ8A0A, UJ8B0X						
<b><u>Electric Strength Test Exemptions - This test is not required for the following models:</u></b>						
UJ8A0A, UJ8B0X						
<b><u>Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:</u></b>						
N/A						
<b><u>Sample and Test Specifics for Follow-Up Tests at UL</u></b>						
Model	Component	Material	Test	Sample(s)	Test Specifics	
N/A	-	-	-	-	-	

**TABLE: List of Critical Components**

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Front Bezel (Optional)	Various	Various	Rated V-1 min.	QMFZ2	UL
Top/Bottom Cover	Various	Various	Metal Plate	-	-
Enclosure Cover (Optional)	Various	Various	Rated V-2 min. Top and Bottom secured by a screw.	QMFZ2	UL
Connectors	Various	Various	Located in SELV.	-	-
CD Tray	Various	Various	Rated HB min.	QMFZ2	UL
PWB	Various	Various	Rated V-1 min.	ZPMV2	UL
Flexible Printed Circuit (Optional)	Various	Various	Rated V-2 min. Located from PWB to I/F connector. Optional plastic plate pasted on Main FPC may not be R/C, overall dimensions 15 x 30 mm.	ZPMV2 or ZPXK2	UL
Spindle Motor	Nidec	24C075F08X (X is any character or blank).	5 Vdc, maximum 750 mA	-	-
Spindle Motor (alternate)	Sanyo Seimitsu	LMA-28DSX (X is any character or blank).	5 Vdc, maximum 750 mA	-	-
Spindle Motor (alternate)	Nidec	24C075G04X (X is any characters or blank).	5 Vdc, maximum 750 mA	-	-
Feed Motor	Nidec Sankyo	MSAW016BXX (X is any character or blank).	4 Vdc, 350mA	-	-
Eject Solenoid	Shinmei Denki	DL0916S2-020-XXX (X is any character or blank).	4.5 - 5.5 Vdc	-	-
Optical Pick-Up	Sanyo	SF-DS29PX (X is any character or blank).	-	-	-
Optical Pick-Up (alternate)	Sanyo	SF-DS2XP (X is any character or blank).	-	-	-
Laser Diode (for CD and DVD)	Panasonic	LNCT26XX (X is any character or	-	-	-

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2011-02-23

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Object/part or Description	Manufacturer/trademark	type/model	technical data	CCN	Marks of Conformity
		blank).			
Interlock Switch (2 Provided)	Alps Electric Co., Ltd.	SPVG (SPVG11) series	20 V dc, 50 mA, 10000 cycles	-	-
Alternate	Panasonic	ESE31R01T	5 V dc, 100 mA, 10000 cycles	-	-
Alternate	MIK Denshi	P431-01	5 Vdc, 1mA, 10000 cycles	-	-
Alternate	MIK Denshi	P544-01	5 Vdc, 1mA, 10000 cycles	-	-
Labels	various	various	Suitable for Application	PGDQ2 or PGJI2	UL

## Enclosures

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-03	UJ8A0A
Photographs	3-10	UJ8A0A
Photographs	3-11	UJ8A0A
Diagrams		
Schematics + PWB	5-01	Schematics
Manuals		
Miscellaneous	7-02	Marking Label
Miscellaneous	7-03	CDRH Laser report
Miscellaneous	7-04	CDRH Laser report