

FUJIFILM

RECORDING MEDIA
**PRODUCT
GUIDE**



DATA STORAGE MEDIA

PROFESSIONAL MEDIA

CONSUMER MEDIA

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FUJIFILM Recording Media

is one of the leading manufacturers of high-performance storage media for both the business and consumer markets and as a world-wide company, creates the supply to the European market.

Exchange of information, working processes, decisions and the creation of binding documents are increasingly handled through a net of multimedia worlds and structures. Despite this progress, one thing remains unavoidable: the safe storage of relevant data and their physical availability.

By using most innovative technologies, FUJIFILM products set new standards and thus face the steadily growing requirements of the market and the people of the age of multimedia with an excellent product quality.

This product guide gives you an overview of our wide and extensive product line-up and services.

Technical Service Center

Over the last few decades, FUJIFILM has repeatedly demonstrated its innovative strengths, with the development of state-of-the-art technologies and the manufacture of high-quality and extremely powerful storage media

The company's achievement also includes a special portfolio of services for back-up solutions that FUJIFILM can offer in tailor-made packages, via the FUJIFILM TECHNICAL SERVICE CENTER.

With this solution, FUJIFILM will in future be focusing on comprehensive data services with a seamless security strategy. Be it labelling and initializing, data migration, data conversion, data recovery, health check or laser etching, all of FUJIFILM's services will be carried out by specialists under clean-room conditions.

All services will be delivered in the shortest possible time and in full compliance with the ISO 9000 certificate. Thanks to these innovative technical services, which are provided from a single source, data backup procedures can now be set up with considerably greater efficiency.



Labelling + Initializing: Immediate use without any delay

Upon customers request, FUJIFILM takes charge of the time-consuming and laborious labelling and initializing of high-quality data cartridges.



Data Migration: Complex and time-consuming transfers made easy

The time-consuming transfer of extensive volumes of data from older systems to new ones can now be performed entirely by our data migration service.



Data Conversion: All your data in one single stroke

Our data conversion service transfers data from all kinds of storage media, data structures and formats onto a shared new backup system.



Data Recovery: We rescue everything we can

The FUJIFILM Service Team rescues data you believed was lost forever, copy it to new data media and thus enable you to access it again with ease.



Analysis + Health Check: Stop risks before they cause mayhem

The data media are checked and analysed thoroughly, so that any risks to the data are detected early on and can be eliminated.



Laser Etching: Make no mistakes

To ensure clear identification, information is burned onto the cartridges by laser. This etching cannot be removed.



Data Disposal: The totally secure way to eliminate data

At FUJIFILM, the disposal of data media means the controlled and certified destruction of data media and thus the irrevocable elimination of all data.



24-Hour Call Center: On-call help

If major queries or problems should arise, our call center is available for you 24 hours a day.

Call Center: +49 (0)180 538542255 ^(12ct./min.)



FUJIFILM offers these services especially for its data storage products. In the Enterprise sector, these include the FUJIFILM Tape Cartridges 3592, while in the Midrange sector, the relevant products are FUJIFILM Tape Cartridges LTO (all generations).

For more information on our services for back-up solutions, please visit our website: www.fuji-mediasolution.com

LIBRARY PACK - The allround pack

The innovative, sturdy transport and archiving packaging developed by FUJIFILM for Enterprise products and, on request, for LTO data cartridges too, facilitates quick and easy unpacking, transportation and stacking.

They also protect securely against shocks, humidity and dust.

Contents: 20 pcs.



Unified Archive Layer

Archival solutions from FUJIFILM



Keeping and Maintaining your Media Archives

Fujifilm Recording Media provides secure off-site Archival Solutions under controlled conditions for all kinds of storage media.

Our services include secure transport of data from your company to our central archive, complete verification and listing of all media and regular media health checks and monitoring all of which help you to manage, protect and control your data.



Unified Archive Layer (UAL)

Prepare yourself for the future with Fujifilm's revolutionary Unified Archive Layer (UAL). We have created a way for you to avoid all future migration/conversion processes and related costs. System and format generations are continuously changing, resulting in high migration costs plus the costs of maintaining old drives. Fujifilm will arrange for all your data to be loaded onto their UAL data storage system, at which point your data becomes free from format and system restraints. Fujifilm staff can transfer any of your data to you on demand, either via a network or on any requested media or format.



The Fujifilm UAL system reduces your migration, labour, system and power costs in addition to your media costs.

The Secure Environment of the UAL

The UAL offers the ultimate secure environment for your data. All media is stored in an air conditioned cleanroom, with personal identification and fingerprint entry requirements. With a 24 hour video observation system, a Novec anti-fire system (with the capability to extinguish fires without causing damage to tapes) and an automatic warning and notification system, you can rest assured that your data is safe with Fujifilm! For disaster recovery requirements, a second copy of your data will be stored in an ex-military off-site vault.



Archive Consulting

As a leading manufacturer of high-performance storage media, Fujifilm has many years of storage experience which we can apply to your business. Our engineers are able to offer their know-how and experience about archival and IT systems as well as media technologies.



Over the years, Fujifilm has developed important devices, for example the DC Analyser (for LTO media) which quickly identifies back-up problems and measures overall cartridge and drive health. Many problems can be recognized and repaired, before they even become a threat to your archive data.



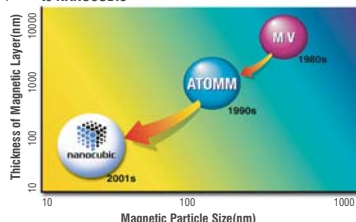
For more information on our services and solutions, please call: +49 (0)2821-509-188

NANOCUBIC TECHNOLOGY



NANOCUBIC is an ultra-thin layer coating that results in higher resolution for recording digital data, ultra-low noise and high signal-to-noise ratios that are ideal for magneto-resistive (MR) heads. It is capable of catapulting data cartridge to one-terabyte native (uncompressed) capacities and floppy disk capacities to three gigabytes. To help visualise the potential, over 700,000 floppy disks or 13 DLT™ IV tapes would be required to store 1TB of data. Fujifilm is already beginning to work with drive manufacturers to develop new, high capacity magnetic storage products using NANOCUBIC.

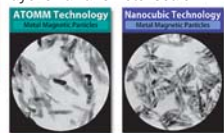
Technology change to NANOCUBIC



NANOCUBIC consists of:

1. Coating technology:

NANOCUBIC employs an advanced precision coating process that can control the thickness of the magnetic layer on a nanometer scale.



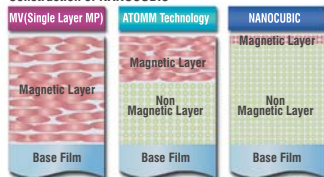
2. Particle technology:

Two types of magnetic particles were developed for NANOCUBIC, both tens of nanometers in size: acicular ferro-magnetic alloy particle and tabular ferromagnetic hexagonal barium ferrite particle.

3. Dispersion technology:

NANOCUBIC uses a special organic binder material that has the ability to thoroughly disperse the particles in the coating solution so that a uniformly packed structure of the layer is realized.

Construction of NANOCUBIC



MV is the metal tape that Fuji Photo Film Co., Ltd. developed as video tape 1981

Applications in development include: magnetic storage tape, both for helical scan and linear recording formats; high-capacity floppy disks; high-definition, long-duration digital video tape for broadcast and home use; and data and video storage tape. High-end tape storage products for enterprise applications are also possible with NANOCUBIC.

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DLT and DLTape is a trademark of Quantum Corp..



Enterprise Tape Cartridge

3592

Proprietary Nanocubic technology assures high capacity and rock-solid reliability

In today's information age, enterprise-class data storage systems require the use of storage media that offer both high capacity and high reliability. FUJIFILM's 3592 Enterprise Tape Cartridge for IBM 3592 TotalStorage® Enterprise Tape Drive Systems offers outstanding reliability.

Ruggedly constructed cartridge shells

For maximum durability, cartridge shells are constructed of heavy-gauge resin and internal components are specially designed to withstand heavy use. Five high tensile-strength screws are also used to secure the cartridge shell halves together.

High-reliability sliding door mechanism

Dust protection and durability are enhanced by a high reliable curved sliding door and leader pin system.

Built in memory modules

All cartridges are equipped with multifunction non-contact flash memory modules.

• DATA: 300GB High Capacity Tape Cartridge

Capability to record 512 tracks with capacity of 300GB and 900GB (3:1 data compressed).

• ECONOMY: 60GB Economical, Fast-Access Tape Cartridge

The fast-access FUJIFILM 3592 Tape minimizes the time to access necessary data. Its tape is shorter and offers 60GB capacity (180GB with 3:1 data compression).

• WORM: DATA (300GB) and ECONOMY (60GB), WORM= (Write Once Read Many)

FUJIFILM provides non-alterable and non-rewriteable FUJIFILM 3592 WORM Tape Cartridges with 300GB and 60GB capacity.

• CLEANING: Cleaning Cartridge for all IBM 3592 Total-Storage® Enterprise Tape Drive Systems.

LIBRARY PACK - The allround pack

The sturdy transport and archiving packaging developed by FUJIFILM for Enterprise products protects the cartridges securely against shocks, humidity and dust.

Services to meet every user need

Tapes can be labelled and pre-initialized to meet customer specifications. A wide variety of color-coded labels and bar-coded labels for automated storage systems are available to facilitate data library management, ensuring full-service support to meet virtually every customer need.

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TotalStorage is a registered trademark of IBM Corp. in the United States and other countries



LTO Ultrium Data Cartridge

LTO ULTRIUM

LTO Ultrium Technology - the standard in high-capacity, high-reliability data storage

As database and Internet-related applications require greater data storage and critical operations demand minimized downtime due to backup operations, new cost-effective solutions are needed.

LTO Ultrium ultra-high-capacity tape is such a solution. With storage capacity of up to 3.0 TB (2:1 compressed; 1.5 TB native) and data-transfer rates of up to 280 MB/s (2:1 compressed; 140 MB/s native), LTO Ultrium tape cartridges serve the needs of network servers, enterprise computers and other demanding environments.

And FUJIFILM's advanced tape technologies, including its innovative servo-writing and NANOCUBIC Technology, translate into solid reliability as well as high performance.

Definition of LTO

LTO stands for "Linear Tape-Open" technology. The standard was developed by a consortium of Hewlett-Packard, IBM and Quantum - and it represents a scalable and durable tape-storage format whose future growth (going all the way up to 32 TB (2.5:1 compressed, 12.8 TB native) configurations) has been mapped out for an extended period into the future.

- **Linear Tape-Open Technology**
- **High capacity cartridge for extremely high data volumes**
- **Applications: network servers, mid-range and mainframe computers**
- **FUJIFILM Servo Technology: Timing-based, high-precision servo control**
- **NANOCUBIC Technology, which is used in LTO Gen 4&5 improves smoothness of tape surface, which helps extend the head-lifetime and outputs high durability by the decrease of error even in rigorous use.**
- **WORM: LTO Gen 3&4&5 offers WORM (Write-Once Read-Many) functionality.**



Once data has been written to WORM tape, it cannot be altered, making it an ideal solution for compliance. To help customers distinguish visually between a WORM cartridge and a standard (non-WORM) data cartridge, the lower part of a FUJIFILM WORM cartridge is light gray in color, unlike the upper part of the shell.

- **Encrypted for security: LTO Gen 4&5 introduces Advanced Encryption Standard (AES) 256-bit encryption algorithms to keep data secure**
- **Cartridge dimension: 102 x 105,4 x 21,5 mm**

Services to meet every user need

Tapes can be labelled and pre-initialized to meet customer specifications. A wide variety of color-coded labels and bar-coded labels for automated storage systems are available to facilitate data library management, ensuring full-service support to meet virtually every customer need.

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Line-up

LTO ULTRIUM 5 DATA CARTRIDGE

- Capacity: 1.5 TB native (3.0 TB with 2:1 compression)
- Impressive data transfer rates of up to 140 MB/s (2:1 compressed, 280 MB/s)

LTO ULTRIUM 5 WORM DATA CARTRIDGE

- Non-rewritable data cartridge
- Capacity: 1.5 TB native (3.0 TB with 2:1 compression)
- Impressive data transfer rates of up to 140 MB/s (2:1 compressed, 280 MB/s)

LTO ULTRIUM 4 DATA CARTRIDGE

- Capacity: 800 GB native (1.6 TB with 2:1 compression)
- Impressive data transfer rates of up to 120 MB/s (2:1 compressed, 240 MB/s)

LTO ULTRIUM 4 WORM DATA CARTRIDGE

- Non-rewritable data cartridge
- Capacity: 800 GB native (1.6 TB with 2:1 compression)
- Impressive data transfer rates of up to 120 MB/s (2:1 compressed, 240 MB/s)

LTO ULTRIUM 3 DATA CARTRIDGE

- Capacity: 400 GB native (800 GB with 2:1 compression)
- High data transfer rates of 40-80 MB/s (2:1 compressed, 80 -160 MB/s)

LTO ULTRIUM 3 WORM DATA CARTRIDGE

- Non-rewritable data cartridge
- Capacity: 400 GB native (800 GB with 2:1 compression)
- High data transfer rates of 40-80 MB/s (2:1 compressed, 80 -160 MB/s)

LTO ULTRIUM 2 DATA CARTRIDGE

- Capacity: 200 GB native (400 GB with 2:1 compression)
- Data transfer rates of 20-40 MB/s (2:1 compressed, 40-80 MB/s)

LTO ULTRIUM 1 DATA CARTRIDGE

- Capacity: 100 GB native (200 GB with 2:1 compression)
- Data transfer rates of 10-20 MB/s (2:1 compressed, 20-40 MB/s)

LTO UCC CLEANING CARTRIDGE

- Universal Cleaning Cartridge for LTO-backup-systems
- LTO Universal Cleaning Cartridge is capable of being used in all generation 1/2/3/4/5 Ultrium format tape drives

LIBRARY PACK

According to customers' preference, FUJIFILM LTO data cartridges can be delivered in the Library Pack developed by FUJIFILM or in the standard PP-case.

Contents: 20 pcs.



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LTO, Linear Tape-Open, LTO Logo, Ultrium and Ultrium Logo are Trademarks of HP, IBM and Quantum in the USA, other countries or both.



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Data Cartridge - Diagnostic Tool

DC ANALYSER

First desktop tool to provide key storage tape diagnostic and tracking data in a single device. FUJIFILM Recording Media GmbH introduced the FUJIFILM DC Analyser, the first data center tool of its kind that leverages the expertise of a leading data tape media manufacturer to instantly provide key information on the age, use and condition of the popular LTO Ultrium format data cartridge.

This tool will help data managers quickly identify if the source of the problem is the cartridge or if a cartridge issue is a symptom of a malfunctioning drive or unbalanced backup and network. The FUJIFILM DC Analyser provides as well recommendation about cartridges, drive and application.

How FUJIFILM DC Analyser Works

Created through combined development efforts between FUJIFILM's globally recognized data tape engineers and the application developers at FUJIFILM Recording Media GmbH, the FUJIFILM DC Analyser uses a low-power radio frequency (RF) reader to access historical tape usage information stored in the internal cartridge memory (CM) chip in every LTO Ultrium tape cartridge. The CM chip retains basic diagnostic information over a period of time, including percentage or record errors, amount of data read/written, number of cartridge loads and the age of the cartridge.

By providing access to this information through a simple RF reader combined with standard barcode scanning technology, the FUJIFILM DC Analyser puts key diagnostic and logistic data at the fingertips of the data manager, helping to quickly locate the root cause and prevent backup issues without the need to access a drive, call in outside technicians or send sensitive data out to a third party for evaluation.

- Analyses LTO tape cartridges by reading only cartridge memory (CM) information, which reduces the risk of data leakage

- Offer quick and easy on-site tape diagnostics anywhere

- Features precise, easy-to-understand tape diagnostic functions

Convenient Carry Case

We also offer a compact and light carry case for the DC Analyser - protects DC Analyser from shock.



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4mm Data Cartridge

DAT72/DDS

DAT72
Digital Data Storage

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FUJIFILM's ATOMM technology provides a high-density, high-output, high-reliability DAT72 data cartridge

Now higher capacity, output and reliability are requested for DDS system. In a further extension of its ATOMM technology, which was applied to DDS4 and DDS3 data cartridges and provided both high-density recording and high reliability, FUJIFILM has developed metal particle-coated DG DAT72 tape which supports the new DAT72 standard. The result is a high-capacity (36GB native/72GB compressed) tape with high reliability. A 4S structure* (Symmetric Slider Spring Structure) which increases the pressing strength of the spring has been adopted. The use of a symmetrical slider spring provides a smoother movement of the cartridge's slider, which increases reliability in repeated use.

*Adopted in the following cartridges:

DAT72 DG5-170M and DDS DG4-150M, DG3-125M

The ATOMM technology is applied to

DAT72 DG5-170M and DDS DG4-150M, DG3-125M

DAT72/DDS DATA CARTRIDGE

- 4mm cartridges for DAT72/DDS-backup system
- Applications: backup, archiving, data exchange
- Stable output thanks to the "Super Fine Metallix"-technology
- Super smooth magnetic surface for better tape performance

Line-up

DG5-170M/DAT72 - 36GB (uncompressed)

DG4-150M/DDS4 - 20GB (uncompressed)

DG3-125M/DDS3 - 12GB (uncompressed)

DG-120M/DDS2 - 4GB (uncompressed)

DG-90M/DDS - 2GB (uncompressed)

DDS (4mm) CLEANING CARTRIDGE DG-15CL

- Cleaning tape for DDS-backup systems
- Suitable for all 4mm DDS drives and DAT72 drives

Specifications and appearance are subject to change without notice.



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Digital HD Videocassette

HD331**HDCAM™**

Leading-edge technology for outstanding HD broadcast quality

FUJIFILM HD331 videocassettes offer the high output and low noise that high-quality HDTV broadcasting demands. High C/N and a low error rate are assured by ultrafine metal magnetic particles and a magnetic layer polished to mirror-like smoothness by our super calendaring technology.

- Super calendaring technology for high C/N and a low error rate
- Stable tape transport and high durability even under the extreme demands of ENG/EPF
- Reels offer superior winding characteristics
- Superior storage characteristics keep image archives safe during long term storage

Cassette size

small:

Digital HD Videocassette HD331 6S
Digital HD Videocassette HD331 12S
Digital HD Videocassette HD331 22S
Digital HD Videocassette HD331 32S
Digital HD Videocassette HD331 40S

large:

Digital HD Videocassette HD331 34L
Digital HD Videocassette HD331 64L
Digital HD Videocassette HD331 94L
Digital HD Videocassette HD331 124L



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Digital Betacam Videocassette

D321**Digital BETACAM™**

Engineered for superior Digital Betacam performance

FUJIFILM D321 is the professional's choice for top-flight Digital Betacam system performance. Specially formulated ultra-fine metal magnetic particles ensure high output and a low error rate, while superior binder and backcoating materials provide the durability and reliability that broadcasters demand.

- High output and low error rate
- Superior durability and transport stability
- Superior storage characteristics
- Rugged hard case design

Cassette size

small:

Digital Betacam Videocassette D321 D6
Digital Betacam Videocassette D321 D12
Digital Betacam Videocassette D321 D22
Digital Betacam Videocassette D321 D32
Digital Betacam Videocassette D321 D40

large:

Digital Betacam Videocassette D321 D34L
Digital Betacam Videocassette D321 D64L
Digital Betacam Videocassette D321 D94L
Digital Betacam Videocassette D321 D124L



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Digital Videocassette

MX321



Outstanding performance for MPEG-IMX systems

FUJIFILM MX321 offers an array of features that make this videocassette one of our most important products offering in years. Working extensively with the format developer ensures that FUJIFILM MX321 will meet or exceed all the specifications of the hardware manufacturer. FUJIFILM MX321 represents the latest development in high performance digital videotape.

- Magnetic particles and calendering technology assures high C/N ratio
- High quality base film and binder material for stability and durability
- Outstanding long-term storage characteristics
- Reels offer superior winding

Cassette size

small:

Digital Videocassette MX321 6S
Digital Videocassette MX321 12S
Digital Videocassette MX321 22S
Digital Videocassette MX321 32S
Digital Videocassette MX321 60S

large:

Digital Videocassette MX321 64L
Digital Videocassette MX321 94L
Digital Videocassette MX321 124L
Digital Videocassette MX321 184L



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Metal Videocassette

M321SP



Betacam SP never looked so good

Acclaimed and respected throughout the industry, FUJIFILM M321SP videocassettes are the Betacam SP tape-of-choice for video professionals around the world. Superior FUJIFILM metal tape technology and Super-Fine Metallix metal magnetic particles team up to ensure that you get superb Betacam SP video and audio quality for recording, editing and playback.

- Super-fine metallix particles
- Fewer dropouts
- Extended still and high-speed playback
- Excellent high-frequency signal response

Cassette size

small:

Metal Videocassette M321SP 5M
Metal Videocassette M321SP 10M
Metal Videocassette M321SP 20M
Metal Videocassette M321SP 30M

large:

Metal Videocassette M321SP 30ML
Metal Videocassette M321SP 60ML
Metal Videocassette M321SP 90ML



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Digital Videocassette

DVCPRO

DVCPRO HD

DP121/DP1001

The generation of digital video excellence

FUJIFILM's DP121 and DP1001 broadcast-use metal videocassettes feature exceptional image quality and the high output required for high-density digital recording. DP121/DP1001 incorporates FUJIFILM's proprietary ATOMM*-II technology, which enables increased output and reduced noise.

- Ultra-fine high-energy metal magnetic
- Particles designed specifically for DVCPRO recording
- High-strength base material for improved reliability
- Superior transport stability, durability and storage characteristics

Cassette size

DP121, small:
Digital Videocassette 12M
Digital Videocassette 24M
Digital Videocassette 33M
Digital Videocassette 46M
Digital Videocassette 66M

DP121, large:
Digital Videocassette 34L
Digital Videocassette 66L
Digital Videocassette 94L
Digital Videocassette 126L

DP1001, small:
Digital Videocassette 23/11M
Digital Videocassette 33/16M

DP1001, large:
Digital Videocassette 64/32L

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Specifications and appearance are subject to change without notice.
*ATOMM is an acronym for Advanced Super Thin Layer and High Output Metal Media technology



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Digital Videocassette

DVCAM™

DV131

Videocassette for DVCAM Systems

DVCAM media are the most compact professional digital video recording media ever to be introduced. As the shift from analog VTR systems continues to gather momentum throughout the video production and broadcasting industries, the DVCAM format has become one of the leading formats for VTR systems.

- High output and low noise for high-density digital recording
- DLC (Diamond-Like Carbon) protective layer for enhanced reliability/durability
- Advanced cassette mechanisms for optimum tape performance
- Low error rate for accurate recording and playback

Cassette size

small:
Digital Videocassette DV131 12S
Digital Videocassette DV131 22S
Digital Videocassette DV131 32S
Digital Videocassette DV131 40S

large:
Digital Videocassette DV131 34L
Digital Videocassette DV131 64L
Digital Videocassette DV131 94L
Digital Videocassette DV131 124L
Digital Videocassette DV131 184L

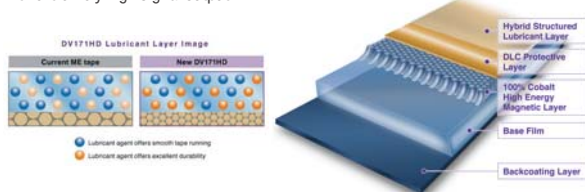
Specifications and appearance are subject to change without notice.

Digital Videocassette

DV171HD for HDV/DV

Metal Evaporated Tape for the Next Generation using Newly-Developed Tape Layers

To enhance reliability and durability to meet every professional application and after extensive study, Fujifilm has redesigned every layer of the DV171HD's metal evaporated tape. This has resulted in the introduction of Fujifilm DV171HD which features an entirely-new magnetic layer, lubricant layer, DLC (Diamond-Like Carbon) protective layer and base film. As a result, DV171HD offers unsurpassed durability and reliability with extremely high signal output.



- **NEW Hybrid Structured Lubricant Layer**
- **NEW Diamond-Like Carbon Protective Layer for Enhanced Reliability and Durability**
- **NEW 100% Cobalt High Energy Magnetic Layer**
- **NEW Base Film for Improved Stability and Runnability**

Cassette size

Small:

Digital Videocassette DV171HD 33S
Digital Videocassette DV171HD 48S
Digital Videocassette DV171HD 63S

Large:

Digital Videocassette DV171HD 64L
Digital Videocassette DV171HD 96L
Digital Videocassette DV171HD 124L
Digital Videocassette DV171HD 186L

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HDV is a registered trademark of Sony Corporation
and Victor Company of Japan, Limited.



P2 Card's compatible with Panasonic P2 system

P2MCE

FUJIFILM rolls out new low-cost, high-capacity E-series, P2 cards compatible with Panasonic's P2 system

FUJIFILM has long been recognized as a leading supplier of high-performance, high-reliability video tape and other media to broadcasters and production houses around the world. The now introduced new "E-series" realized to offer users lower cost media option, a higher transfer rate and a same level high capacity as that of current models. FUJIFILM's E-series P2 cards come in 16 GB, 32 GB and 64 GB capacities. A single 64 GB card is capable of reading about 128 minutes of HD data.*

*When used with an AVC-Intra compatible device using AVC-Intra 50 compression.

Compliant with general PC card specification, adaptable to PC with PC card slot.*

General PC card specification (Card bus Type II) is adopted, E-series P2 memory card is capable of reading and writing data with laptop and desktop PC by plugging it in PC card slot. Additionally, the memory card can store content in a complete range of P2 supported frame rates and formats, from high definition to standard definition and from DVCPRO to AVC-Intra 100.

*When used with laptop and desktop PC, P2 card driver (Panasonic product) must be installed.

Our P2 cards utilized all the inherent advantages of solid-state memory to protect your quality footage and video work from vibration and shock. FUJIFILM P2 cards can be operated in temperatures from -20°C to 60°C and stored at temperatures between -40°C and 80°C. Card replacement interval is about five years when entire (100%) detail is rewritten once a day and the connectors, which have passed 30,000- cycles insertion and removal tests, are ruggedly built to withstand repetitive use.

- **With fast reading/writing speeds and no need to digitize content, the P2 Series fastly reduces production time, resulting in a dramatic improvement in workflow efficiency**
- **Long recording times and high-speed transfers**
- **High reliability for resistance to temperature changes, vibrations and sudden impact**

Line-up

P2 MCE 16 GB
P2 MCE 32 GB
P2 MCE 64 GB

Specifications and appearance are subject to change without notice.
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Professional Disc PD711



High compatibility and durability for professional XDCAM recording

FUJIFILM's pre-formatted PD711 Professional Discs are the ideal recording media for today's XDCAM and XDCAM HD systems. As with all FUJIFILM professional video products, PD711 has been precision-designed to provide outstanding performance under a wide range of conditions, both in the field and in the studio.

Outstanding durability under heavy professional use

High-quality materials and advanced production technologies assure outstanding disc durability and rewriting stability, with ultra-low error rates even after 1,000 overwrites.

User-friendly pre-formatted disc

As the disc is pre-formatted, recording can begin immediately. Therefore, the the FUJIFILM PD711 will help users save time and decrease the risk of missing important shots while waiting for their disc to format.

- A proven reputation for quality and reliability
- Superior dust- and scratch-resistance
- Excellent performance with a wide range of hardware
- Precision-engineered cartridges for heavy use

Line-up

Professional Disc PD711, 23GB, 2.4x speed

Professional Disc PD711 DL Dual Layer

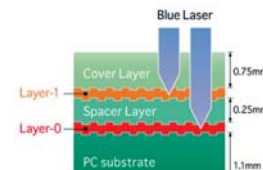


High compatibility and durability for professional XDCAM recording

We have introduced the FUJIFILM PD711 Dual Layer Disc (50GB) to meet the need for higher capacity. By adopting recording layer which is appropriate for high density recording and dual recording layers structure on one side, FUJIFILM has realized 50GB recording capacity.

At the same time, FUJIFILM has realized low error rate and ultra wide power margin at both layers with Super Advanced Rapid Cooling Structure.

In accelerated aging tests, FUJIFILM PD711 Professional Discs have demonstrated excellent data integrity and a potential archiving storage life of over 50 years.



Characteristics for FUJIFILM Professional Dual Layer Disc

Precision-Engineered Cartridges

In materials and construction, FUJIFILM PD711 cartridges are engineered to the highest standard of precision, and the shutter and bottom half of the cartridge shell are treated with an antistatic coating to protect discs from dust and other airborne contaminants.

The Structure of Fujifilm PD711 Professional Discs

- Upper Shell
- Disc
- Inner Rotor
- Shutter
- Lower Shell



- A proven reputation for quality and reliability
- Superior long-term storage characteristics
- Excellent performance with a wide range of hardware
- Precision-engineered cartridges for heavy use

Line-up

Professional Disc PD711DL, 50GB, 2.4x speed

Recordable Compact Disc

CD-R Printable Professional

CD-R Printable 700MB for professional use
Highly compatible with Inkjet, Thermal-Transfer and Thermal-Re-Transfer printers

Printable discs are rapidly becoming a popular medium. FUJIFILM's CD-R Printable provides high accuracy photos, colourful illustration and sharp text onto the printable surface while offering excellent compatibility with inkjet, thermal and thermal re-transfer printers.

Superior Performance and Compatibility

With a High-Sensitivity organic dye and a high reflective layer, FUJIFILM's CD-R Printable can record 700MB of data or 80 minutes of music at speeds of up to 48x. With wide drive and recorder compatibility and superior recording and reading performance, FUJIFILM's CD-R Printable makes a perfect distribution medium.

Long Term Archiving

Accelerated testing** has shown FUJIFILM CD-R Printable provides up to 100 years archiving capability under room conditions.

- CD-R 700MB Multispeed
- Excellent white surface layer for high print quality

Line-up

CD-R 700MB 48x Printable Inkjet Pro - Full printable

- printable to the hub providing increased print area
- available in 100 pcs. soft-wrap *

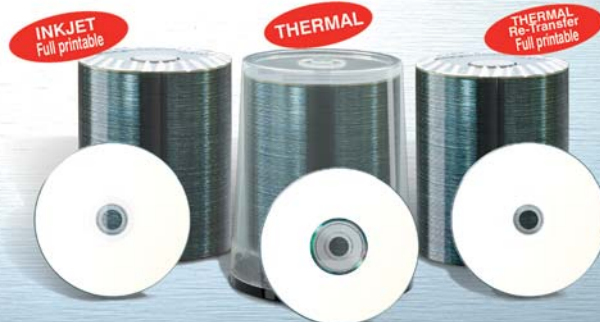
CD-R 700MB 48x Printable Thermal-Transfer Pro

- available in 100 pcs. cake box

CD-R 700MB 48x Printable Thermal-Re-Transfer Pro - Full printable

- printable to the hub providing increased print area
- available in 100 pcs. soft-wrap *

*soft-wrap (prevents bending of disc)



DVD Recordable Disc

DVD-R 8x Printable Professional

Highly compatible with Inkjet, Thermal and Thermal Re-Transfer printers

DVD-R 8x Printable Professional can provide high matching with inkjet, thermal and thermal re-transfer printers to meet various requirements of high accuracy photos, colorful illustration and sharp text on the printable surface, with high speed recording and high capacity for video and data recording.

Large Print Capacity on Inkjet and Thermal Re-transfer Discs

Both inkjet and thermal re-transfer discs allow to be printed even on the hub, offering extensible design.

Long Term Archiving

The disc has extremely long working life for video, image data or any type of information that can be stored digitally by adoption of the stable organic dye to protect against any climates. It is expected to give you 30 - 50 years archiving capability under room temperature condition**.

- DVD-R 4.7GB/120min. for Video and Data
- Write-once format DVD
- Conform to public standard of "DVD-R for General Ver. 2.0/8x-SPEED DVD-R Revision 3.0"

Line-up

DVD-R Printable Inkjet Pro - Full printable

- available in 100 pcs. soft-wrap *

DVD-R Printable Thermal Transfer Pro

- available in 100 pcs. cake box

DVD-R Printable Thermal Re-Transfer Pro - Full printable

- available in 100 pcs. soft-wrap *

*soft-wrap (prevents bending of disc)

FUJIFILM

Specifications and appearance are subject to change without notice.
**15-25°C, 20-40% relative humidity, no direct sunlight, free from dust.

Specifications and appearance are subject to change without notice.
**estimated using the Arrhenius storage performance acceleration method,
15-25°C, 20-40% relative humidity, no direct sunlight, free from dust.



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Blu-ray Disk

BD-R/RE Printable Inkjet



Fujifilm BD-R and BD-RE full printable inkjet Discs for Video and Data are the perfect solution for customers who will be using this high-capacity media for back-up and archival, data storage, high-definition video and a host of other high demanding applications.

Fujifilm's BD-R media is coated with a special full inkjet-optimized surface that not only delivers extremely bright, high resolution full color images and text, but offers more than five times the storage capacity of traditional DVDs and can hold up to 25GB on a single-layer disc and 50GB on a dual-layer disc.

Line-up

BD-R 25 GB, 1-4x, Printable Inkjet

- Recordable
- Inorganic recording layer
- Hard-coat layer
- Available in:
5-pack jewel case
cake box with 25 pcs.

BD-R DL 50 GB, 1-4x, Printable Inkjet

- Recordable
- Inorganic phase-change recording layer
- Hard-coat layer
- Available in 5-pack jewel case

BD-RE DL 50 GB, 1-2x, Printable Inkjet

- Rewritable
- Inorganic phase-change recording layer
- Hard-coat layer
- Available in 5-pack jewel case



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Blu-ray Disk

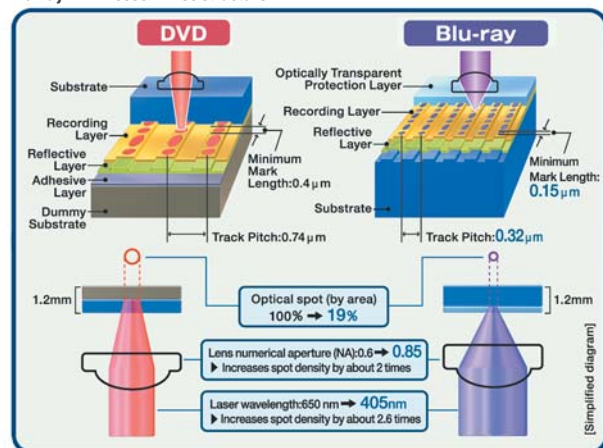
BD-R/RE



FUJIFILM BD-R and BD-RE Discs for Video and Data - the true beginning of Blu-ray

The concept behind Blu-ray format is to be able to record a two-hour high-definition (HD) broadcast on a single-sided, single-layer disc. HD video contains about six times the number of pixels of standard-definition (SD) video. A disc capacity of about 22 GB is needed to store this amount of HD video. Both the BD-R and the BD-RE formats have a standard capacity of 25 GB to ensure they can hold two hours worth of HD programming. The high-performance recording layer used in FUJIFILM's BD-R/RE discs ensures wide power margins. This means you can make accurate recordings even from a weaker laser.

Blu-ray Mini-Lesson: Disc structure



Line-up

BD-R 25 GB, 1-2x, Recordable

- Inorganic recording layer
- Hard-coat layer
- Available in 5-pack jewel case

BD-RE 25 GB, 1-2x, Rewritable

- Inorganic phase-change recording layer
- Hard-coat layer
- Available in 5-pack jewel case



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DVD Disc up to 16x

DVD-R



Recordable Disc for Video and Data

The FUJIFILM DVD-R 16x recordable disc is based on an organic dye that has proven to allow recording capabilities at speeds ranging from 1x to 16x, which is ideal for archiving, storage and retrieval of high-capacity data files.

- DVD-R 4.7GB/120min., for Video and Data, Recordable
- Superior storage performance and durability of light exposure. Archival life of over 100 years* at room temperature
- Excellent reliability by high sensitive dye for record and read

Line-up

DVD-R 16x 4.7GB/120min. is available in:

- 10-pack jewel case
- cake box with 10, 25, 50 or 100 pcs.
- 10-pack slim case

Printable DVD-R up to 16x

DVD-R Printable Consumer

The DVD recordable disc which is highly compatible with Inkjet printer

DVD-R 16x Printable "Consumer" can provide high matching with inkjet printers to meet various requirements of high accuracy photos, colorful illustration and sharp text on the printable surface, with high speed recording and high capacity for video and data recording.

White Surface for Excellent Print Quality

White layer including very suitable substance for the inkjet printers, provides superior properties of the color fidelity, sharpness of figure and text, and fast drying to prevent ink from transcribing.

- DVD-R 4.7GB/120 min. for Video and Data, Recordable
- Conform to public standard of "DVD-R for General Ver. 2.1/16x-SPEED DVD-R Revision 6.0"
- Full surface layer offering a larger printing area close to the center hole

Line-up

DVD-R 16x Printable is available in cake box with 25 or 50 pcs.

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Specifications and appearance are subject to change without notice.
*estimated using the Arrhenius storage performance acceleration method,
15-25°C, 20-40% relative humidity, no direct sunlight, free from dust.



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DVD Disc up to 16x

DVD+R



Recordable Disc for Video and Data

The FUJIFILM DVD+R 16x recordable disc is optimized for customer recording valuable digital data, whether recording in real time at 1x speed or with 16x DVD drive.

- DVD+R 4.7GB/120min., for Video and Data, Recordable
- Superior storage performance and durability of light exposure. Archival life of over 100 years* at room temperature
- Excellent reliability by high sensitive dye for record and read

Line-up

DVD+R 4.7GB/120min. is available in:

- 10-pack jewel case
- cake box with 10, 25, 50 or 100 pcs.
- 10-pack slim case

DVD Disc

DVD+RDL Double Layer

The DVD+R DL (Double Layer) of FUJIFILM offers a capacity of 8.5 GB for data storage or 4 hours video recording in DVD quality respectively 16 hours in VHS quality on one disc.

- DVD+R 8.5 GB/240 min., for Video and Data, Recordable
- Suitable for special contents that you don't want to miss by overwriting
- The writing speed is 8X offering a transfer rate of appr. 11 MB/s
- Compatible with legacy play back devices
- Excellent reliability by FUJIFILM's high sensitive dye for stable record and read

Line-up

DVD+R 8x DL, 8.5 GB/240 min.

- Available in cake box with 10 pcs.

Specifications and appearance are subject to change without notice.
*estimated using the Arrhenius storage performance acceleration method,
15-25°C, 20-40% relative humidity, no direct sunlight, free from dust.



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DVD Disc

DVD-RW

Rewritable Disc for Video and Data

The Fujifilm DVD-RW disc for Video and Data can be recorded, erased and recorded again more than 1,000 times without any loss of quality. To achieve high-quality recording and a high level of durability, Fujifilm DVD-RW discs utilize a high-performance phase change material which is ideal for mass storage and long archival life.

- DVD-RW 4.7 GB/120 min., for Video and Data, Rewritable
- High compatible, can be recorded and played on most DVD players and DVD-ROM drives
- Can be recorded and erased more than 1,000 times

DVD-RW up to 2x 4.7 GB/120 min., for Video and Data, Rewritable

Line-up

- 5-pack jewel case

DVD+RW

To achieve high-quality recording and a high level of durability, Fujifilm DVD+RW discs utilize a high-performance phase change material which is ideal for mass storage and long archival life. Designed for personal or professional use. Highly compatible, the Fujifilm DVD+RW discs can be played on most DVD players and DVD-ROM drives after they're recorded.

- DVD+RW 4.7 GB/120 min., for Video and Data, Rewritable
- Uses same 8-16 Modulation and RS code as DVD-ROM
- Constant linear data density
- Quick formatting

DVD+RW 1-4x 4.7 GB/120 min., for Video and Data, Rewritable

Line-up

- 5-pack jewel case



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DVD Discs for Camcorder

8cm DVD

8cm DVD-R/-RW for Camcorder

Ideal for sharing and storing your videos, photos and data

FUJIFILM 8cm DVD-R/-RW discs are ideal for storing your favorite videos, photos and data, so you can enjoy them anywhere, anytime, with any camcorder, PC drive, recorder or player that supports DVD-R/-RW format.

"Anti-Scratch" - coating offers protection against scratches caused by mishandling or wiping the recording surface. It also makes the surface easy to clean.

- Recording time / mode (per side):
 - 20min./HQ mode • 30min./SP mode • 60min./LP mode
- 8cm DVD-RW can be recorded and erased more than 1,000 times

Line-up

8cm DVD-R up to 4x:

- 1.4GB/30min. (single sided), 3-pack jewel case

8cm DVD-RW up to 2x:

- 2.8GB/60min. (double sided), 3-pack jewel case



Recordable/Rewritable Compact Disc

CD-R**CD-R 700 MB 52x Multispeed, write-once compact disk**

- Original developed organic dye guarantees high data security and reliability even with high speed up to 52x
- Applications: Archiving, ideal for all multimedia applications

Available in:

- 10-pack jewel case
- cake box with 10, 25, 50 or 100 pcs.
- slim case with 10 or 20 pcs.

CD-R Printable Inkjet "Consumer"

- Highly compatible with inkjet printer
- Full surface layer offering a larger printing area close to the center hole
- The white surface provides photorealistic color, bright graphics and sharp text

Available in cake box with 25 pcs.

CD-RW**CD-RW 700 MB 4x-12x High speed, rewritable compact disk**

- Recordable in High speed CD-RW drives with (1) logo
- "Phase Change"-Technology guarantees excellent data and reliability with 12x writing speed

Available in 10-pack jewel case

CD-R AUDIO**CD-R PRO for Audio 80**

- Write-once digital audio CD
- With high speed rotation stabilizer

Available in 10-pack jewel case

Recordable Compact Disc

CD-R for Digital Photos

Specially developed CD-R for Digital Photos with a black protection shield as effective protection of the recording layer against ultra-violet and solar radiation

FUJIFILM has developed a new CD-R for Digital Photos with a black protection shield. It provides extremely effective protection of the recording layer against ultra-violet and solar radiation.

FUJIFILM CD-R for Digital Photos is an ideal solution for storing your precious photo image and long time archiving. According to our accelerated test with a Xenon arc lamp based on ISO standard (ISO 105-B04), FUJIFILM CD-R for Digital Photos offers 10 times higher protection against the degradation of reflected laser beams caused by sunlight (Fig. 1). It has also been confirmed that FUJIFILM CD-R for Digital Photos have a stable block error rate under direct sunlight (Fig. 2). The excellent reflection and block error rate ensure high and long-term recording & play-back performance.

CD-R 700 MB up to 52x for Digital Photos

- Write-once Compact Disc
- Specially developed UV-Protection shield as effective protection of the recording layer
- Ideal solution for storing precious photo image and long time archiving

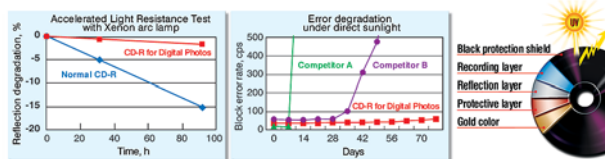


Fig. 1

Fig. 2

Line-up

- 10-pack jewel case



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Mini DV Digital Videocassette

DVC Mini



Digital video-fascination

High-density digital recording demands high output and high C/N ratio characteristics. The DLC (Diamond-Like Carbon) protective layer ensures excellent durability for reliable performance. The low error rate enhances the precision of recording and playback.

DVC, Digital Video Cassette for Mini-DVC-systems

- Excellent recording and playback quality
- DLC (Diamond-Like Carbon) protective layer
- Excellent HiFi sound for authentic original sound
- Optimum protection through heat-resistant shell design
- Shock resistant archiving box

Line-up

- DVC:**
- Length: 60 min.
 - Also available as color mix in 3 and 5-pack:
3-pack= blue, green, red 5-pack= blue, green, yellow, red, purple

Mini DV Digital Videocassette

HDV DV63S

Mini DV videocassette for HDV use

Created specially for those who demand top-of-the-line quality, new FUJIFILM advanced DVCassette boast enhanced durability and higher output that ensure a superior recording experience.

FUJIFILM advanced quality tapes feature a robust new lubricant and tough, extra thick, diamond-like carbon base film that ensure significantly enhanced durability during still-frame playback, that means the tapes can withstand the repeated rewinding, fast-forwarding and playback of professional editing.

Line-up

HDV DV, size: 63S
Rec.Time: 94 min. DV (LP mode), 63 Min. HDV/DV (SP mode), 42 min. (Prof. mode)

FUJIFILM

Specifications and appearance are subject to change without notice.
HDV is a registered trademark of Sony Corporation
and Victor Company of Japan, Limited.



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VHS Videocassettes

VHS



Fascinating world of video

As a pioneer manufacturer of video tapes for broadcast use, we bring you a VHS videocassette designed to demanding specifications for performance and durability.

VHS Videocassette FUJIFILM (Fine Quality)

The FUJIFILM F-type is a durable neutral basic cassette.

- Can be used for all kind of recordings
- Good reliability even for every day usage
- Application: daily use, recordings of movies

Line-up

VHS F: •Length: 240 minutes



Alkaline-Batteries

FUJIFILM Alkaline Batteries, 20% more energy, 100% for the environment

FUJIFILM Alkaline Batteries are charged with 20% more energy and therefore provide more power at home, in the office and on the road. As they also have 0% cadmium and mercury, they provide 100% protection of the environment. And you will not be the only one to prize these features. FUJIFILM Alkaline Batteries are available in five different sizes for 1.5 and 9 volt for almost every use.

Line-up

| | | | | | Blister PCS/Pack |
|---------|-----------------|---------|-------|--|------------------|
| • LR 20 | (=D =AM1) | MONO | 1.5 V | | 2 |
| • LR 14 | (=C =AM2) | BABY | 1.5 V | | 2 |
| • LR 6 | (=AA =AM3) | MIGNON | 1.5 V | | 2 or 4 |
| • LR 03 | (=AAA =AM4) | MICRO | 1.5 V | | 2 or 4 |
| • 6LR61 | (=9V =6AM6) | E-BLOCK | 9 V | | 1 |

Specifications and appearance are subject to change without notice.

Technical Specifications

| LTO Ultrium 5 Technical Data | | |
|------------------------------------|---|----------------|
| Cartridge Type | LTO Ultrium 5 | |
| | Data Cartridge | WORM Cartridge |
| Basic Specifications | | |
| Tape Drive | LTO Ultrium 5 | |
| Capacity (compressed) | 1.5 TB (3.0 TB) | |
| Transfer Rate (native) | up to 140 MB/sec | |
| Transfer Rate (compressed) | up to 280 MB/sec | |
| Number of Tracks | 1,280 | |
| Servo Band | 5 Magnetic Servo Bands | |
| Cartridge Memory | 65,280 Bits (8,160 Bytes); Internal EEPROM | |
| Physical Characteristics | | |
| Tape Width | 12.65 mm | |
| Tape Thickness | 6.4 μm | |
| Tape Length | 846 m | |
| Cartridge Dimensions | 102 x 105.4 x 21.5 mm (H x W x D) | |
| Operating Environmental Conditions | | |
| Temperature | 10 ~ 45 °C | |
| Humidity | 10 ~ 80 % (No dew condensation) | |
| Max. Wet Bulb Temperature | 26 °C | |
| Archival Environmental Conditions | | |
| Temperature | 16 ~ 32 °C | |
| Humidity | 20 ~ 80 % (No dew condensation) | |
| Max. Wet Bulb Temperature | 26 °C | |

Bulk erasers should not be used with LTO tape.
The universal cleaning cartridge is capable of being used in all generation 1/2/3/4 /5Ultrium format tape drives.
Specific revisions of firmware may be required for proper operation.
Linear Tape-Open, LTO, LTO Logo, Ultrium and Ultrium logo are trademarks of Hewlett-Packard, IBM and Certance in the US,

| LTO Ultrium 1/2/3/4 Technical Data | | | | | | |
|------------------------------------|---|----------------|------------------|---|----------------|-----------------|
| Cartridge Type | LTO Ultrium 4 | LTO Ultrium 4 | LTO Ultrium 3 | LTO Ultrium 3 | LTO Ultrium 2 | LTO Ultrium 1 |
| | Data Cartridge | WORM Cartridge | Data Cartridge | WORM Cartridge | Data Cartridge | Data Cartridge |
| Basic Specifications | | | | | | |
| Tape Drive | LTO Ultrium 4 | | LTO Ultrium 3 | | LTO Ultrium 2 | LTO Ultrium 1 |
| Capacity (compressed) | 800 GB (1600 GB) | | 400 GB (800 GB) | | 200 GB(400 GB) | 100 GB (200 GB) |
| Transfer Rate (native) | up to 120 MB/sec | | up to 80 MB/sec | | up to 40 MB/s | up to 20 MB/s |
| Transfer Rate (compressed) | up to 240 MB/sec | | up to 160 MB/sec | | up to 80 MB/s | up to 40 MB/s |
| Number of Tracks | 896 | | 704 | | 512 | 384 |
| Servo Band | 5 Magnetic Servo Bands | | | | | |
| Cartridge Memory | 65,280 Bits (8,160 Bytes); Internal EEPROM | | | 32,768 Bits (4,096 Bytes); Internal EEPROM | | |
| Physical Characteristics | | | | | | |
| Tape Width | 12.65 mm | | | | | |
| Tape Thickness | 6.6 μm | | 8.0 μm | | 8.9 μm | |
| Tape Length | 820 m | | 680 m | | 609 m | |
| Cartridge Dimensions | 102 x 105.4 x 21.5 mm (H x W x D) | | | | | |
| Operating Environmental Conditions | | | | | | |
| Temperature | 10 – 45 °C | | | | | |
| Humidity | 10 – 80 % (No dew condensation) | | | | | |
| Max. Wet Bulb Temperature | 26 °C | | | | | |
| Archival Environmental Conditions | | | | | | |
| Temperature | 16 – 32 °C | | | | | |
| Humidity | 20 – 80 % (No dew condensation) | | | | | |
| Max. Wet Bulb Temperature | 26 °C | | | | | |

| 3592 Technical Data | |
|-------------------------------------|---|
| Cartridge Type | Enterprise Tape Cartridge 3592 |
| Basic Specifications | |
| Capacity (3:1 Data Compressed) | 300 GB (900 GB) 60 GB (180 GB) WORM 300 GB (900 GB) WORM 60 GB (180 GB) |
| Transfer Rate (3:1 Data Compressed) | 40 MB/s (110 MB/s) |
| Number of Tracks | 512 |
| Physical Characteristics | |
| Tape Width (Nominal) | 12.65 mm |
| Tape Thickness (Nominal) | 8.9 μ |
| Tape Length (Nominal) | 609 m 246 m 609 m 246 m |
| Dimensions (Nominal) | 125.0 x 109.0 x 24.5 mm (L x W x H) |
| Operating Environmental Conditions | |
| Temperature | 16 ~ 32 °C |
| Humidity | 20 ~ 80 % (No dew condensation) |
| Max. Wet Bulb Temperature | 26 °C |
| Archival Environmental Conditions | |
| Temperature | 16 ~ 25 °C |
| Humidity | 20 ~ 80 % (No dew condensation) |
| Max. Wet Bulb Temperature | 26 °C |
| Data Rewrite | |
| | yes no |

Bulk erasers should not be used with 3592 tape. The tape is encoded at the factory with servo system timing signals that will be lost if bulk erasers are used.Specifications are subject to change without notice. TotalStorage is a registered trademark of IBM Corp. in the United States and other countries.

| DAT72/DDS Technical Data | | | | | | |
|-----------------------------|--------------------------|----------|----------|---------|--------|---------|
| | DG5-170M | DG4-150M | DG3-125M | DG-120M | DG-90M | DG-15CL |
| Basic Specifications | | | | | | |
| Format | DAT72 | DDS4 | DDS3 | DDS2 | DDS | — |
| Magnetic Particles | metal magnetic particles | | | | | |
| Normal Recording Capacity | 36.0 GB | 20.0 GB | 12.0 GB | 4.0 GB | 2.0 GB | — |
| Maximum Recording Capacity* | 72.0 GB | 40.0 GB | 24.0 GB | 8.0 GB | 4.0 GB | — |
| Physical Characteristics | | | | | | |
| Tape Width | 3.81 mm | | | | | |
| Tape Thickness | 5.2 μm | 5.6 μm | 6.7 μm | 9.0 μm | 7.0 μm | |
| Tape Length | 170 m | 155 m | 125 m | 91 m | 15 m | |

* 2:1 data compression

Technical Specifications

HD331 Technical Data

| | | |
|----------------------------|---------------------------|------------|
| Magnetic Properties | Coercivity (Hc) | 131 kA/m |
| | Retentivity (Br) | 300 mT |
| Physical Properties | Thickness: Magnetic Layer | 3 μ m |
| | : Total | 14 μ m |
| | Tape Width | 12.65 mm |
| | Yield Strength | 40 N |
| | Residual Elongation | 0.04 % |
| Performance | Video RF Output | 0 dB* |
| | Video C/N | 0 dB* |
| | Audio Sensitivity | 0 dB* |
| | Audio Frequency Response | 0 dB* |

Note: The figures marked with * are comparisons with Fujifilm reference tape.

D321 Technical Data

| | | |
|----------------------------|---------------------------|------------|
| Magnetic Properties | Coercivity (Hc) | 131 kA/m |
| | Retentivity (Br) | 270 mT |
| Physical Properties | Tape Thickness: Total | 14 μ m |
| | Tape Width | 12.65 mm |
| | Yield Strength | 25 N |
| | Breaking Tensile Strength | 40 N |
| | Residual Elongation | 0.04 % |
| Performance | Video RF Output | 0 dB* |
| | Video C/N | 0 dB* |
| | Audio Sensitivity | 0 dB* |
| | Audio Frequency Response | 0 dB* |

Note: Figures are typical values based on Fujifilm's standard measurement procedures.
The figures marked with * are comparisons with the Fujifilm Digital Betacam reference tape.

MX321 Technical Data

| | | |
|----------------------------|---------------------------|--------------|
| Magnetic Properties | Coercivity (Hc) | 130 kA/m |
| | Retentivity (Br) | 252 mT |
| Physical Properties | Thickness: Magnetic Layer | 1.5 μ m |
| | : Total | 13.3 μ m |
| | Tape Width | 12.65 mm |
| | Yield Strength | 20 N |
| | Breaking Tensile Strength | 40 N |
| Performance | Video RF Output | 0 dB* |
| | Video C/N | 0 dB* |
| | Audio Sensitivity | 0 dB* |
| | Audio Frequency Response | 0 dB* |

Note: The figures marked with * are comparisons with Fujifilm reference tape.

M321SP Technical Data

| | | |
|----------------------------|---------------------------|--------------|
| Magnetic Properties | Coercivity (Hc) | 121 kA/m |
| | Retentivity (Br) | 260 mT |
| Physical Properties | Tape Thickness: Total | 14.5 μ m |
| | Tape Width | 12.65 mm |
| | Yield Strength | 25 N |
| | Breaking Tensile Strength | 45 N |
| | Residual Elongation | 0.04 % |
| Performance | Video RF Output | 0 dB* |
| | Video C/N | 0 dB* |
| | Audio Sensitivity | 0 dB* |
| | Audio Frequency Response | 0 dB* |

Note: Figures are typical values based on Fujifilm's standard measurement procedures.
The figures marked with * are comparisons with the Fujifilm reference tape.

DVCPRO Technical Data

| | | |
|----------------------------|---------------------------|-----------------|
| Magnetic Properties | Coercivity (Hc) | 183 kA/m |
| | Retentivity (Br) | 370 mT |
| Physical Properties | Tape Thickness: Total | 8.5 μ m |
| | Tape Width | 6.35 mm |
| | Yield Strength | More than 5 N |
| | Breaking Tensile Strength | More than 10 N |
| | Residual Elongation | Less than 0.2 % |
| Performance | Video RF Output | 0 dB* |
| | Video C/N | 0 dB* |
| | Audio Sensitivity | 0 dB* |
| | Audio Frequency Response | 0 dB* |

Note: Figures are typical values based on Fujifilm's standard measurement procedures.
The figures marked with * are comparisons with the Fujifilm DVCPRO reference tape.

DV131(without IC memory chip) Technical Data

| | | |
|----------------------------|----------------------------|-------------|
| Magnetic Properties | Coercivity (Hc) | 105 kA/m |
| | Retentivity (Br) | 500 mT |
| Physical Properties | Squareness (Br/Bm) | 0.78 |
| | Thickness: Magnetic Layer | 0.2 μ m |
| | : Total | 7.0 μ m |
| | Tape Width | 6.35 mm |
| | RF Playback Output (20MHz) | 0 dB* |
| | C/N | 0 dB* |

Note: The figures marked with * are comparisons with the Fujifilm reference tape.

DV171HD Technical Data

| | | |
|----------------------------|---------------------------|-------------|
| Magnetic Properties | | |
| | Coercivity (Hc) | 120 kA/m |
| | Retentivity (Br) | 500 mT |
| | Squareness (Br/Bm) | 0.8 |
| Physical Properties | Thickness: Magnetic Layer | 0.2 μ m |
| | : Total | 7.0 μ m |
| | Tape Width | 6.35 mm |
| Performance | | |
| | Video RF Output | +1 dB* |
| | Video C/N | +1 dB* |

| Cassette | Size | Tape Length | Recording Time (min.) | | |
|----------|------|-----------------|-----------------------|--------------|-------------------|
| | | | HDV/DV (SP mode) | DV (LP mode) | Professional mode |
| S | 33S | 39m (130ft.) | 33 | 49 | 22 |
| | 48S | 56m (186ft.) | 48 | 72 | 32 |
| | 63S | 73m (242ft.) | 63 | 94 | 42 |
| L | 64L | 74m (245ft.) | 64 | 96 | 42 |
| | 96L | 111m (365ft.) | 96 | 144 | 64 |
| | 124L | 143m (469ft.) | 124 | 186 | 82 |
| | 186L | 213m (700ft.) | 186 | 279 | 124 |
| | 276L | 315m (1,035ft.) | 276 | 414 | 184 |

Note: The Figures marked with * are comparisons with the Fujifilm reference tape. HDV is a registered trademark of Sony Corporation and Victor Company of Japan, Limited.

P2MCE Card Technical Data

| Basic specifications | | | |
|---------------------------------------|---|-----------------|-----------------|
| | P2MCE16-WW | P2MCE32-WW | P2MCE64-WW |
| Recording capacity ^{(*)1} | Approx. 16 GB | Approx. 32 GB | Approx. 64 GB |
| Reading/Writing Speed ^{(*)2} | 1.2 Gbps | | |
| Interface | CardBus (PC Card Standard) | | |
| Power Source | DC 3.3V ± 0.3 V | | |
| Power Consumption | Approx. 1.5W | | |
| Operation Condition | -20 ~ 60 °C/ 5 ~ 90 % RH (No Condensation) | | |
| Storage Condition | -40 ~ 80 °C/ 5 ~ 90 % RH (No Condensation) | | |
| Weight | Approx. 45g (1.6 oz) | | |
| Card Dimensions | 54(W) x 5(H) x 85.6 (D) mm (2.13" x 0.2" x 3.37") | | |
| Recording Playback Time | | | |
| AVC-Intra 100 | Approx. 16min. | Approx. 32min. | Approx. 64min. |
| AVC-Intra 50 | Approx. 32min. | Approx. 64min. | Approx. 128min. |
| DVCPRO HD | Approx. 16min. | Approx. 32min. | Approx. 64min. |
| DVCPRO 50 | Approx. 32min. | Approx. 64min. | Approx. 128min. |
| DVCPRO/DV | Approx. 64min. | Approx. 128min. | Approx. 256min. |

(*)1 Total card capacity includes space for data management such as system data, therefore, actual usable area is less than capacity indicated on the card.

(*)2 Data transfer speed is theoretical value. An Actual data transfer speed varies according to operating condition and devices.

To use FUJIFILM memory card, a P2 Card driver (Panasonic product) must be installed on your P2 series product. For the latest information on drivers, please visit the P2 Support Desk at Panasonic Web sites shown below
<https://www.pavc.panasonic.co.jp/pro-av/>

Technical Specifications

PD711 Technical Data

| Basic Specifications | | 23 GB (Single Layer) | 50 GB (Dual Layer) |
|--------------------------|--|---|--------------------|
| Disc Type | | Rewritable | |
| Capacity | | 23.3 GB | 50GB |
| Recording Wavelength | | 405 nm (Blue-Violet Laser) | |
| Recording Method | | Phase Change Recording | |
| Data Transfer Rate | | 72 or 86 (*1) Mbps with 1 Optical Head, 144 or 172 (*1) Mbps with 2 Optical Heads | |
| Track Pitch | | 0.32μm | |
| No. of Read | | Over 1,000,000 times | |
| Estimated Shelf Life | | 50 years or more | |
| Estimated Archival Life | | 50 years or more | |
| Operating Condition | | -5 ~ 55 °C, 3 ~ 90 % RH | |
| Storage Condition | | -10 ~ 55 °C, 5 ~ 90 % RH | |
| Physical Characteristics | | | |
| Disc Diameter | | 120.0 mm | |
| Disc Thickness | | 1.2 mm | |
| Cover Layer Thickness | | 0.1 mm | |
| Cartridge Dimension | | 128.6 x 130.6 x 9.1 mm | |

PD711 Recording Time (*2)

| | | 23 GB (Single Layer) | 50 GB (Dual Layer) |
|----|----------|----------------------------|----------------------------|
| | | Approx. 60 min. (HQ mode) | Approx. 145 min. (HQ mode) |
| HD | MPEG HD | Approx. 90 min. (SP mode) | Approx. 190 min. (SP mode) |
| | | Approx. 120 min. (LP mode) | Approx. 250 min. (LP mode) |
| | | Approx. 43 min. (50 Mbps) | Approx. 95 min. (50 Mbps) |
| SD | MPEG IMX | Approx. 45 min. (50 Mbps) | Approx. 100 min. (50 Mbps) |
| | DVCAM | Approx. 85 min. (25 Mbps) | Approx. 185 min. (25 Mbps) |

(*1) When the disc is used in PDW-1500 Compact Studio Recorder, some function operators at higher data rate if latest software is used.

(*2) Since a portion of user data area will be used for data management, available capacity may vary.

Professional Disc, "XDCAM", "DVCAM" and "MPEG IMX" are trademarks of Sony Corporation.

DVD-R 8x Printable Technical Data

| Basic Specifications | |
|--------------------------|----------------------------------|
| Capacity | 4.7 GB |
| Linear Velocity | 3.49 m/s (1x), 27.92 m/s (8x) |
| Substrate Material | Polycarbonate |
| Recording Layer | Organic Dye |
| Recording Wavelength | 650 nm |
| Physical Characteristics | |
| Outer Diameter | 120.0 mm |
| Inner Diameter | 15.0 mm |
| Thickness | 1.2 (0.6 x 2) mm |
| Operating Environment | |
| Temperature | -5 ~ 55 °C |
| Humidity | 3 ~ 95 % RH(No dew condensation) |

CD-R Printable Technical Data

| Basic Specifications | |
|--------------------------|-----------------------------------|
| Linear Velocity | 1.2 m/s |
| Substrate Material | Polycarbonate |
| Recording Layer | Organic Dye |
| Physical Characteristics | |
| Outer Diameter | 120.0 mm |
| Inner Diameter | 15.0 mm |
| Thickness | 1.2 mm |
| Operating Environment | |
| Temperature | -5 ~ 55 °C |
| Humidity | 3 ~ 95 % RH (No dew condensation) |

BD-R/-RE Technical Data

| | BD-R | BD-RE |
|--|-------------------------|---------------------------------|
| | Recordable | Rewritable |
| Basic Specifications | | |
| Format | Compliant with Ver. 1.1 | Compliant with Ver. 2.1 |
| Storage capacity (single layer/dual layer) | 25 GB | 50 GB |
| Laser Wavelength | 405 nm | |
| Numerical aperture (NA) of lens | 0.85 | |
| Recording Speed | 1- 2x | |
| Data transfer rate max. | 72Mbps | |
| Optical transparent protection layer | 0.1 mm | |
| Recording / tracking method | Groove recording | Phase change / Groove recording |
| Track Pitch | 0.32 μm | |
| Minimum mark length | 0.15 μm | |
| Hard-coating | Yes | |
| Copyright-protection system | AACS | |
| Physical Characteristics | | |
| Outer Diameter | 120.0 mm | |
| Inner Diameter | 15.0 mm | |
| Thickness | 1.2 mm | |
| Cartridge | No | |

DVD-R/-RW Technical Data

| | | DVD-R | DVD-RW |
|--------------------------|--------------------------------------|--------------|--------|
| Basic Specifications | | | |
| Capacity (unformatted) | 4.7 GB | | |
| Video Record | 120 min. (standard mode) | | |
| Substrata Material | Polycarbonate | | |
| Recording Layer | Organic Dye | Phase change | |
| Recording Wavelength | 650 nm | | |
| Reflectivity | 45 ~ 85 % | 18 ~ 30 % | |
| Track Pitch | 0.74 μm | | |
| Minimum Pit Length | 0.4 μm | | |
| Physical Characteristics | | | |
| Outer Diameter | 120.0 mm | | |
| Inner Diameter | 15.0 mm | | |
| Thickness | 1.2 (0.6 x 2) mm | | |
| Operating Environment | | | |
| Temperature | -5 ~ 55 °C | | |
| Humidity | 3 ~ 95 % RH (No dew condensation) | | |

DVD+R/+RW Technical Data

| | DVD+R | DVD+RW | DVD+R DL |
|---------------------------------|--------------------------------------|--------------|--------------------------------------|
| Basic Specifications | | | |
| Capacity (unformatted) | 4.7 GB | | 8.5 GB |
| Video Record | 120 min. (standard mode) | | 240 min. (standard mode) |
| Substrate Material | Polycarbonate | | Polycarbonate |
| Recording Layer | Organic Dye | Phase change | Organic Dye |
| Recording Wavelength | 655 nm | | 655 nm |
| Reflectivity | 45 ~ 85 % | 18 ~ 30 % | 16 ~ 30 % |
| Track Pitch | 0.74 μm | | 0.74 μm |
| Minimum Pit Length | 0.4 μm | | 0.4 μm |
| Recording Speed | up to 16x | 1-4x | up to 8x |
| Physical Characteristics | | | |
| Outer Diameter | 120.0 mm | | 120.0 mm |
| Inner Diameter | 15.0 mm | | 15.0 mm |
| Thickness | 1.2 (0.6 x 2) mm | | 1.2 (0.6 x 2) mm |
| Operating Environment | | | |
| Temperature | 5 ~ 55 °C | | 5 ~ 55 °C |
| Humidity | 3 ~ 85 % RH (No dew condensation) | | 3 ~ 85 % RH (No dew condensation) |

Technical Specifications

8cm DVD-R/-RW for Camcorder Technical Data

| | 8cm DVD-R | 8cm DVD-RW |
|--------------------------|--------------------------------------|-------------------|
| Basic Specifications | | |
| Capacity (unformatted) | 1.4 GB | 2.8 GB |
| Video Record | 30 min. (SP mode) | 60 min. (LP mode) |
| Substrate Material | Polycarbonate | |
| Recording Layer | Organic Dye | Phase change |
| Recording Wavelength | 650 nm | |
| Reflectivity | 45 ~ 85 % | 18 ~ 30 % |
| Track Pitch | 0.74 μm | |
| Minimum Pit Length | 0.4 μm | |
| Recording Speed | up to 4x | up to 2x |
| Physical Characteristics | | |
| Outer Diameter | 80.0 mm | |
| Inner Diameter | 15.0 mm | |
| Thickness | 1.2 (0.6 x 2) mm | |
| Operating Environment | | |
| Temperature | -5 ~ 55 °C | |
| Humidity | 3 ~ 85 % RH (No dew condensation) | |

CD-R/CD-R PRO for Audio/ CD-RW Technical Data

| | CD-R | CD-R PRO for Audio | CD-RW 4x-12x |
|---------------------------------|-----------------------|--------------------|-----------------------|
| Basic Specifications | | | |
| Format | Orange Book Part II | | Orange Book Part III |
| Capacity | 700 MB | | |
| Recording Time | 79 min. 57 sec. | | |
| Linear Velocity | 1.2 m/s | | 4.8 - 14.4 m/s |
| Track Pitch | 1.5 μ m | | 1.5 μ m \pm 0.1 |
| Substrate Material | Polycarbonate | | |
| Recording Layer | Organic Dye | | Phase Change Material |
| Physical Characteristics | | | |
| Outer Diameter | 120.0 \pm 0.3 mm | | |
| Inner Diameter | 15 mm + 0.1 / - 0.0 | | |
| Thickness | 1.2 + 0.3 / - 0.1 | | |
| Recording Areas | 44.7 to 118 mm (max.) | | 50 to 116 mm |
| Operating Environments | | | |
| Temperature | -5 ~ 55 °C | | |
| Humidity | 5 ~ 95 %RH | | |
| Wet Bulb | < 29 | | |

Recordable in High speed CD-RW drives with (1) logo



(1) This is the disc that will enable you in the future to write and rewrite using High Speed CD-RW drives that are available from major drive manufacturer. Use after verifying that your drive is compatible with High Speed CD-RW. High Speed CD-RW drives have the High Speed CD-RW logo on the left (1). Writing and rewriting can not be done with existing 1 x 2 x 4 CD-R/RW drives, which have the logo on the left (2), but not the logo (1).

CD-R for Digital Photos Technical Data

| | |
|-----------------------------|---|
| Basic Specifications | |
| Format | Orange Book Part II |
| Capacity | 700 MB |
| Linear Velocity | 1.2 m/s |
| Track Pitch | 1.5 μ m |
| Substrate Material | Polycarbonate + Black Protection Shield |
| Recording Layer | Organic Dye |
| Outer Diameter | 120.0 \pm 0.3 mm |
| Inner Diameter | 15 mm + 0.1 / - 0.0 |
| Thickness | 1.2 + 0.3 / - 0.1 |
| Recording Areas | 44.7 to 118 mm (max.) |
| Optimum Write Power | 6 ~ 7 mw (Laser W/L = 790 nm, Lens = 0.5) |
| Number of Readings | More than 10 ⁶ times |

*The value is in the case of Mode 1 recording, capacity varies by the format in use.

DVCassette Mini DV/ HDV DV 63S Technical Data

| | DVM60 | HDV DV 63S |
|---|------------------|--------------------|
| Magnetic Properties | | |
| Coercivity (Hc) | 120 kA/m | 120 kA/m |
| Retentivity (Br) | 450 mT | 500 mT |
| Squareness (Br / Bm) | 0.8 | 0.8 |
| Physical Properties | | |
| Tape Width | 6.35 mm | 6.35 mm |
| Tape Thickness | 7 μ m | 7 μ m |
| Recording Characteristics | | |
| Optimum Recording Current | 0 dB* | 0 dB* |
| Data Signal Output Level (21 MHz) | More than -1 dB* | More than 0 dB* |
| Frequency Response (21 MHz / 10.5 MHz) | \pm 2 dB* | within \pm 2 dB* |
| Overwrite Level (21 MHz / 10.5 MHz) | Less than +2 dB* | Less than 2 dB* |
| C/N (21 MHz) | More than -2 dB* | More than -1dB* |
| C/N (10.5 MHz) | More than -2 dB* | More than -1dB* |
| Tracking Signal Output Level (0.47 MHz) | 0 dB* | 0 dB* |
| Tracking Signal Overwrite Level (0.47 MHz / 21 MHz) | Less than +1dB* | Less than -1dB* |
| Impulse Response | \pm 5 % | within \pm 5 % |

• Figures are marked with * are comparisons with the Fujifilm reference tape.

• Please note that the DV digital video system is NOT compatible with analog video systems. • Two sizes of cassettes are available for the DV digital video system – the Mini DVCassette and the DVCassette. The latter is suitable for extended recording and playback. • In accordance with copyright laws, Mini DVCassette recording are for private viewing only. • Mini DV is a commercially registered logo. • Specifications and appearance are subject to change without notice for product improvement purposes. Color and packing may differ from that shown in the catalog.