

Although Sony DVCAM tape (mini or standard cassette) will work in DV recorders and DV tape works in DVCAM recorders, they are designed and manufactured for different applications – Professional and Consumer. There are clear differences, in the manufacturing process of DVCAM tape, that ensures DVCAM tape meets the most stringent demands of the Professional environment. This guide describes six features that clearly show the superiority of DVCAM tapes.

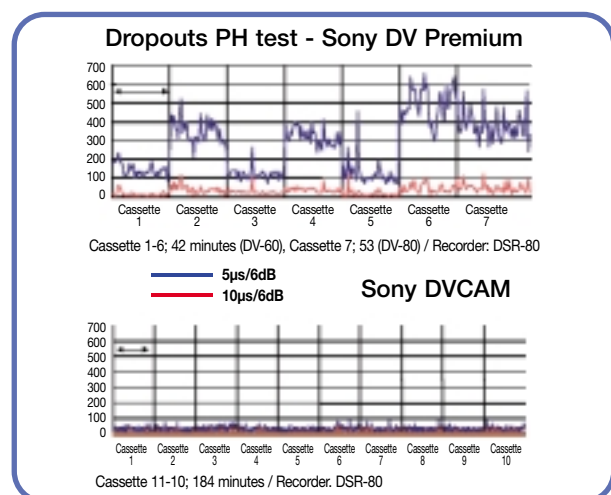
Features:

- 1 Enhanced picture quality due to lower drop out rate.
- 2 Maximum durability due to the superior DLC (Diamond like Carbon) coating – using the special Carbon Vapour Depositing process.
- 3 Improved physical stability for consistent tracking.
- 4 Precision slitting of DVCAM tape gives finer control of tape width - providing a reduction in tape shrinkage, over time, to approximately half that of DV tape.
- 5 Maximum stability of picture and sound.
- 6 DVCAM cassettes are protected by a professional album case with additional cushioning provided in the mini-cassettes for extra safety.

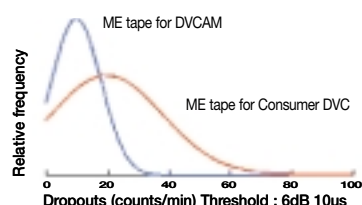
Those processes give you:

- Tape durability designed to withstand shuttle and still mode play.
- Confidence to edit, knowing there will be no deterioration in your rushes.
- A master tape as good as the day you recorded it.
- Precision quality to ensure you record exactly what you expect to record.
- No “off-tracking” problems when moving from one piece of equipment to another.
- Robust packaging that protects your recordings from accidental damage.

Enhanced picture quality due to lower drop out rate

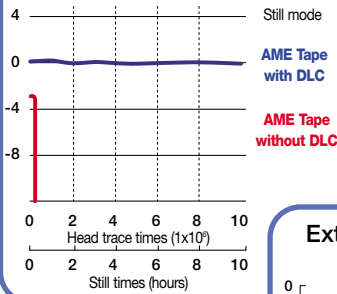


Distribution of Dropouts of DVCAM and DVC tape



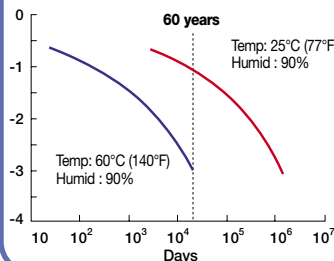
Maximum durability due to the superior DLC (Diamond like Carbon) coating improved with special technological Carbon Depositing process

Excellent Durability with DLC



- Archival stability of ME cassette is more than 60 years with minimum decrease of C/N Ratio.
 - Test based on 1dB at 25°C / 90% humidity
 - Test based on 3dB at 60°C / 90% humidity.

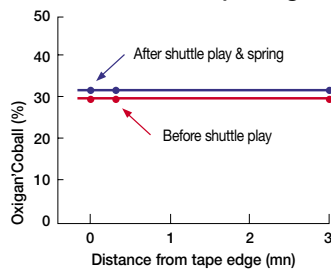
Extreme archival stability Evolution of C/N ratio



- There is no oxidation of the tape edge even after 2000 Shuttle passes and 6 days of test.

ME tapes are perfect for long time archiving with no deterioration in quality!

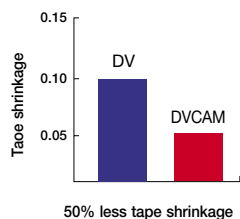
Oxidation of tape edge



Improved physical stability for consistent tracking:

Designed for long-term tape compatibility, DVCAM's advanced narrow tracking technology and low-shrinkage tape technology promotes compatibility between tapes and hardware for smooth editing and post-archival playback.

Physical Stability



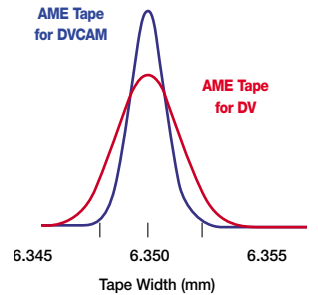
Special manufacturing process ensures that the DVCAM tape shrinkage is only 0.05% after saturation against high temperature and prolonged time.

Tape width

Precision slitting of DVCAM tape gives finer control of tape width - providing a reduction in tape shrinkage, over time, to approximately half that of DV tapes. It is clear that the more uniform the tape width the

better the record/playback stability and compatibility between recorders. DVCAM width is held to a tighter tolerance to offer a higher level of reliability and compatibility.

Tape Width distribution

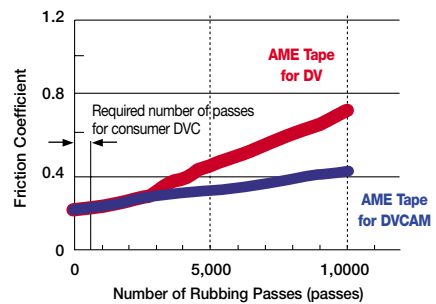


Maximum stability

Friction increases between tape and recorder heads after repeated passes on the tape. DVCAM media has a significantly lower friction coefficient than DV. For the professional this means greater recorded signal longevity, higher reliability, increased durability and overall performance.

Durability

Variation of friction coefficient of DVCAM and DV tape



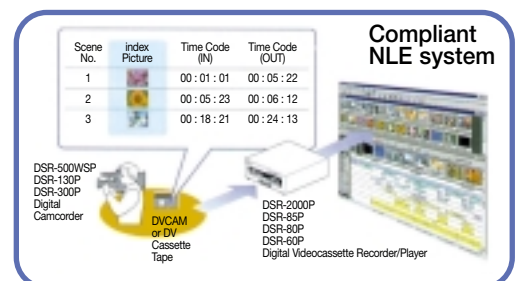
There is a difference when you use DVCAM Media. As a professional you and your customers deserve to have the best and most reliable end result the format can provide.

When quality is all that counts, use the media that was designed for professionals - DVCAM.

Additional info:

Clip Link™ is the function specific to DVCAM equipment:

- A Miniature Index image is created automatically for each frame.
- Time-code data "IN" and "OUT", index number, number of the frame and sequence, the status OK (well taken)/ "No-Good" (badly taken). This data is recorded on the IC Memory chip of the DVCAM tape.
- ClipLink™ can significantly reduce postproduction time.



DCAM Sony VTR's and cameras possessing the ClipLink™ functionality:

Cameras	DSR-570WSP/500WSP DSR-135P/130P DSR-390P/370AP/300AP/300P
VTR's	DSR-2000P DSR-1800P DSR-1600P DSR-1500AP/1500P DSR-85P DSR-80P DSR-60P
Portable Editing Recorder	DSR-70AP/70P(W x H x D)

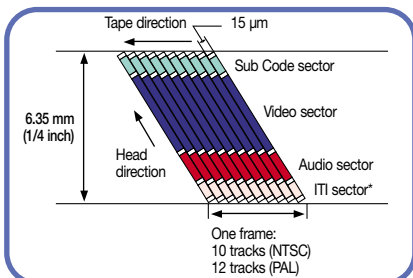
DVCAM Professional Hardware Line-up:

Cameras	DSR-570WSP/500WSP DSR-135P/DSR-130P DSR-390P/370P/300AP/300P DSR-250P/200AP/200P DSR-PD150P DSR-PD100AP/DSR-PD100P DSR-PD1P/DSR-V10P DSR-PDX10P
VTR's	DSR-2000P DSR-1800P/DSR-1600P DSR-1500AP/1500P DSR-85P/DSR-80P/DSR-60P DSR-45P/40P DSR-25/20P DSR-30P/DSR-11 DRV-1000P
Portable	DSR-V10P DSR-70AP/70P DSR-50P

Compatibility guide hardware/cassettes: Professional DVCAM Hardware

Cameras	Cassettes Mini	Cassettes Standard
DSR-135P/130P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-200AP/200P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-250P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-390P/370P/300AP/300P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-570WSP/500WSP	<input type="checkbox"/>	<input type="checkbox"/>
DSR-PD100AP/PD100P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-PD150P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-PD1	<input type="checkbox"/>	<input type="checkbox"/>
VTR's	Cassettes Mini	Cassettes Standard
DRV-1000P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-1500AP/1500P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-1600P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-1800P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-2000P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-11	<input type="checkbox"/>	<input type="checkbox"/>
DSR-25/20P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-30P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-45P/40P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-50P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-60P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-70AP/70P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-80P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-85P	<input type="checkbox"/>	<input type="checkbox"/>
DSR-V10P	<input type="checkbox"/>	<input type="checkbox"/>

DVCAM Magnetic tape impression:



*ITI sector: (Insert and Track Information) sub-code sector for tracking

Recording time of DVCAM tapes with the DV Consumer hardware and vice versa

When you use DVCAM cassettes for your consumer DV camera or VTR, you gain an increase of up to 50% of the recording time !

If you utilise DV cassettes in your DVCAM equipment, the recording time will be 33% less.

Remember: The track width for DVCAM is 15 µm versus 10 µm for consumer DV.

Consumer DV Cassette **-33%** Of recording time → Camera DVCAM DSR Series

DVCAM Cassette **+50%** Of recording time → Camera DV Mini DV Series

DVCAM Series without IC Memory (no chip)

DVCAM cassettes without IC memory can be utilised in all types of DVCAM hardware, which do not offer the possibility of tape data recording.



Size	Model Name	Recording time (min)		Tape length (m)
		DVCAM Hardware	DV Hardware	
Small cassettes	PDVM-12N	12	18	24
	PDVM-22N	22	33	41
	PDVM-32N	32	48	58
	PDVM-40N	40	60	71
Standard cassettes	PDV-34N	34	51	61
	PDV-64N	64	96	112
	PDV-94N	94	141	163
	PDV-124N	124	186	214
	PDV-184N	184	276	315

DVCAM Series with IC Memory

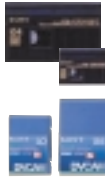
These models have a 16 Kilobits memory chip installed, which can be used for the recording of various types of data relevant to the picture shoot and consequently facilitate the post-production. These tapes are perfect to use in DVCAM equipment providing the ClipLink™ capability.

Size	Model Name	Recording time (min)		Tape length (m)
		DVCAM Hardware	DV Hardware	
Small cassettes	PDVM-12ME	12	18	24
	PDVM-22ME	22	33	41
	PDVM-32ME	32	48	58
	PDVM-40ME	40	60	71
Standard cassettes	PDV-34ME	34	51	61
	PDV-64ME	64	96	112
	PDV-94ME	94	141	163
	PDV-124ME	124	186	214
	PDV-184ME	184	276	315

DVCAM cassettes are protected by a professional album case with additional cushioning provided in the mini-cassettes for extra safety.

DVCAM Master Series (MEM) Tapes

DVCAM MEM series utilises Sony Unique Hyper Evaticle II magnetic particles to provide higher output performance with significantly lower noise and error. With greater retentivity and coercivity, the new 100% cobalt particles allow the DVCAM MEM Series to achieve a C/N ratio +2dB higher than ME tapes and truly high-density digital recording and playback.



Size	Model Name	Recording time (min) DVCAM Hardware	Recording time (min) DV Hardware	Tape length (m)
Small cassettes	PDVM-32MEM	32	48	58
	PDVM-40MEM	40	60	71
Standard cassettes	PDV-64MEM	64	96	112
	PDV-124MEM	124	186	214
	PDV-184MEM	184	276	315

This tape is the tape to use for those critical applications when you just can't count on other formats. DVCAM MEM series give you this confidence.

Also, it should be noted that DVCAM MEM series tapes are IDEAL for the archiving of your precious content, providing you peace of mind over the years!

Cassettes memory



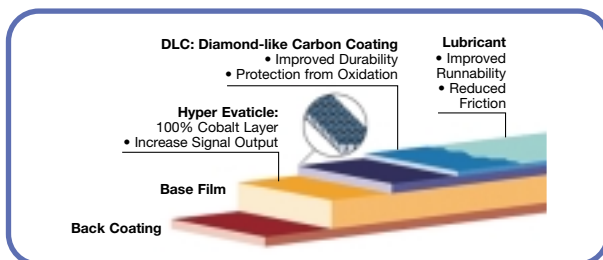
Cassette Memory Chip

Certain models of DV and DVCAM cassettes possess a memory chip. The integrated chip memory communicates with the microprocessor of the camera and memorizes various parameters as a list of indexed sequences.

This memory has a capacity of 4 KBits (45 images indexes) on DV cassettes and a 16 KBits (198 images indexes) on DVCAM cassettes. This feature offers the possibility to memorize a certain amount of data and information (as already mentioned ClipLink, dates, photo mode etc). Thus it brings flexibility and saves time whether in post-production or acquisition.

Metal Evaporated tape technology beats metal particle technology

Although tape thickness of DVCAM tape is just 7.0 µm (the micron is 1000 times smaller than the millimetre) and its width hardly more than 6 mm, it can effortlessly handle up to 184 minutes of digital video recording.

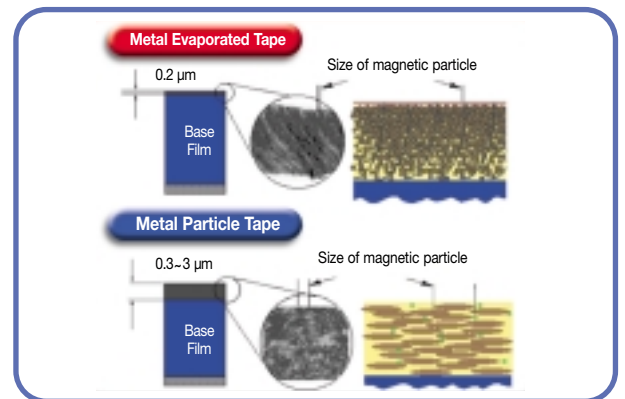


What are the fundamental differences between Metal Particle (Competitors format) and Metal Evaporated (DVCAM) tape?

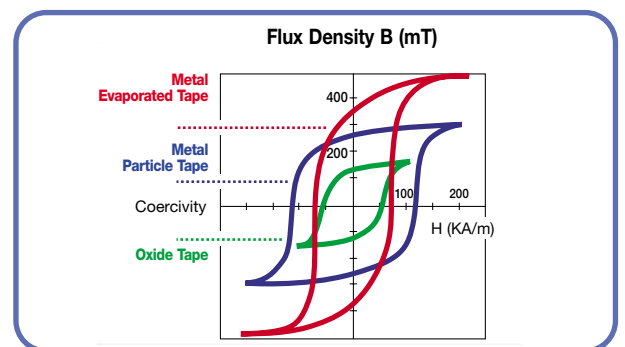
Size of magnetic particle for Metal evaporated tape is around 0,02µm whereas metal particle average size is 0.3x0.03µm. Usage of Metal Evaporation technology ensures superior quality even at four times high speed transfer mode during fast editing.

With conventionally coated tapes, magnetic particles comprise only about 50% of the formed magnetic layer, while the rest is composed of high-polymer binding agents (lubricants, solvents, etc.) which have no magnetic properties at all.

Metal-E tape, however, does not require a binder to bond magnetic particles to the base film. So, with Metal-E tape, a minimum of 80% of the magnetic layer is composed of magnetic particles, which greatly improves the recording density.



Also, it should be known that the quality of recording depends on the relationship between flux density and Coercivity. These two parameters form a diagram called Hysteresis curve.



This graph expresses the magnetic energy of the tape. The larger the hysteresis loop and the closer it is to a rectangular shape, the better the tape's quality.