

High-density coated digital recording tape

Registration No.	Number 00316		
Registration Date	September 14, 2021	Registration Category	Category 1

Name (Model, etc.)	Coated magnetic tape for computer backup FUJIFILM DLT tape IV (Model number : Data cartridge DLTIV FB D)
Location	Odawara-shi, Kanagawa FUJIFILM Corporation Kanagawa Plant
Owner (Custodian)	FUJIFILM Corporation Advanced Functional Materials Development Center
Manufacturer (Company)	FUJI PHOTO FILM CO., LTD. (now FUJIFILM Corporation)
Year Manufactured	1996
Year first appeared	1994
Reason For Selection	This is a coated digital recording tape with a thin magnetic layer. The widespread adoption of computers in the 1990s led to an explosion in demand for high-density recording media. High-density digital recording requires a very thin (sub-micron level) magnetic layer, which at that time could only be made via vapor deposition onto magnetic tape. However this process was unsuitable for mass production and suffered from reliability issues. The magnetic layer on standard coated tape, meanwhile, was around three microns thick. Fujifilm was able to create an 0.3 micron magnetic layer (about ten times thinner than previously) using a unique multi-layer coating system whereby a thin magnetic layer was coated upon a non-magnetic functional layer. Reliability was improved by adding a lubricant and smoothing out irregularities in a substrate. This low-cost solution quickly saw magnetic tape adopted as the key medium for digital storage, with the Fujifilm tape becoming the de facto standard in the tape industry, even to this day. This tape provides a fascinating insight into the early days of tape technology.
Registration Standard	1-B (Show a uniquely Japanese scientific or technological development from an international perspective.)

Open/Closed to Public	Closed to Public
Photo	
Other useful information	