

Data Sheets : White Papers : Case Studies



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Ideally suited for sophisticated multimedia and network applications such as desktop publishing, image processing, medical diagnostics, multimedia data exchange, financial records and administration archiving.

5.25" MO Magneto-Optical Discs

Ultimate reliability for long-term archiving.

Sony has called on over 15 years expertise as a pioneer in magneto-optical technology to develop the extremely reliable and durable 5.25" Magneto-Optical disc. Designed to meet demanding storage needs in the vertical markets, 5.25" MO media handles all kinds of data safely and securely. With up to 9.1GB of data storage, super fast access and over 50 years archival life, these discs offer high performance.



Key features and benefits

- **Versatile capacity for specific storage needs**
 One of the main advantages of 5.25" Magneto-Optical disc is its versatility. There are a **wide variety of data capacities** available to meet specific storage needs plus either **rewritable (EDM) or write-once (CWO) versions** for secure archiving. Featuring advanced **MSR (Magnetically-induced Super Resolution)** and **Land & Groove recording technologies**, latest generation 5.25" MO media stores **up to 9.1GB** of data – that's 14 times the capacity of the first 650MB MO disc!
- **Renowned for durability**
 Sony 5.25"MO discs can perform **over 1 million erase and write cycles, 1 billion reads and 100,000 load and unload cycles** per side without quality loss. Archival life can exceed **50 years***. **Lifetime guaranteed****.

- **Unrivalled performance and reliability**
 A strong cartridge and anti-static hard-coated disc surface protects data against scratches, dust, magnetic fields and other extreme environmental conditions. This ensures faultless performance, now and in the future.
- **High-speed random access**
 With seek times measured in milliseconds, 5.25" MO discs are highly suited to large-scale libraries and jukeboxes.
- **Excellent portability**
 MO discs are tough, compact and lightweight, making them easy to remove and carry around!

* Environmental conditions: 25°C, 15-50% relative humidity.

** Terms and conditions apply.

5.25" MO

Drive / Media Total Compatibility

Unlike some technologies, MO is fully backward compatible, allowing new drives to read and write files stored on previous generations of the format. Archived data always remains accessible - an important criteria for many of today's organisations and institutions where access to past information is essential.

Media Generation		
	8X drive	14X drive
1X-2X	Read	Read
4X-8X	Read/Write	Read/Write
14X	-	Read/Write

Specifications

General	EDM600	EDM650	EDM/ CWO1200	EDM/ CWO1300	EDM/ CWO2300	EDM/ CWO2600	EDM/ CWO4100	EDM/ CWO4800	EDM/ CWO5200	EDM/ CWO8600	EDM/ CWO9100
Characteristics											
Generation	1X	1X	2X	2X	4X	4X	8X	8X	8X	14X	14X
Unformatted	594MB	650MB	1,193MB	1,309MB	2,319MB	2,636MB	4,130MB	4,836MB	5,233MB	8,627MB	9,165MB
User Area (radius) (mm)	30~60	30~60	30~60	30~60	30~60	30~60	29.96~62	30.14~62	29.68~62.10	29.81~62.10	29.70~62.10
Physical tracks per side	18,751	18,751	21,600	21,600	26,010	26,040	37,696	37,485	38,136	49,560	49,728
Logical tracks	18,751	18,751	37,600	37,600	73,080	75,735	130,112	138,915	182,508	300,900	186,480
Sector Size (Bytes/sector)	512	1,024	512	1,024	512	1,024	512	1,024	2,048	2,048	4,096 (EDM/CWO9100) 1,024 (EM19100) 512 (EM59100)
Track Pitch (µm)	1.6	1.6	1.39	1.39	1.15	1.15	0.85	0.85	0.85	0.65	0.65
Number of Bands	-	-	16	16	30	34	38	45	24	30	16

Common specifications

Reliability (Acceleration Test Results)	
Read Cycle	≥10 ⁷
Erase/Write/Read Cycle	≥10 ⁶
Byte error rate	≥10 ⁻¹²
Archival and Shelf Life	≥50 years
Environmental Requirements*	
Operating Conditions ((°f) °c; 3~85%rh)	41~131 (5~55)
Storage Conditions ((°f) °c; 3~90%rh)	14~131 (-10~55)
Absolute Humidity (g/m3)	1~30
Dimensions	
Diameter (mm)	130
Cartridge Dimensions (mm)	135x153x11
Weight total (g)	165

* Maximum wet bulb temperature : No condensation at 29°C (85°F)

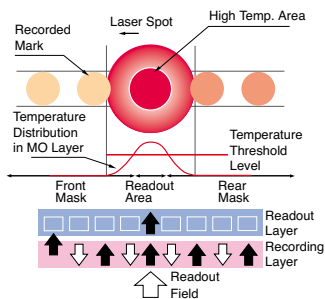
Logistics

Sub carton	
External Dimensions (mm)	71x140x157
Weight (kg)	0.95
Quantity	5
Master carton	
External Dimensions (mm)	310x175x340
Weight (kg)	8.05
Quantity	40

14X MO Features Sophisticated Technology

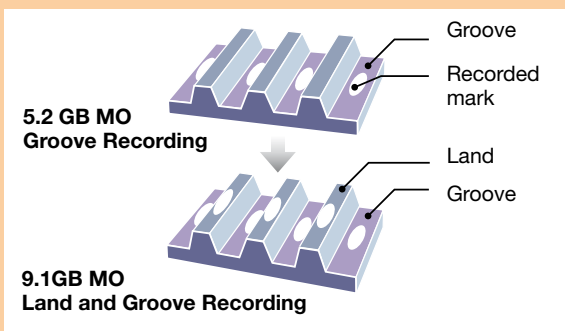
Advanced MSR Technology

Sony 5.25" MO media features MSR (Magnetically-induced Super Resolution) technology for even greater storage capacity. By using triple magnetic recording layers to form a mask within the laser spot, MSR makes it possible to identify magnetic data that is much smaller than the laser beam spot size. This increases linear and track density while retaining conventional MO disc drive optical properties.



Land & Groove Recording

A "dual spiral" zone layout enables continuous Land & Groove track recording. Data is recorded on both the surface of the layer (the land) and the spiral track (the groove), increasing media density and allowing an astonishing 9.1GB of data to be stored on just one disc.



High reliability for a variety of user environments

Sony MO media offers stable and consistent performance across all kinds of user environments. A Wide Margin Recording Film capable of handling any fluctuation in laser power plus a high-precision stamper and substrate molding ensures excellent storage and over one million erase and record cycles.



Fast and Powerful 5.25" MO Drives

Sony supplies powerful and reliable MO drives based on ISO standardisation. The range includes internal and external drives with an S-cache algorithm to achieve maximum speed and responsiveness. 8X and 14X drives can achieve data transfer rates of up to 5.07 MB/Sec and 6.14 MB/Sec respectively to ensure retrieval of the largest files within seconds.

About Sony storage media

Sony has spent more than 50 years driving innovation, and this pioneering spirit has led us to develop many popular storage standards. Today, Sony manufactures media for many different formats – including AIT and half-inch tape formats such as S-AIT, LTO and DLT and optical discs like MO, DVD, CD – all to the same demanding standards, for absolute performance and reliability. Businesses and consumers get the widest choice of storage solutions from a single supplier. And with the backing of Sony technical support and time-saving services like pre-labelling, the answer is clear: whether you need archival, backup or file transfer, trust Sony with your data.

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