# Verbatim 3.5" Optical Disks

- Dos & Mac Formats
- Mac Formats Avail abl e With Val ue-Added Features
- 5X DOW Offers UI tra-High Data Transfer Rate
- Lowest Byte Error Rate
- 5X Optical Sets New Standard
- Exceeds ISO Standards
- Lifetime Warranty



# Optical Products

## 3.5 Rewritable Optical Disks Are Practical, Reliable Storage Solution

Achieve maximum performance while meeting the demands of any operating environment with Verbatim 3.5" Rewritable Optical Disks. Available in 128MB (1X), 230MB (2X), 540MB (5X) and 640MB (5X) capacities, these magneto-optical disks are ideal for graphics, desktop publishing, medical imaging, multimedia and routine system backup. Verbatim 3.5" MO disks are compatible with all ISO standard 3.5" optical drives. They feature a hard-coated, wear-resistant media surface that resists scratches, plus a superior cartridge case for enhanced data protection.

Verbatim 3.5" Rewritable Optical Disks are backed by a Lifetime Warranty and are ISO 9002 certified for consistent quality and reliability.

### New 5X Optical Offers Largest Native Capacity Available On 3.5 Disk

Verbatim is pioneering new boundaries in storage capacity with two new 5X rewritable optical disks. Available in 540MB, 512 bytes/sector, and 640MB, 2048 bytes/sector, these premium disks offer storage capacities comparable to CD-ROMs. This high capacity makes them perfect for downloading internet files as well as a variety of on-line, near-line and off-line applications.

Verbatim 5X Rewritable Optical Disks come factory formatted for Macintosh systems. They are also available unformatted.

As with all Verbatim MO disks, the new 3.5" 5X products are certified 100% error free and feature the lowest carrier to noise ratio in the industry.

#### Verbatim Blends Value-Added Features With Versatile MO Technology

The versatility of this powerful technology is best exhibited in the value-added features available in select packs of Verbatim MO products.

• DOW Products Verbatim 3.5" DOW optical products are the perfect solution for write-intensive jobs. Available in capacities up to 640MB, these direct overwrite disks offer the highest data transfer rate among media meeting ISO/IEC standards.

• Dantz Diskfit® Special packs of 128MB and 230MB Mac format MO disks feature Dantz Diskfit, a multilingual backup software. Fast and easy to use, it walks users through data backup procedures with simple, menu-driven, on-screen instructions.

• Stacker® Data Compression This integrated compression software automatically increases capacity on Verbatim 3.5" 230MB Mac format optical disks to 430MB.

• Color-Coded Disks Verbatim 128MB and 230MB 3.5" Rewritable Optical Disks are available in color-coded, three-disk packs. Color coding makes it easy to file and retrieve data, while providing a colorful reminder for Monday/ Wednesday/Friday backups.





Verbatim 3.5" Optical Disk Media Listing & Specifications						
Product	Part#	UPC Code	Capacity	Sectors	Bytes Per Sector	ISO Standard
3.5"	Rewr	itable Ma	agneto-	Optica	(MO)	
1X Unformatted	88012	23942-88012	128MB	25	512	ECMA-154, ISO 10090
1X Color Unformatted (3-Pack)	90984	23942-90984	128MB	25	512	ECMA-154, ISO 10090
1X MAC Format	89396	23942-89396	128MB	25	512	ECMA-201
1X MAC Format w/Dantz (3-Pack)	90881	23942-90881	128MB	25	512	ECMA-201
2X Unformatted	90545	23942-90545	230MB	25	512	ECMA-201
2X MAC Format	90672	23942-90672	230MB	25	512	ECMA-201
2X MAC Format w/Stacker	90807	23942-90807	230MB	25	512	ECMA-201
2X MAC Format w/Dantz	90880	23942-90880	230MB	25	512	ECMA-154, ISO 10090
2X DOS Format	90673	23942-90673	230MB	25	512	ECMA-154, ISO 10090
5X Unformatted	91321	23942-91321	540MB	25	512	ISO/IEC 15041
5X MAC Format	91427	23942-91427	540MB	25	512	ISO/IEC 15041
5X Unformatted	91250	23942-91250	640MB	17	2048	ISO/IEC 15041
5X MAC Format	91428	23942-91428	640MB	17	2048	ISO/IEC 15041
5X DOW Unformatted	91700	23942-91700	540MB	25	512	ISO/IEC 15041
5X DOW Unformatted	91702	23942-91702	640MB	17	2048	ISO/IEC 15041

	Verbati	im 3.5" (	Optical	Disk Chara	cterist	ics	
Read/Write Characteristics				Mechanical Characteristics (Continued)			
	1X	2X	5X		1X	2X	5X
Maximum Read Power	2.0 mW	1.6 mW	1.5 mW	Radial Acceleration	$\leq 3m/s^2$	$\leq 3m/s^2$	$\leq 2.2 \text{m/s}^2$
Carrier to Noise Ratio (dB)	≥ 47	≥ 43	≥ 45	Tilt	≤ 5.0mrad	≤ 5.0mrad	≤ 3.2mrad
Write/Erase Power (typical)	8 mW	8 mW	7.25 mW	Load/Unload Cyclability	$\ge 4 \times 10^4$	≥ 4 X 10 <sup>4</sup>	≥ 2.5 X 10 <sup>4</sup>
Byte Error Rate	≤ 5X10 <sup>-5</sup>	≤ 5X10 <sup>-5</sup>	≤ 5X10 <sup>-5</sup>	Disk Construction			
Write/Erase Cyclability	≥ <sub>10</sub> 7	≥ 10 <sup>7</sup>	≥ 10 <sup>7</sup>				
Read Cyclability	<sup>≥</sup> 10 <sup>9</sup>	<sup>≥</sup> 10 <sup>9</sup>	<sup>≥</sup> 10 <sup>9</sup>	Standard	ISO 10090, ECMA-154	ISO 13963, ECMA-201	ISO/IEC DIS 15041
Archival Life	$\geq$ 40 Years	≥ 40 Years	$\geq$ 40 Years	Or			BI3 13041
Physical Characteristics				Operating Conditions			
Substrate Material	Polycarbonate	Polycarbonate	Polycarbonate	Operating Temperature	5° C to 55° C	5° C to 55° C	5° C to 55° C
Disk Outer Diameter	86mm	86mm	86mm	Relative Humidity * Rewritable	3-85%	3-85%	3-85%
Substrate Thickness	1.2mm	1.2mm	1.2mm	Absolute Humidity	1 to 30 g/m <sup>3</sup>	1 to 30 g/m <sup>3</sup>	1 to 30 g/m <sup>3</sup>
Disk Thickness	≤ 1.4mm	≤ 1.4mm	≤ 1.4mm	Storage Conditions			
Hub Inner Diameter	4.0mm	4.0mm	4.0mm				10° C to 55° C
Cartridge Case Material	Polycarbonate	Polycarbonate	Polycarbonate	Temperature Relative Humidity	- 10° C 10 55° C 3-90%	-10° C to 55° C 3-90%	-10° C to 55° C 3-90%
Cartridge Case Dimensions (mm)	90 X 94 X 6	90 X 94 X 6	90 X 94 X 6	Absolute Humidity	3-90% 1 to 30 g/m <sup>3</sup>	3-90% 1 to 30 g/m <sup>3</sup>	3-90% 1 to 30 g/m <sup>3</sup>
Mechanical Characteristics				Optical Characteristics			
Axial Deflection	≤ 0.22mm	≤ 0.22mm	≤ 0.15mm	Substrate Refractive Index	1.57	1.57	1.57
Axial Acceleration	$\leq 10 \text{m/s}^2$	$\leq 10 \text{m/s}^2$	$\leq$ 7.92m/s <sup>2</sup>	Double Pass Retardation	≤ 40 nm	≤ 40 nm	≤ 40 nm
Radial Runout	≤ 50um	≤ 50um	≤ 50um	Reflectivity	15 - 24%	15 - 24%	15 - 24%

Verbatim 3.5" Rewritable Optical Media should be used with the following ANSI, ECMA and ISO CCS compatible drives:							
FUJITSU	IBM	MCA	MOST				
OLYMPUS	PANASONIC	PINNACLE MICRO	RICOH				
SANYO	SONY	TEAC					

The recognized leader in 3.5 MO technology, Verbatim is proud to offer the broadest selection of high quality optical disk products in America.



 $\label{eq:total_total_total} \end{tabular} Toll-free hotline 1-800-759-DISK. For product availability call 1-888-VERBATIM. Visit us on the World Wide Web at http://www.verbatimcorp.com. Specifications subject to change without notice (11/96).$