

maxell
PROFESSIONAL

Professional Disc

The Maxell Professional Disc Unlocks a New World of Video Imaging



A professional disc for the next generation non-linear broadcasting system.

Fully compatible with the XDCAM System, the Maxell Professional Disc is an all-new rewritable optical disc featuring remarkably high capacity storage on a 12 cm diameter disc packed in a cartridge.



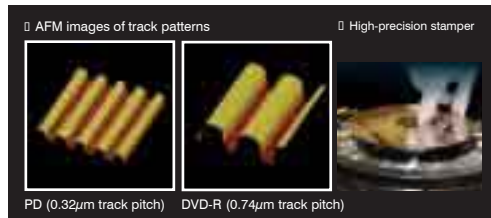
Full features compatible with the XDCAM System offer outstanding picture quality and ease of use

Direct-to-disc digital tapeless recording systems are a fast-growing part of the professional recording market. Maxell's long experience in cutting-edge technologies has enabled it to develop optical storage media that meet the needs of this sector.

With a 23.3 GB storage capacity, the Maxell Professional Disc (PD) offers a recording time of more than 65 minutes in HD (MPEG HD) format, approximately 45 minutes at 50 Mbps in SD (MPEG IMX) format and up to 85 minutes in SD (DVCAM) format.

High-precision track stamping

High-density track patterns and the blue-violet laser's short wavelength of 405 nm both contribute to creating the Professional Disc's large storage capacity. By using a higher numerical aperture of 0.85, the laser beam can be focused much more tightly. This produces an extremely tiny spot on the disc, compared to that of existing CDs or DVDs. Finer tracks are thus required for the laser beam. To realize an ultra-low-pitch data track, Maxell employs the latest stamping instrument using a high-precision laser-cutting-control technology based on conventional DVD production technologies. As a result, a track pitch of a mere 0.32 μm , less than half that of DVD-R's 0.74 μm , is achieved while the fine, sharp shape of the grooves is maintained.



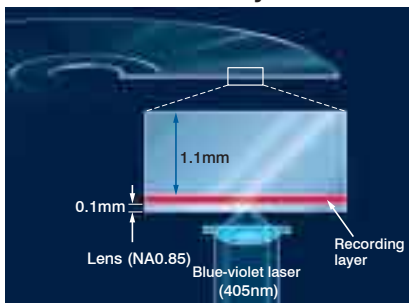
High transfer rate

The Maxell Professional Disc's transfer rate is 72 Mbps on one optical head and 144 Mbps on two optical heads. This enables stable, high-bit-rate recording and playback.

Highly durable and reliable media

The unique phase change recording layer realizes media that have both a highly durable recording surface and a very low error rate. In order to avoid data errors caused by minute disc warp, the Professional Disc adopts a special structure. The surface of the Professional Disc's recording layer is formed by a 0.1-mm-thick light transmission protective layer coating with a hard coat protecting the disc's surface against scratches, dust and fingerprints, which can damage the disc. The high-density data recording capability of Maxell's Professional Disc is ensured through the use of a plate with a thin cover layer coating that itself is a product of ultra-fine processing technology. The Professional Disc also employs a high precision cartridge to protect against dust and handling errors caused by heavy use.

Professional Disc layer structure

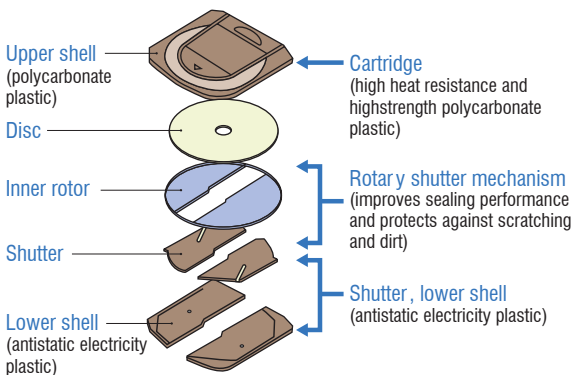


23.3GB /side

Specifications

Item #	633010
Inner carton quantity	5
Master carton quantity	50
Storage capacity	23.3 GB
Laser wavelength	405 nm
Data transfer rate	144 Mbps (2 optical heads) 72 Mbps (1 optical head)
Disc diameter	120 mm
Cartridge size	128.6 x 130.6 x 9.1 mm
Recording layer	Phase Change Material
Erase/write/read cycles	≥ 1,000 times
Read cycles	≥ 1,000,000 times
Estimated shelf and archival life	≥ 50 years*

*Estimated through acceleration testing



	Codec method	Bit rate	Audio channels	Recording time**
HD	MPEG HD MPEG2 MP@HL Number of pixels: 1440 x 1080	HQ mode	4 ch	≥ 65 min.
		• Variable Bit Rate • Max. 35 Mbps	2 ch	≥ 68 min.
			SP mode	4 ch
		• Constant Bit Rate • 25 Mbps	2 ch	Approx. 90 min.
SD	DVCAM	25 Mbps	4 ch	Approx. 85 min.
			8 ch	Approx. 45 min.
		50 Mbps	4 ch	Approx. 55 min.
			8 ch	Approx. 68 min.
MPEG IMX	40 Mbps	4 ch	Approx. 55 min.	
		8 ch	Approx. 68 min.	
	30 Mbps	4 ch	Approx. 68 min.	
		8 ch	Approx. 68 min.	

**When recording in HQ or LP mode, recording time may be more than the above specified figures depending on the actual bit rate used in VBR encoding.



50 Locke St., Unit # 2,
Concord, ON Canada, L4K 5R4
1-800-661-9500
www.maxellcanada.com

Catalog contents accurate as of August 2006.
All features and specifications are subject to change without notice.
"Professional Disc," "XDCAM" and "DVCAM" are trademarks of Sony Corporation.
All registered trademarks and trademarks are the property of their respective holders.