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SONY ACHIEVES OPTICAL TECHNOLOGY BREAKTHROUGH FOR THE STORAGE MARKET

Sony Raises the Bar for Optical Storage Yet Again with the Introduction of their Next Generation Disc Format and Drive.

Imagine that you could design the ideal storage technology. What would it be? Would it have enough capacity to save any data, documents, images, or multimedia files? Would it let you retrieve archived files within seconds without having to search through old tapes? Would it give you the ability to back up files automatically, and keep them secure for extended periods of time? What if this perfect system could do all of this on just ONE removable disc? Thanks to Sony … it can … it does … and it is here today!

This is all possible due to a most advanced professional data storage technology breakthrough by Sony, the recognized leader in the optical storage field for over 15 years. This amazing new 23.3GB blue laser optical storage technology is going to change the way you store, access and use information.

Sony continues to WOW the IT industry, raising the bar yet again by championing another innovative and practical breakthrough in the data storage market. Sony's revolutionary blue laser optical drive system offers exciting new mass storage solution and media possibilities.

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Building Storage Solutions for the Future

The perfect choice for data storage in the broadband network era.

Sony's new blue laser optical storage device, which is scheduled to ship August of 2003, is designed to meet today's data storage challenges by providing 23.3GB of storage capacity on just one single-sided media, and with data transfer rates as high as 9 MB/sec.-- a new milestone for optical storage. High-capacity users with unlimited fields of applications in markets such as healthcare, telecom, financial, insurance, legal, and government will benefit from this new advancement in storage technology.

In addition, users requiring automated large scale data storage with quick and random access, such as document image management, medical imaging, enterprise content management, email archiving, network storage, engineering design, non-linear video, and multimedia production will applaud the new blue laser optical drive's ability to keep multi-terabytes of data accessible within seconds.

A look into the future of the blue laser recording technology

Even with the high capacity and performance offered on the first generation of the new blue laser optical disc, there are still storage users whose future requirements will demand more. In order to address the relentless growing storage needs of these customers, Sony's blue laser technology roadmap extends three generations, with the aim of doubling capacity and performance from one generation to the next. The second generation technology is expected to feature 50GB product capacity on a single sided double layer disc with the transfer rate of 18 MB/sec (144 Mbps) to be available around 2005, and a 100GB product using double sided media and a transfer rate of 36 MB/sec (288 Mbps), currently planned for release by 2007.

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Data Protection at it's Best

Sony's blue laser optical drive supports high-end active archival environments such as medical records, CAD/CAM designs, e-commerce, financial records, broadcast content, and document image management applications where reliable, frequent, and random access to mission critical files is demanded 24x7x365. The new 23.3 GB blue laser optical drive is the ideal storage solution for high-capacity unattended backup and restore applications, and wherever long-term data integrity and reliability are key issues.

The data integrity rating of the media is more than 30 years for both the rewritable and write-once formats. These robust media features, combined with the drive's extremely quick file access/retrieval time and high-capacities, provide greatly improved archiving performance and guaranteed longevity over all tape, CD or DVD media alternatives.

Is secured long-term storage of information important to you?

The 23.3GB write-once media is the perfect high-capacity technology to meet your needs. Write-once media provides permanent record storage -- a methodology where data can be updated but protected against any alterations to the original input ensuring data authenticity and integrity.

Financial and insurance institutions, archivist, records managers, and government agencies all appreciate the ruggedness and permanence of write-once media's structure.

With write-once media you can store it and forget it, at ease with the knowledge that your data is completely safe and secure for decades to come.

The multifunction feature of Sony's blue laser optical drive allows the use of write-once media and rewritable media, permitting sites to implement high-capacity optical storage solutions for one application, document imaging or email archival for example, and later expand to another such as financial audit records without additional investment in equipment. This makes for exceptional versatility and cost savings.

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23.3 GB Blue Laser Optical drive offers advantages in dust protection

Sony's new drive and media cartridge are designed to be impervious to dust and other air-borne containments, resulting in ultimate reliability and durability. After the media is inserted into the drive, the front shutter closes completely and the airtight structure of the drive prevents dust particles from getting in contact with the drive mechanism, optical pickup, and media surface. Plus, an internal automatic lens cleaning feature enhances the effect of dust protection. The media itself offers further advantages such as an anti-static cartridge and hard coating media surface protection.

Blue Laser Optical Drive Technology Highlights

Sony's new blue laser optical storage device provides a breakthrough in optical drive storage capacity and data transfer rates by incorporating the blue laser recording technology with phase change recording technology.

By utilizing blue laser recording technology, it allows higher density recording onto a 120mm disc than current optical MO, CD and DVD discs that use red laser.

The following technological advancements facilitate the achievement of higher-capacity and higher-density

① Narrowing the size of the laser beam wavelength by using a 405nm wavelength blue laser.

② Increasing the NA of the objective lens to 0.85 to minimize the beam spot range.

③ Adopting a very thin cover layer, 0.1mm thick to prevent any disc tilt for maximum read/write reliability.

④ Narrowing tracking pitch size to 0.32um to heighten the recording density.

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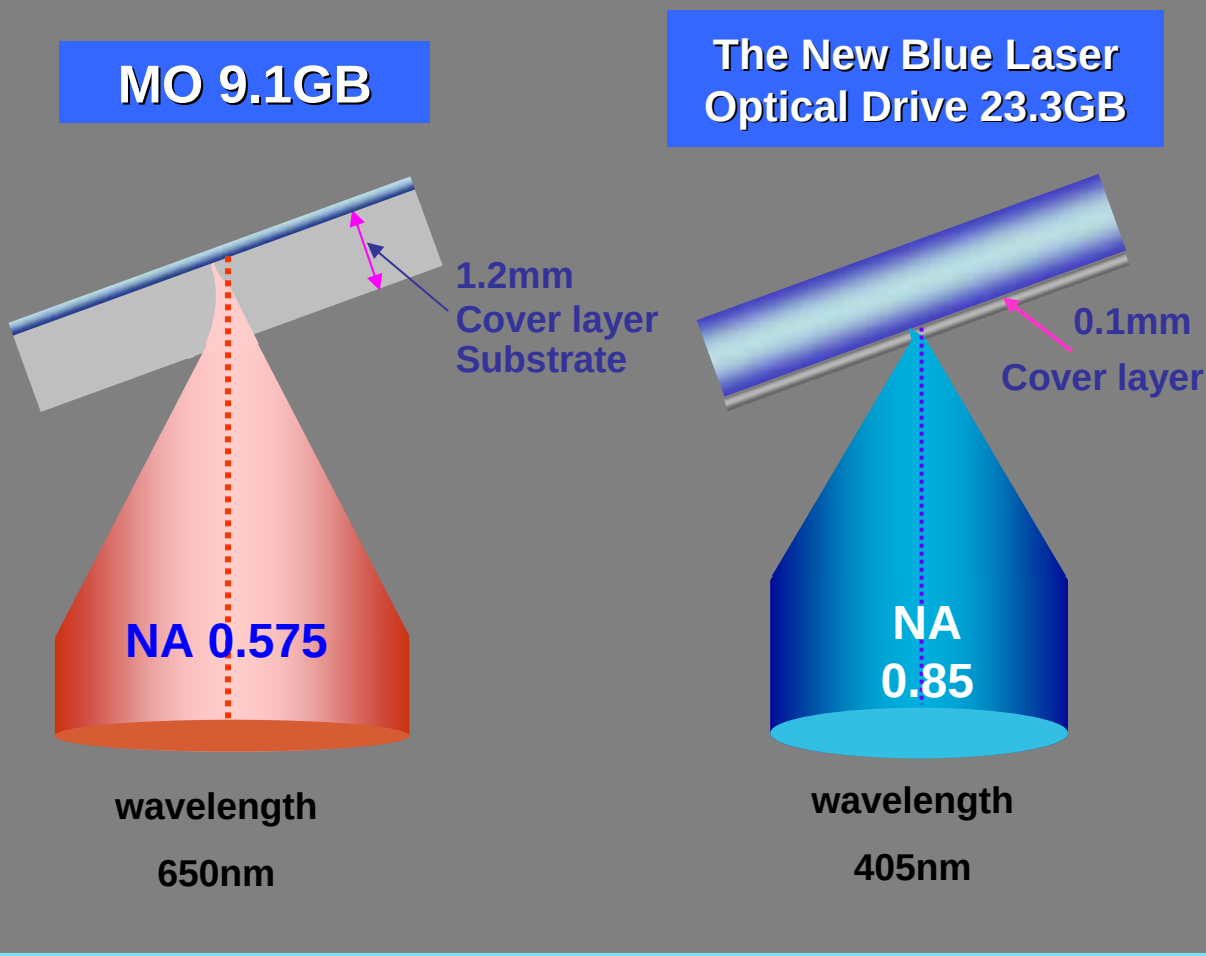
Technical Highlight ①,②,③

0.1mm cover layer maintains better tilt tolerance than MO



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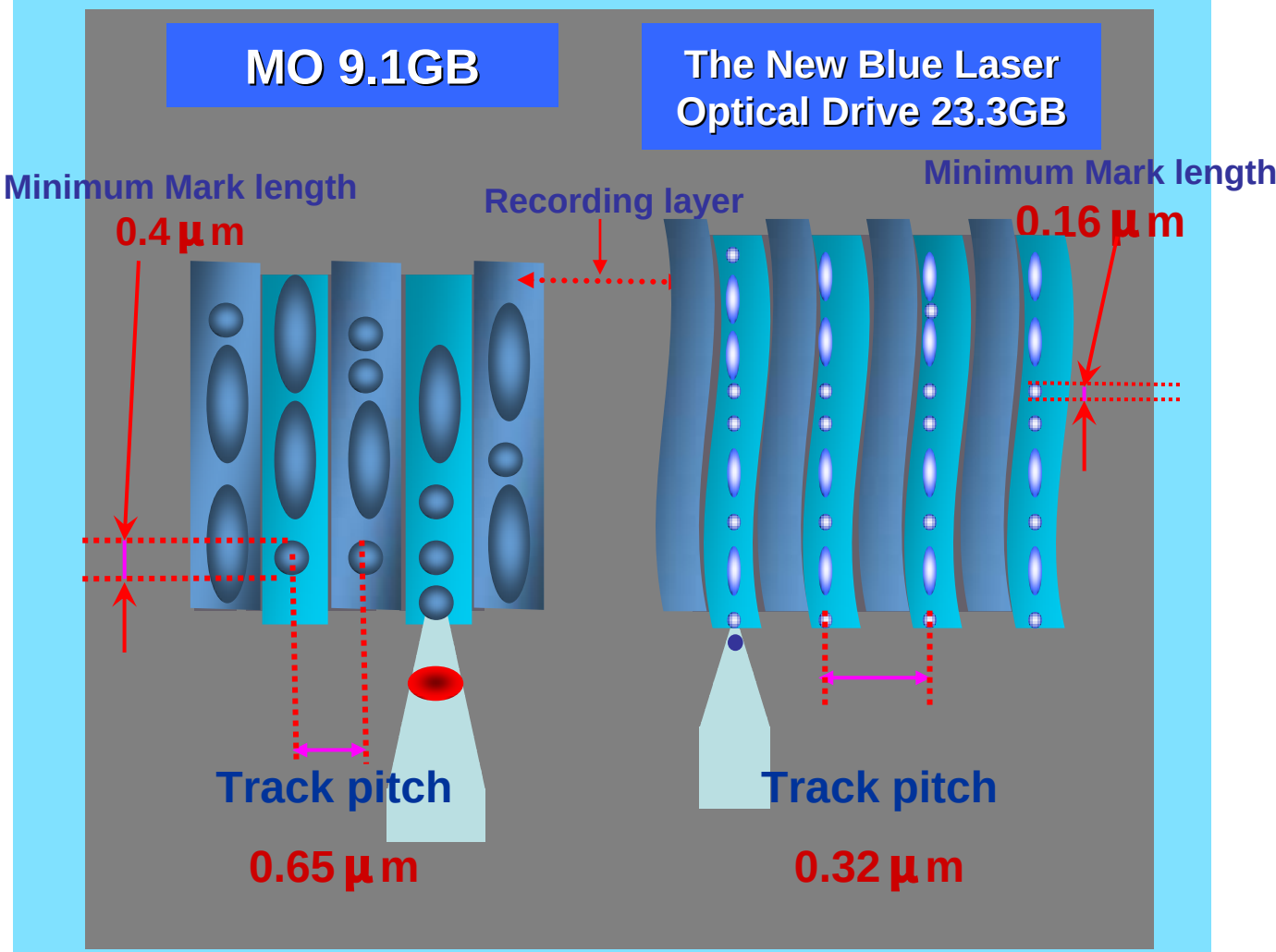
Technical Highlight ④



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Sony is collaborating with independent software vendors (ISVs) and library automation manufacturers to provide compatibility to major operating systems and platforms, and to develop a wide range of high capacity library solutions.

With its multifunction capabilities, dramatic increase in capacity and the decease in cost per GB, Sony's new blue laser optical drive technology is positioned to be a key component for professional storage requirements well into the future.

Main Specification for Media	
Disc Type	**Rewritable [PDDRW23], Write Once[PDDWO23]**
Capacity	**23.3G Byte**
Disc Diameter	**120mm**
Cartridge Dimension	**Dedicated cartridge 130.6(H) x 128.6(W) x 9.1mm(D)**

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Main Specification for BW-F101	
Disc Type	Rewritable, Write Once
Capacity	23.3G Byte
Sector Size	2,048Bytes (512 Bytes emulation)
Host Interface	SCSI LVD Wide
Recording format	Over-write Phase Change
Tracking format	Groove Recording
NA	0.85
Laser Wavelength	405nm (blue laser)
Data Transfer Rate	Sustained write : 9 MB/s(CLV)
	Sustained read : 11 MB/s(CLV), 4.5〜11.0MB(CAV)
	Burst : 160MB/s (Synchronous)
Seek Time	CLV : 280msec(1/3 stroke), 680msec(full stroke)
	CAV : 80msec(1/3 stroke), 120msec(full stroke)
MSBF*1	300,000 SWAP
MTBF*2	50,000 POH (90% Reliability),100,000 POH (60% Reliability)
Buffer Memory	4MByte
Bit Error Rate	less than 1.0 x 10-12
Power Supply	5V±5%, 12V±5%
Power Consumption	12W
Current	5V / 12V, 0.60A / 0.75A
Mass	1.2 kg
Dimensions	146.0(W) x 41.3(H) x 203.0(D) mm
Operation Mount	Horizontal/Vertical

MSBF*1=Mean Swap Between Failure

MTBF*2=Mean Time Between Failure

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