Maxell leads optical media technology into the future.

Optical media performance has been accelerating at an extraordinary rate. Capacities double regularly, and transfer rates increase constantly. Going forward into the future, the landscape promises to change even faster, and Maxell will continue to lead the charge – developing new technologies and innovative solutions to meet the ever-increasing demand.

Blu-ray

FEATURES
- A multilayer disc that offers the speed and capacity for the most demanding archival applications
- Archival storage of data, image and video
- Capacity for over 25,000 page books
- More than 3 times the capacity of DVD (4.7GB vs. 20GB)
- Approximately 35 times the capacity of double layer DVD (8.5GB vs. 300GB)
- More than 63 times the transfer rate of DVD (160Mbps vs. 250Mbps)

APPLICATIONS
- Ideal for recording more than 25 gigabytes of data and information without turning the disc over
- Specifically designed for high capacity data backup and archival storage

HD DVD

FEATURES
- A recordable disc that offers the speed and capacity for the most demanding archival applications
- Archival storage of data, image and video
- Capacity for over 30,000 page books
- More than 3 times the capacity of double layer DVD (8.5GB vs. 20GB)
- Approximately 7 times the capacity of double layer DVD (11.1GB vs. 16GB)
- More than 23 times the transfer rate of DVD (784Mbps vs. 160Mbps)

APPLICATIONS
- Ideal for recording up to 30 gigabytes of data and information without turning the disc over
- Specifically designed for high capacity data backup and archival storage

Holographic Recording

- The ultimate optical media data storage solution
- Enabled by greater capacity and higher transfer rates
- Archival storage of data, image and video
- Holds approximately 150,000 pages of text (Approx. 500,000 pages broken into 1/144th pages)
- Comparable productivity to current mid-range tape due to higher transfer rate and capacity
- Conversion from tape to disc takes place, eliminating maintenance and increases longevity of the content
- More than 14 times the transfer rate of DVD (160Mbps vs. 250Mbps)
- Approximately 20 times the capacity of double layer DVD (11.1GB vs. 300GB)

APPLICATIONS
- Ideal for recording more than 25 gigabytes of data and information without turning the disc over
- Specifically designed for high capacity data backup and archival storage

HD DVD SPECIFICATIONS

<table>
<thead>
<tr>
<th>PRODUCT YEAR</th>
<th>CAPACITY</th>
<th>TRANSFER RATE</th>
<th>WAVELENGTH</th>
<th>FUNCTION/ DISK DIAMETER</th>
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</thead>
<tbody>
<tr>
<td>Generation 3 (2010)</td>
<td>1.6TB</td>
<td>960Mb/sec</td>
<td>407nm</td>
<td>Write Once 130mm</td>
</tr>
<tr>
<td>Generation 2 (2008)</td>
<td>800GB</td>
<td>640Mb/sec</td>
<td>407nm</td>
<td>Write Once 130mm</td>
</tr>
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<td>Generation 1 (2006)</td>
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</table>

SERIAL SPECIFICATIONS

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<tr>
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<th>TRANSFER RATE</th>
<th>WAVELENGTH</th>
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Blu-ray

- A multiplated disc that offers the speed and capacity for the most demanding archival applications
- Archival storage of data, images, and videos
- Capacity for over 15,000,000 pages of text (Approx. 30GB)
- Readout by presenting reference beam to media
- Record by crossing signal beam with a reference beam

Applications
- Ideal for recording more than 25 gigabytes of data and information without turning the disc over
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Holographic Recording

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- Capable of greater capacity and higher transfer rates
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- Comparable product to current mid-range tape due to high transfer rate and capacity
- Conversion from tape to disc is more rapid, efficient, and increases longevity of the content
- More than 14 times the transfer rate of DVD (11.18Mbps vs. 160Mbps)
- More than 63 times the capacity of DVD (4.7GB vs. 300GB)
- More than 35 times the capacity of double layer DVD (8.5GB vs. 300GB)
- More than 14 times the transfer rate of DVD (11.18Mbps vs. 160Mbps)
- More than 5 times the capacity of DVD (4.7GB vs. 25GB)
- Approximately 3 times the capacity of double layer DVD (8.5GB vs. 25GB)

Applications
- Ideal for recording more than 25 gigabytes of data and information without turning the disc over
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FEATURES
- Second generation products will be available in 2008, with 800GB capacity / 640Mbps
- The first media products will be available in late 2006, with 300GB capacity / 160Mbps
- Joint Development with InPhase Technologies, Inc.

Applications
- Removable media
- Multiplex data pages in one location
- Parallel access to data
- Fast data transfer rates
- Ultra-high storage densities
- Removable media
- Fast data transfer rates
- Removable media

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HD DVD Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Blu-ray</th>
<th>HD DVD</th>
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<tbody>
<tr>
<td>Capacity</td>
<td>25GB</td>
<td>30GB</td>
</tr>
<tr>
<td>Transfer Rate</td>
<td>36Mbps (1X)</td>
<td>160Mbps (4X)</td>
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<tr>
<td>Wave Length</td>
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<td>405nm</td>
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<tr>
<td>Recording Film</td>
<td>Organic Dye</td>
<td>Phase Change</td>
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<tr>
<td>Cartridge</td>
<td>Optional</td>
<td>Optional</td>
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<tr>
<td>Disc Thickness</td>
<td>1.2mm (0.1mm cover + 1.1mm)</td>
<td>1.2mm (0.6mm x 2)</td>
</tr>
<tr>
<td>Disc Diameter</td>
<td>120mm</td>
<td>120mm</td>
</tr>
</tbody>
</table>

- Blu-ray SPECIFICATIONS

- HD DVD SPECIFICATIONS

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- Approximately 3 times the capacity of double layer DVD (8.5GB vs. 25GB)

Applications
- Archival storage of data, image and video
- A recordable disc that offers the speed and capacity for the most demanding archival applications
- Removable media
- Fast data transfer rates
- Enhanced readout
- Removable media
- Fast data transfer rates
- Removable media

HD DVD RECORDABLE (WRITE ONCE) REWRITABLE

- Joint Development with InPhase Technologies, Inc.
- The first media products will be available in late 2006, with 300GB capacity / 160Mbps
- Second generation products will be available in 2008, with 800GB capacity / 640Mbps

Holographic Recording

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**Blu-ray**

**FEATURES**

- A multilayer disc that offers the speed and capacity for the most demanding archival applications
- Archival storage of data, image and video
- Capacity for over 12,500,000 pages of text (Approx. 30,000,000 page books)
- More than 14 times the capacity of DVD (11.18Mbps vs. 160Mbps)
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- More than 35 times the capacity of double layer DVD (8.5GB vs. 300GB)
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**APPLICATIONS**

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**APPLICATIONS**

- Specifically designed for high-capacity data backup and archival storage
- Removable Media
- Multiplex data pages in one location
- Parallel access to data
- Ultra-high storage densities
- Fast data transfer rates

**Holographic Recording**

- The ultimate optical multi media storage solution
- Enables larger capacity and higher transfer rates
- archival storage of data, image and video
- Write approximately 180,000 pages of text (Approx. 550,000 page books)
- Write approximately 35,000 pages of text (Approx. 105,000 page books)
- Comparable product to current mid-range tape due to high transfer rate and capacity
- Conversion from tape to disc makes data portable and increases longevity of the content
- More than 63 times the capacity of DVD (11.18Mbps vs. 160Mbps)
- More than 14 1/2 times the transfer rate of DVD (11.18Mbps vs. 160Mbps)

**Holographic Specifications**

- Product Year
- Capacity (GB)
- Transfer Rate (Mbps)
- Maximum Capacity (GB)
- Functional Transfer Rate (Mbps)
- Disc Diameter (mm)

<table>
<thead>
<tr>
<th>Product Year</th>
<th>Capacity</th>
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<th>Maximum Capacity</th>
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What will the future hold?

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Pages of Text</th>
<th>Speed</th>
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</thead>
<tbody>
<tr>
<td>50GB</td>
<td>Approx. 25 million</td>
<td>36Mbps</td>
</tr>
<tr>
<td>25GB</td>
<td>Approx. 12.5 million</td>
<td>36Mbps</td>
</tr>
<tr>
<td>15GB</td>
<td>Approx. 7.5 million</td>
<td>36Mbps</td>
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<tr>
<td>300GB</td>
<td>Approx. 150 million</td>
<td>160Mbps</td>
</tr>
<tr>
<td>800GB</td>
<td>Approx. 400 million</td>
<td>640Mbps</td>
</tr>
<tr>
<td>8.5GB</td>
<td>Approx. 4.25 million</td>
<td>27Mbps</td>
</tr>
</tbody>
</table>

For more information, visit our website at www.maxell-data.com. For technical support call 1-800-377-5887.

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