

Surrender looms in DVD format war

The high-definition movie disc battle between HD DVD and Blu-ray Disc could be over after Toshiba gave the strongest sign yet it would exit its HD-DVD business. Sony-backed rival Blu-ray Disc is now expected to become the definitive next-generation DVD format

Blue laser technology

Used by both formats for up to 3.5x higher data density

Double layer discs of both formats – with two reflective **memory layers** – can hold double capacity



Memory layer

Close to surface so no distortion of laser

BLU-RAY (BD-ROM)

Single-sided: 23-27Gb

3+ hours HD video

Polymer substrate, 1.1mm

Protective silica coat, 0.1mm

Track pitch 0.32 microns*

Minimum pit length 0.15 microns



Single sided: 15-20Gb

2 hrs HD video

0.4 microns

Pit length 0.2 microns

Blue laser

Wavelength 405nm*

Smaller focal spot can read smaller data-carrying **pits** in tighter **tracks**

Red laser

Wavelength 650nm

(standard DVD)

Polycarbonate

substrate, 0.6mm

Optical layer,

0.6mm

Memory

layer

HD-DVDs manufactured using same process and equipment as standard DVDs. BD-ROMs are cheaper to produce but require new tooling and application of protective coat