
Blu-Ray - the "Next" DVD Format?

Those video files just keep getting bigger - especially with the advent of HDTV. And even with Dual-Layer, Double-Sided DVD's fitting HDTV movies onto a DVD has become next to impossible. That's where Blu-Ray comes in. Developed by some of the world's most notable electronics, computing and media manufacturers - including Apple, Dell, Hitachi, HP, JVC, LG, Mitsubishi, Panasonic, Pioneer, Philips, Samsung, Sharp, Sony, TDK and Thomson), Blu-Ray was developed for HD - and for backing up and storing very large amounts of data. Using Blu-Ray, you'll be able to store 25GB on a single-layer disc and 50GB on a dual-layer disc. Additionally, Blu-Ray uses a blue-violet laser instead of a red laser to read and write data. The blue-violet laser provides better precision than red-laser technology.

If you're currently in the market for a DVD burner or reader, we'd recommend that you purchase one that is Blu-Ray compatible - NOW. You can find more information on Blu-Ray at: <http://www.blu-ray.com>. We've included two tables from that web site below that outline the differences between Blu-ray and DVD and Blu-ray and HD-DVD.

Parameters	Blu-ray	DVD
Storage capacity	25GB (single-layer)	4.7GB (single-layer)
Laser wavelength	405nm (blue laser)	650nm (red laser)
Numerical aperture (NA)	0.85	0.60
Disc diameter	120mm	120mm
Disc thickness	1.2mm	1.2mm
Protection layer	0.1mm	0.6mm
Hard coating	Yes	No
Track pitch	0.32µm	0.74µm
Data transfer rate (data)	36.0Mbps (1x)	11.08Mbps (1x)
Data transfer rate (video/audio)	54.0Mbps (1.5x)	10.08Mbps (<1x)
Video resolution (max)	1920x1080 (1080p)	720x480/720x576 (480i/576i)
Video bit rate (max)	40.0Mbps	9.8Mbps
Video codecs	MPEG-2 MPEG-4 AVC	MPEG-2
Audio codecs	Linear PCM Dolby Digital Dolby Digital Plus Dolby TrueHD DTS Digital Surround DTS-HD	Linear PCM Dolby Digital DTS Digital Surround
Interactivity	BD-J	DVD-Video

Parameters	Blu-ray	HD-DVD
Storage capacity	25GB (single-layer)	15GB (single-layer)
Laser wavelength	405nm (blue laser)	405nm (blue laser)
Numerical aperture (NA)	0.85	0.65
Disc diameter	120mm	120mm
Disc thickness	1.2mm	1.2mm
Protection layer	0.1mm	0.6mm
Hard coating	Yes	No
Track pitch	0.32µm	0.40µm
Data transfer rate (data)	36.0Mbps (1x)	36.55Mbps (1x)
Data transfer rate (video/audio)	54.0Mbps (1.5x)	36.55Mbps (1x)
Video resolution (max)	1920x1080 (1080p)	1920x1080 (1080p)
Video bit rate (max)	40.0Mbps	28.0Mbps
Video codecs	MPEG-2 MPEG-4 AVC	MPEG-2 MPEG-4 AVC
Audio codecs	Linear PCM Dolby Digital Dolby Digital Plus Dolby TrueHD DTS Digital Surround DTS-HD	Linear PCM Dolby Digital Dolby Digital Plus Dolby TrueHD DTS Digital Surround DTS-HD
Interactivity	BD-J	iHD

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