

World's first TÜV Rheinland Certified Blu-ray Disc



- Long life
- Tested for harmful substances



▶ For details, please visit the TÜV Rheinland website.
TÜV Rheinland www.tuv.com

The TÜV Rheinland Group is an international third-party institution that provides product safety tests and certification, as well as management system certification services. Panasonic discs are the world's first Blu-ray Discs to gain certification by TÜV Rheinland.

Long Life

TÜV Rheinland performed a durability test for Panasonic Blu-ray Discs under high temperature conditions of approximately 80°C and a relative humidity of 80% for 750 hours. All the Panasonic tested samples passed unaffected.

			Test results	
			Before test	After test
Panasonic	BD-RE 25GB	(2x)	OK	OK
Panasonic	BD-RE 50GB	(2x)	OK	OK
Panasonic	BD-R 25GB	(4x)	OK	OK
Panasonic	BD-R 50GB	(4x)	OK	OK
Brand A	BD-RE 50GB	(4x)	OK	Error
Brand A	BD-R 50GB	(4x)	OK	Error
Brand B	BD-R 25GB (2x) (LTH type)		OK	Could not read

Test tool: I-O Data BD drive model BRD-SP-8, Software nero 9 "Disc speed"

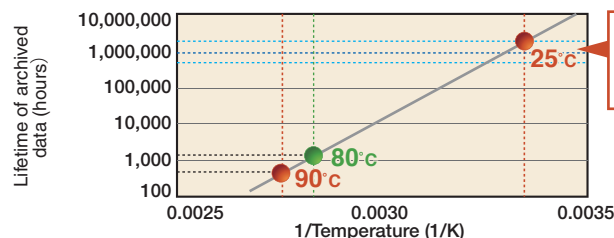
Accelerated age test by Panasonic

50 Years Archive Life

The test result shows that Panasonic Blu-ray Discs offer more than 50 years of expected archive life at a room temperature of 25°C and a relative humidity of 80%.

Estimated life span of data on Panasonic Blu-ray Disc

Test data of BD-RE 50GB (2x)



Long term storage of more than 50 years at 25°C, 80%RH

Tested for Harmful Substances

Extensive tests conducted by TÜV Rheinland showed that Panasonic's Blu-ray Discs were in compliance with the relevant directive in regard to 15 harmful substances - the so called "Substances of Very High Concern" (SVHC). The discs were also tested for six different phthalates substances and successfully passed the requirements.

Chemical substances tested

15 harmful substances (SVHC)

- Anthracene
- 4,4'- Diaminodiphenylmethane
- Dibutyl phthalate
- Cobalt dichloride
- Diarsenic pentaoxide
- Diarsenic trioxide
- Sodium dichromate
- musk xylene
- DEHP
- HBCDD
- Short Chain Chlorinated Paraffins
- TBTO
- Lead hydrogen arsenate
- Benzyl butyl phthalate
- Triethyl arsenate

6 phthalates substances

- Diethylhexyl phthalate (DEHP)
- Dibutyl phthalate (DBP)
- Benzyl butyl phthalate (BBP)
- Di-n-octyl phthalate (DNOP)
- Di isononyl phthalate (DINP)
- Di isodecyl phthalate (DIDP)

Panasonic Blu-ray Disc Line-up

REWRIPTABLE

For Data



Single sided / Dual Layer
50GB BD-RE
LM-BE50DE **1-2x speed**



Single sided / Single Layer
25GB BD-RE
LM-BE25DE **1-2x speed**

For Video



Single sided / Dual Layer
50GB BD-RE
LM-BEU50AE **1-2x speed**



Single sided / Single Layer
25GB BD-RE
LM-BEU25AE (2 pack)
LM-BEU25AE2 (2 pack)
LM-BEU25AE3 (3 pack)

RECORDABLE

For Data



Single sided / Dual Layer
50GB BD-R
LM-BR50MDE **1-6x speed**



Single sided / Single Layer
25GB BD-R
LM-BR25MDE **1-6x speed**



Single sided / Dual Layer
50GB BD-R
LM-BR50LDE **1-4x speed**



Single sided / Single Layer
25GB BD-R
LM-BR25LDE (3 pack)
LM-BR25LDE3 (3 pack)
LM-BR25LDE5 (5 pack)



Single sided / Dual Layer
50GB BD-R
LM-BR50DE (3 pack)
LM-BR50DE3 (3 pack)
LM-BR50DE5 (5 pack)

For Video



Single sided / Dual Layer
50GB BD-R
LM-BRU50MAE **1-6x speed**



Single sided / Single Layer
25GB BD-R
LM-BRU25MAE **1-6x speed**



Single sided / Dual Layer
50GB BD-R
LM-BRU50LAE **1-4x speed**



Single sided / Single Layer
25GB BD-R
LM-BRU25LAE (3 pack)
LM-BRU25LAE3 (3 pack)



Single sided / Dual Layer
50GB BD-R
LM-BRU50AE (2 pack)
LM-BRU50AE2 (2 pack)

For Data Spindle

RECORDABLE



Single sided / Single Layer
25GB BD-R <25Pack>
LM-BRS2LWE25 **1-4x speed**

Single sided / Single Layer
25GB BD-R <10Pack>
LM-BRS2LWE10 **1-4x speed**

REWRIPTABLE



Single sided / Single Layer
25GB BD-RE <25Pack>
LM-BES25WE25 **1-2x speed**

Single sided / Single Layer
25GB BD-RE <10Pack>
LM-BES25WE10 **1-2x speed**

Format Name	BD-RE				BD-R									
	Blu-ray Rewritable format Ver.2.1				Blu-ray Recordable format Ver.1.3				Blu-ray Recordable format Ver.1.2				Blu-ray Recordable format Ver.1.1	
Model Number	LM-BE50DE	LM-BE25DE	LM-BEU50AE	LM-BEU25AE	LM-BR50MDE	LM-BR25MDE	LM-BRU50MAE	LM-BRU25MAE	LM-BR50LDE	LM-BR25LDE	LM-BRU50LAE	LM-BRU25LAE	LM-BR50DE	LM-BRU50AE
Data Capacity	50GB*	25GB*	50GB*	25GB*	50GB*	25GB*	50GB*	25GB*	50GB*	25GB*	50GB*	25GB*	50GB*	50GB*
Layer Constitution	Single Sided/ Dual Layer	Single Sided/ Single Layer	Single Sided/ Dual Layer	Single Sided/ Single Layer	Single Sided/ Dual Layer	Single Sided/ Single Layer	Single Sided/ Dual Layer	Single Sided/ Single Layer	Single Sided/ Dual Layer	Single Sided/ Single Layer	Single Sided/ Dual Layer	Single Sided/ Single Layer	Single Sided/ Dual Layer	Single Sided/ Dual Layer
Recording Format	Phase Change Rewritable				Phase Change Recordable									
Laser Wavelength	405nm (Blue-violet Laser)													
Objective Lens Numerical Aperture (NA)	0.85													
Disc Diameter/Thickness	120mm x 1.2mm													
Track Pitch	0.32 μm													
Minimum Mark Length	0.149 μm													
Max.Data Transfer Speed	72Mbps (2X)				216Mbps (6X)				144Mbps (4X)				72Mbps (2X)	
Hard Coating	Yes													

*The capacity of Blu-ray discs is expressed in units of 1 GB = 1 billion bytes, but the capacity is slightly below that after formatting, so that the actual amount area that can be used will be less.