

Verbatim

DVD Double Layer Media

March 2010

- **DVDR DL media consist of 2 data layers which are read out from one side.**
- **2 possible manufacturing processes or “disc designs” exist:**
 - **2P process applied by MKM/Verbatim**
 - **Inverse stack applied by others**

Built of a Double Layer DVD

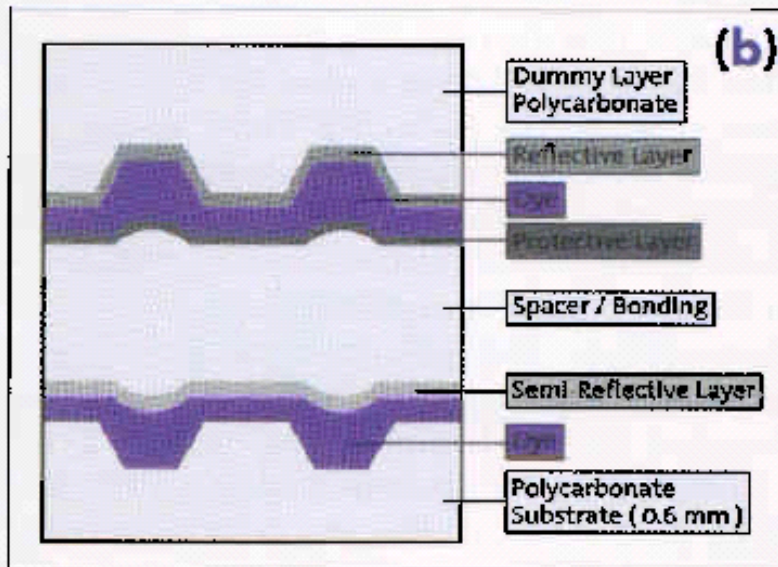
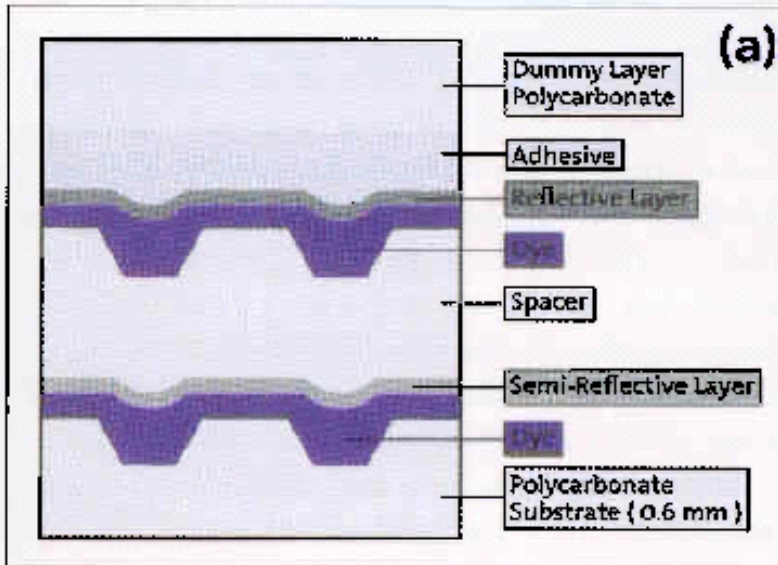


Fig 2: Schematic presentation of 'simple' (a) and 'reversed' (b) recording stack design for DVD+R DL discs

Verbatim 2P Process:
Both layers are
manufactured on the
same side of the disc

Inverse stack Process:
One recording layer is
manufactured on each
side of the disc.

- **Both recording layers are on ONE side of the disc**
- **Separated by 55nm spacer layer**
- **Very accurate process**
- **Very good optical characteristics**
- **Good Write / Read for second (inner) layer**
- **Typically good recording results**

- **Cost expensive process**

Inverse stack Process

- **One recording layer on either side of the disc**
- **Second layer is a mirror of first layer
Separated by bonding layer**
- **Easy process**
- **Poor optical characteristics
Mirrored second layer
Bonding glue often creates laser problems
because it is not accurate enough**
- **Poor Write / Read for second (upper) layer
Typically creating issues on second layer**
- **Inexpensive process**

Comparison (1)

- **MKM / Verbatim compatibility test**
- **Recording of “2P” and “Inverse Stack DVDR DL media**
 - “2P” = MKM mediacode**
 - “Inverse stack” = Ricoh Mediacode (most used)**
- **Various recorders used**

Comparison (2)

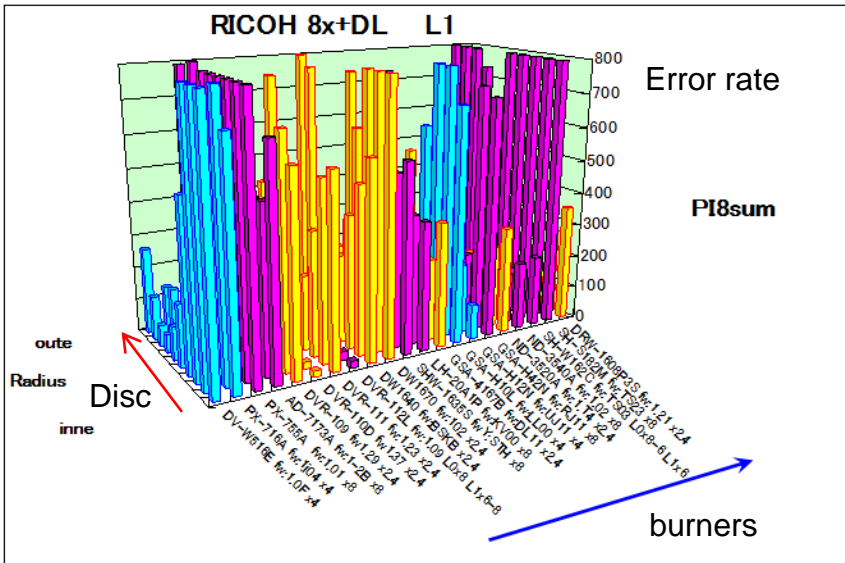
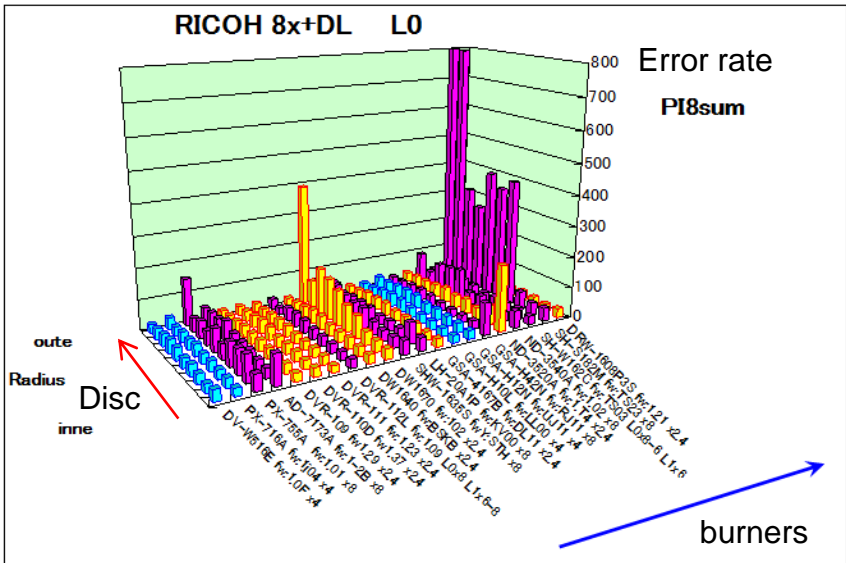
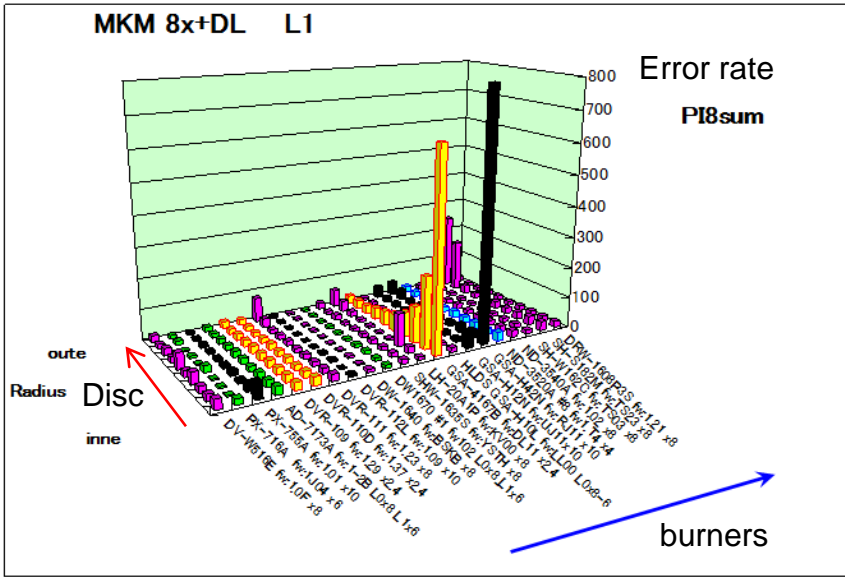
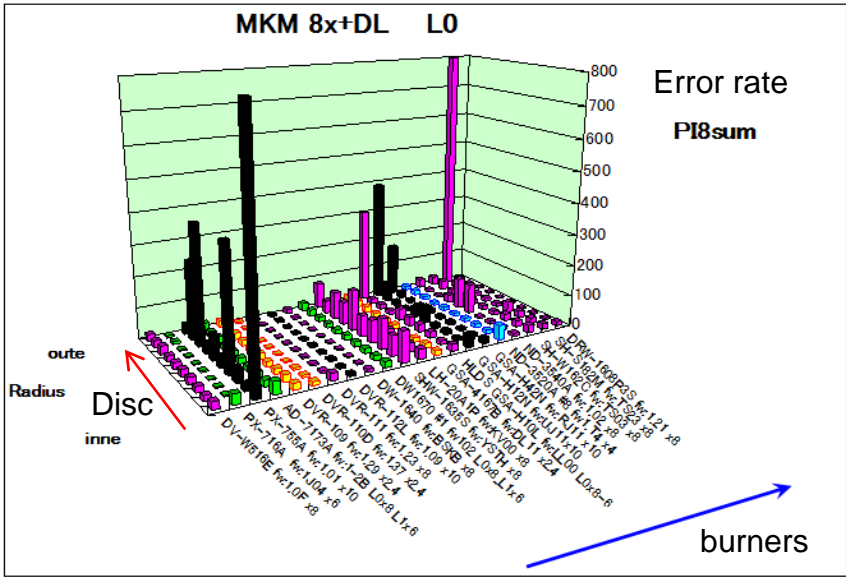
- **Error rates measured across discs on both layers**
- **Results see next chart**

**Left hand “2P” MKM/Verbatim media
= good on both layers throughout the disc**

**Right hand “Inverse stack” Ricoh coded media
= good on layer 0 (lower layer)**

= poor on layer 1 (upper layer) = Problems expected!

Evaluation of Compatibility (“2P” MKM vs Verbatim. “Inverse Stack” Ricoh)



- **Only Verbatim DVDR DL media offer**
 - **excellent recording quality**
 - **excellent burner compatibility**

- **Due to the higher manufacturing cost a higher price is necessary and is justified**

- **Verbatim media cannot be compared to other DVDR DL media**

Full range of DVDR DL

P/N	Media	Packaging Configuration
Dual Layer DVD-R DL		
43543	4X matt silver	5pk branded JC
43596	8X matt silver	5pk branded JC
Double Layer DVD+R DL		
43541	8X Matt silver	5pk branded JC
43665	8X Wide Printable No ID	10pk branded JC
43666	8X Matt silver	10pk spindle
43667	8X Wide Printable No ID	25pk branded spindle
43703	8X Wide Printable No ID	50pk branded spindle
43682	8X Colour	5pk SC
43684	8X Lightscribe	5pk branded JC
43700	8X Wide Thermal No ID	50pk spindle



**Thanks
for your
attention**

Any questions?