

# Product Specifications

Product Name : DVD-R for General Ver.2.0

1.0

Revision mark



### 4.3 Write strategy

Refer to **12. Unrecorded Physical Format** .

### 4.4 Measuring conditions (PUH) : Recorded disc

Wavelength( $\lambda$ ) :  $650 \pm 5$  nm

Polarization : circularly polarized light

Numerical aperture (NA) :  $0.60 \pm 0.01$

Light intensity at the rim of the pupil of the objective lens  
: 60 to 70 % of the maximum intensity level in the radial  
direction and over 90% of the maximum intensity level  
in the tangential direction.

### 4.5 Measuring scanning velocity

:  $3.49 \pm 0.03$  m/sec.

### 4.6 Clamping

Clamping force :  $2.0 \pm 0.5$  N

## 5. Mechanical Parameters

| Items  | Requirements   | Measuring methods or Conditions    |
|--|--|------------------------------------|
| <ul style="list-style-type: none"> <li>• Outer diameter</li> <li>• Maximum rotation run-out of outer edge</li> <li>• Center hole diameter<br/>(One side of the disc)</li> <li>• Center hole diameter<br/>(Both sides put together)</li> <li>• Thickness of a disc</li> <li>• Inner diameter of the Clamping area</li> <li>• Outer diameter of the Clamping area</li> <li>• Thickness of a disc in the Clamping area</li> <li>• Mass of a disc</li> </ul> | <p><math>120.00 \pm 0.30</math> mm</p> <p>0.30 mm max.<br/>(peak to peak)</p> <p><math>15.00 +0.15/ -0.00</math> mm</p> <p>15.00 mm min.</p> <p><math>1.20 +0.30/ -0.06</math> mm</p> <p>22.0 mm max.</p> <p>33.0 mm max.</p> <p><math>1.20 +0.20/ -0.10</math> mm</p> <p>13 g to 20 g</p> | Includes adhesive layer and label. |

## 6. Optical Parameters

| Items   | Requirements  | Measuring methods or conditions          |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Thickness of a transparent Substrate</li> <li>• Refractive index (RI)</li> <li>• Birefringence of transparent Substrate</li> <li>• Limits for the angular deviation of the reflected beam (<math>\alpha</math>)               <ul style="list-style-type: none"> <li>a. Radial deviation</li> <li>b. Tangential deviation</li> </ul> </li> <li>• Reflectivity</li> <li>• Polarity of modulation</li> <li>• Recording sensitivity fluctuation over the surface</li> </ul> | <p><math>0.6 +0.020/ -0.025</math> mm</p> <p><math>1.55 \pm 0.10</math></p> <p>100 nm max.</p> <p><math>\pm 0.80^\circ</math></p> <p><math>\pm 0.30^\circ</math></p> <p>45 to 85 %</p> <p>High to Low</p> <p><math>P_o \pm 0.05P_o</math></p> | <p>Double Pass</p> <p>(PUH with PBS)</p> |

## 7. Recorded Parameters

| Items  | Requirements   | Measuring methods or conditions   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• Sense of disc rotation as seen from read-out side</li> <li>• Limit for the velocity variation for the laser beam recorder</li> <li>• Channel bit length averaged over whole disc</li> <li>• Track pitch</li> <br/> <li>• Starting diameter of the Lead-in area</li> <li>• Starting diameter of the Data area</li> <li>• Maximum outer diameter of the data area</li> <li>• Outer diameter of the information area</li> <br/> <li>• Inner diameter of the Lead-out area</li> <li>• Outer diameter of the Lead-out area</li> <li>• Track pitch               <ul style="list-style-type: none"> <li>a. Average track pitch</li> <li>b. Maximum deviation of track pitch</li> </ul> </li> <li>• Limits of the deviation from the recorded layer perpendicular to the Reference plane               <ul style="list-style-type: none"> <li>a. Deviation from nominal value below the rotational frequency determined by the scanning velocity.</li> </ul> </li> <li>• Limits of the radial deviation from the track               <ul style="list-style-type: none"> <li>a. Radial run-out of the tracks determined by the scanning velocity</li> </ul> </li> </ul> | <p style="text-align: center;">Counterclockwise</p> <p style="text-align: center;">0.5% max. (peak to peak)</p> <p style="text-align: center;"><math>133.3 \pm 1.4 \text{ nm}</math></p> <p style="text-align: center;">Continuous spiral from inside to outside.</p> <p style="text-align: center;">45.2 mm max.</p> <p style="text-align: center;"><math>48.0 +0.0/ -0.4 \text{ mm}</math></p> <p style="text-align: center;">116.0 mm</p> <p style="text-align: center;">70.0 mm min.</p> <p style="text-align: center;">Outer diameter of Data area<br/>+2.0 mm min.<br/>117 mm min.</p> <p style="text-align: center;">Outer diameter of the Data area</p> <p style="text-align: center;">Outer diameter of the Information area</p> <p style="text-align: center;"><math>0.74 \pm 0.01 \text{ }\mu\text{m}</math></p> <p style="text-align: center;"><math>0.74 \pm 0.03 \text{ }\mu\text{m}</math></p> <p style="text-align: center;"><math>\pm 0.3 \text{ mm}</math></p> <p style="text-align: center;">70 <math>\mu\text{m}</math> (peak to peak)</p> | <p style="text-align: center;">Diameter of Data area &lt;68.0mm.</p> <p style="text-align: center;">68.0mm&lt; Diameter of Data area&lt; 115.0 mm</p> <p style="text-align: center;">115.0mm&lt;Diameter of Data area&lt; 116.0mm</p> |

Additional specifications exist, but are proprietary to Mitsui Advanced Media, Inc.