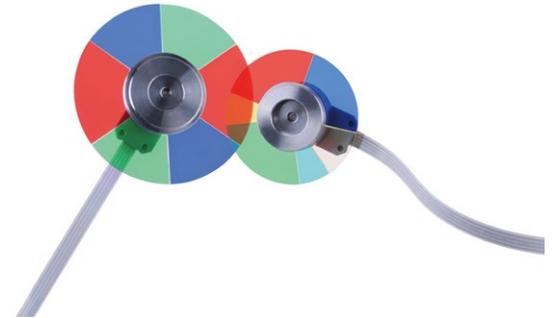




ColorWheel™

ColorWheel™ for Projection Display

When you require enhanced resolution and high brightness, with very low noise level, our flexible ColorWheel™ will meet your digital projection, video production, and photo imaging needs. As the world's largest manufacturer of color wheels, we have an unmatched heritage in offering a variety of total light management solutions including dichroic color separation filters, UV/IR filters, solid and hollow light integrators, high reflectivity folding mirrors, AR-coating, light engine procurement assembly and testing.



Benefits

Our ColorWheel™ design offers a high degree of flexibility and can be customized for:

- Diameter
- Number of filter segments
- Motor speed
- Timing index mark
- Integrated timing index sensor available
- Expert spectral tuning
- High transmission

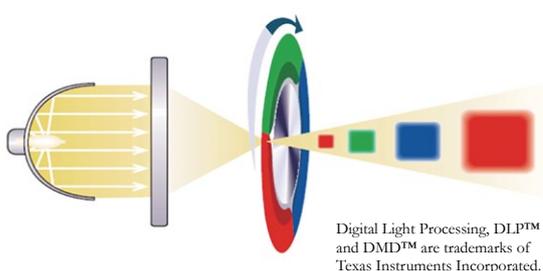
Reliability and performance is assured with proven:

- Motor technology
- Individual precision balancing
- Stable colors from sputter deposition coating
- Patented construction (U.S. Patent #5,868,482)
- Low noise characteristics

Applications

The small size ColorWheel™ will meet the needs of the new family of ultra-ultra portable DLP™ brand projects. Materion Balzers Optics also offers various custom-configured ColorWheel™ designs for different applications. Optimized for enhanced resolution and high brightness the ColorWheel™ also designed for very low noise.

Schematic of ColorWheel™



Technical Data

Diameter

from 35mm to 250mm (other sizes available)

Operating speed

2 × 7200rpm, 2.5 × 9000rpm, 4 × 14400rpm

Special temperature stability

<0.3%, typical from 20° C to 100°C

Filter segments

Special designs available on request

Spectral performance

According to customer specification
(Cut-on/cut-off wavelength +/-1% typical)

Balancing

To better than G6.3 - quality grade per ISO 1940 - 1986

Timing index mark

Integrated optical sensor available as option

Mass

Approx.45 grams (for available 50mm)

80 grams (for diameter 80mm)

100 grams (for diameter 120mm)

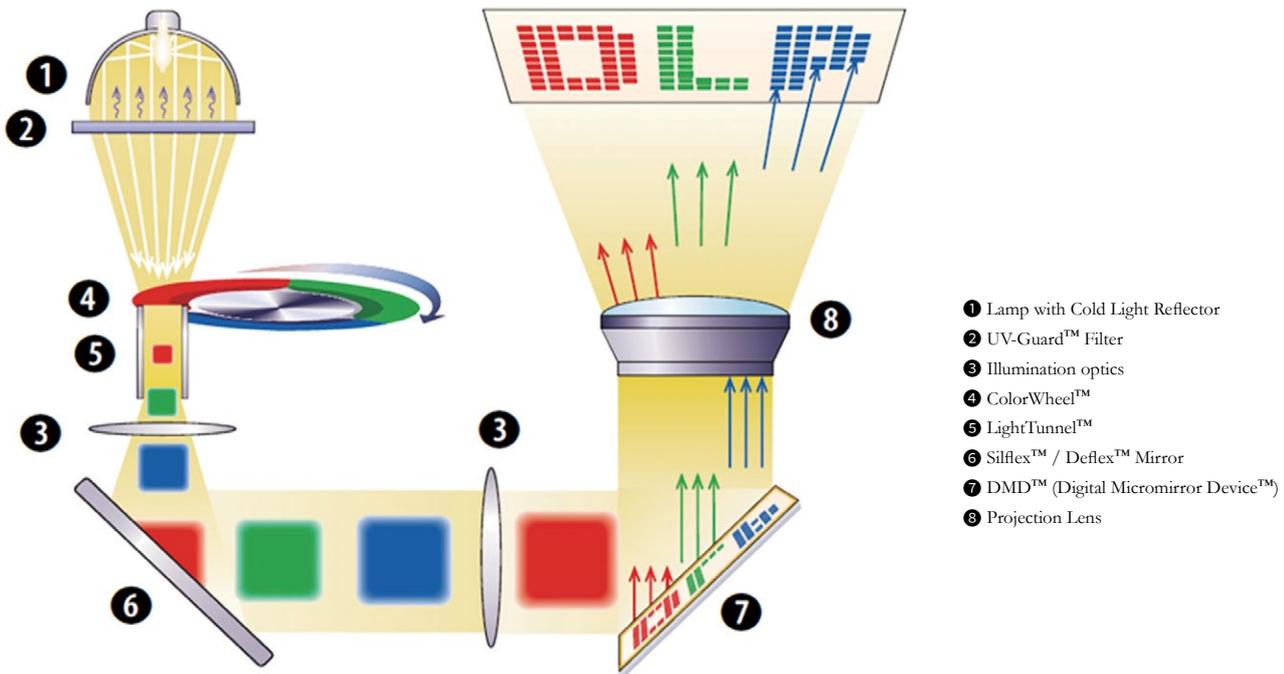
operating temperature 0°C to 85°C

storage temperature -20°C to 85°C

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Schematic of DLP™ front projector



- ① Lamp with Cold Light Reflector
- ② UV-Guard™ Filter
- ③ Illumination optics
- ④ ColorWheel™
- ⑤ LightTunnel™
- ⑥ Silflex™ / Deflex™ Mirror
- ⑦ DMD™ (Digital Micromirror Device™)
- ⑧ Projection Lens

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Subject to technical change without notices