

Technical Data Sheet: LB1 / VG9 Green Optical Filter

Product Overview LB1 (also known as VG9) is an ion-colored green optical glass filter. It is characterized by high transmission in the green spectrum and effective absorption of red and violet wavelengths. It is a critical component in laser technology, fluorescence microscopy, and high-end industrial imaging.

1. Optical Specifications

- **Peak Wavelength:** 535 nm (+/- 5 nm)
- **Maximum Transmittance (T_{max}):** Over 85% (at 2mm thickness)
- **Blocking Range:** Effective absorption from 300 nm to 400 nm and 650 nm to 800 nm.
- **Refractive Index (n_d):** 1.523
- **International Equivalent Grades:** Schott VG9, HOYA G533, Chance Pilkington GR3.

2. Physical & Thermal Properties

- **Density:** 2.54 g/cm³
- **Transformation Temperature (T_g):** 455 degrees Celsius
- **Thermal Expansion Coefficient:** 9.2 x 10⁻⁶ / K (20 to 300 degrees Celsius)
- **Chemical Stability:** Grade 1 (Excellent resistance to acids and alkalis).

3. Custom Fabrication Capabilities

- **Available Shapes:** Circular, Square, Rectangular, or Custom CNC Shapes.
- **Size Range:** 3 mm to 300 mm.
- **Thickness:** 0.5 mm to 20.0 mm.
- **Thickness Tolerance:** +/- 0.05 mm (Standard), +/- 0.01 mm (High Precision).
- **Surface Quality:** 60/40, 40/20, or 20/10 Scratch/Dig.
- **Parallelism:** Less than 1 arc minute.

4. Typical Applications

- **532nm Laser Systems:** Beam cleanup and stray light suppression.
- **Fluorescence Microscopy:** Enhancing signal-to-noise ratio in bio-imaging.
- **Industrial Inspection:** Color correction in automated optical inspection (AOI).
- **Specialty Photography:** Creating analog "sci-fi" green-shift visual effects.

Contact Information

- **Manufacturer:** Jinan Youjia Machinery Co., Ltd (YOUJIA OPTICAL)

YOUJIA OPTICAL

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