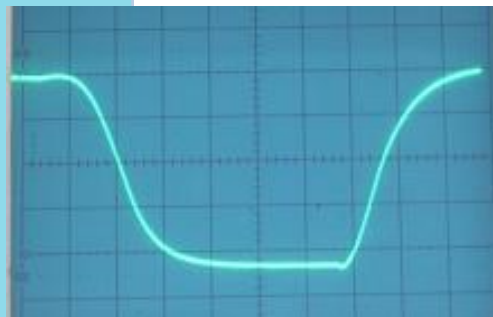


LEOI-35 Experimental System for Liquid-Crystal Electro-Optic Effect

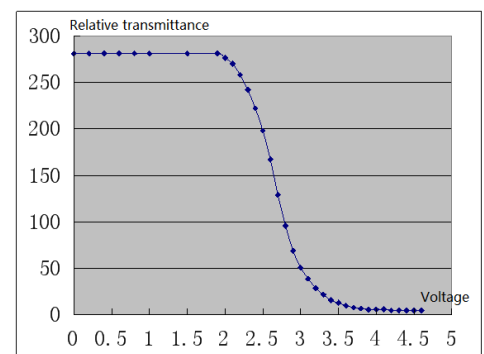


Liquid crystal (LC) is the fourth state of matter that has been well described in textbooks. It has found widespread applications in physics, chemistry, electronics, and life science. Among them, LC-based devices such as LC display, LC spatial light modulator, LC optical modulator, and LC optical switch are fabricated utilizing the electro-optic effect of LC materials. Therefore, it is important for students to understand the electro-optic effect of LC materials.

- Compact structure
- Ample experimental contents
- Affordable



Observed response curve on oscilloscope



Transmittance vs. applied voltage

Experimental Contents

1. Understand the basic principle of LC display (TN-LCD).
2. Measure the response curve of LC sample.
3. Calculate parameters such as threshold voltage (V_t) and saturation voltage (V_s).
4. Measure the transmittance of LC switch.
5. Observe transmittance change versus viewing angle.

Specifications

Semiconductor Laser	0~3 mW, adjustable
Polarizer/Analyzer	360° rotation, division 1°
LC Plate	TN-type, area 35mm × 80mm, 360° horizontal rotation, division 20°
LC Driving Voltage	0 ~ 11 V, 60-120Hz
Voltmeter	3-1/2 digit, 10 mV
Photodetector	high speed
Current meter	3-1/2 digit, 10 μ A

Part List

Electric control unit	1
Diode laser	1
Photo receiver	1
LC plate	1
Polarizer	2
Optical bench	1
BNC cable	2

Note: above product information is subject to change without notice.