



Optical Finesse LCC1-100

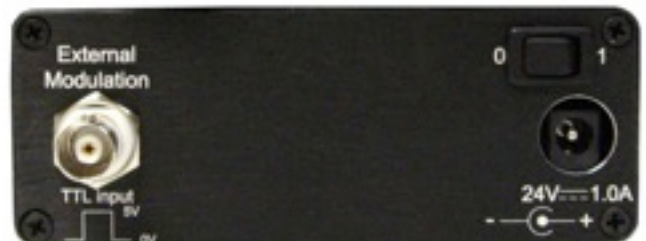
High-Voltage Liquid-Crystal Driver



The **LCC1-100** is a high-voltage, single-channel driver specifically designed to drive dispersed-polymer liquid-crystal (LC) shutter devices such as the Boulder Nonlinear Systems LF series non-polarizing optical shutter. LC voltages up to 100 V_{RMS} can be generated. The rugged output stage of the **LCC1-100** can drive shutters up to 150 x 150 mm² in size. The output can be toggled between a preset high-voltage amplitude (shutter open) and zero volts (shutter closed) manually, or by external or internal trigger. The **LCC1-100** is factory-adjusted to optimize open-state transmission for each shutter.

Features

- 2 kHz balanced AC waveform generation up to 100 VRMS
- Ability to drive large-area cells up to 150 x 150 mm²
- Switch-selectable External or Internal Modulation; Internal Modulation rates from 0.15 to 15 Hz
- Front-panel pushbutton for convenient manual operation
- RoHS compliant
- Compact size; 24VDC international power supply included



LC OUTPUT & INTERFACE

Number of LC channels	• One
Output waveform	• Bipolar DC-balanced square wave
Carrier frequency	• 2.00 ± 0.02 kHz
Amplitude range	• 50 to 96 V _{RMS} guaranteed
Amplitude control	• By internal factory-set pot. Amplitude pre-optimized for open-state shutter transmittance
Residual DC	< 10mV at any amplitude level
Operating modes	• Manual pushbutton mode • Internal Modulation mode • External Modulation mode
Internal Modulation rate	• 0.15 to 15 Hz, 50% duty cycle shutter open/closed. Internal Modulation rate TTL signal can be optionally routed to back-panel BNC bulkhead
External Modulation	• TTL logic-level controlled (arbitrary duty cycle), asynchronously to 30 Hz. Logic HI = shutter closed, logic LO = shutter open
Drive capability	• Output can drive LF shutters up to 150 x 150 mm ²

PHYSICAL

Dimensions	• 4.1 in W x 4.2 in L x 1.7 in H (10.4 cm W x 10.7 cm L x 4.3 cm H)
Weight	• 1.6 lbs (0.7 kg), driver + power supply
Chassis material	• Black anodized aluminum, rubber bottom feet • Machined aluminum front & back panels, black-anodized and laser-etched
Front panel	• 50-ohm SMA female bulkhead for LC voltage output • Power and Status LEDs; Status LED lit when high voltage present at LC output • Two-position Internal/External Modulation toggle switch • Three-quarter turn Internal Modulation frequency knob • Pushbutton LC output switch (controls shutter in External Modulation mode with no external source present)
Back panel	• 50-ohm BNC female bulkhead for External Modulation source • 2.1 mm power jack receptacle for 24VDC power supply • 24VDC power ON/OFF switch
RoHS compliance	• 100% compliant (no exemptions used)
CE compliance	• Certification to FCC Class A emissions level upon special arrangement.
Operating temperature	• 5 to 45° C
Power Supply	• Separate, supplied with driver • International +24V, 25W, 100-240VAC 50-60Hz input, UL/CE listed • 2.1 x 5.5 mm center-positive plug
Warranty	• One year

In keeping with our commitment to continuous product improvement, these specifications are subject to change without notice.

