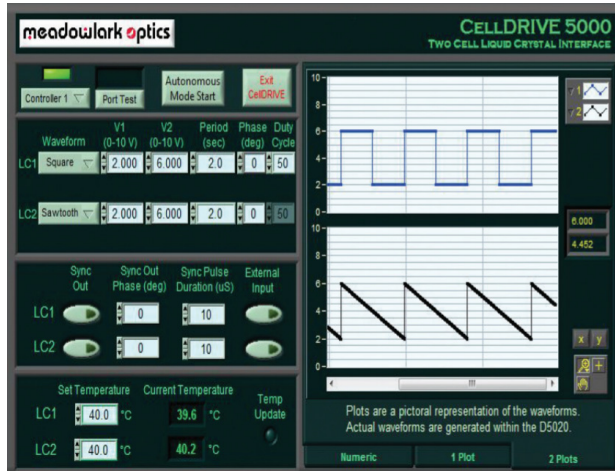


## Liquid Crystal Digital Interface – D5020

The D5020 Liquid Crystal Digital Interface is the next generation in the evolution of Meadowlark Optics Liquid Crystal Controllers. The Digital Controller is designed for user functionality and productivity. The D5020 provides a “set and go” function that allows the controller to run autonomously without a computer.



CellDRIVE 5000 User Interface

Controlling multiple Liquid Crystal cells has never been easier. CellDRIVE 5000 software provides a separate sync output for each channel as well as temperature sensing and control on both channels. The 2 kHz square wave output can be amplitude modulated with sinusoidal, square, triangle, sawtooth and transient nematic effect waveforms.

### D5020 Package:

- D5020 Controller Unit
- Front Panel SMB I/O Connectors
- User Manual
- USB Cable
- Power Supply and Power Cable
- Temperature Sensing and Control capability
- CellDRIVE 5000 Software
- National Instruments LabVIEW™ virtual Instrument Drivers



### Key Features

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- Two channels of voltage and temperature sensing & control (TSC)
- USB powered (unless using TSC)
- Waveforms generated internally
- Independent SMB I/O Connectors for each channel
- Multiple external control options
- Includes USB and LabVIEW™ code example

### Liquid Crystal Suite

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#### Variable Retarders

- Liquid Crystal Variable Retarder
- UV Variable Retarder
- MWIR Variable Retarder
- OEM LCVR

#### Rotators

- Achromatic High Speed Rotator
- Binary Rotator
- Polarization Rotator

#### Shutters / Attenuators

- Achromatic High Speed Shutter
- High Contrast Shutter
- Variable Attenuator

#### Controllers

- Analog Controller
- FLC Controller
- LC Digital Interface Controller
- Temperature Controller
- Two Channel High Voltage Controller



## SPECIFICATIONS

|   |  |
|---|--|
| <b>Fundamental Drive Waveform</b>   | 2 kHz AC square wave   |
| <b>Modulation Amplitude</b>   | 0 – 10 V <sub>rms</sub> (20 V <sub>rms</sub> option available)   |
| <b>Modulation Resolution</b>  | 1 mV (0.155 mV using LabVIEW™ subroutines)   |
| <b>DC Offset</b>  | < 5 mV   |
| <b>Communications Interface</b>   | USB  |
| <b>LC Cell to Controller Connections</b>  | SMA – SMB, 2 m cable length  |
| <b>CE Compliant</b>   |  |
| <b>Dimensions (L x W x H)</b>   | 5.50 x 5.25 x 1.63 in.   |
| <b>Weight</b>   | 1.8 lbs. (with cables)   |
| <b>Modulation Waveforms</b>   | External modulation<br>Input (0 - 5 v)<br>Sinusoidal<br>Triangle<br>Square<br>Sawtooth<br>Transient nematic effect |
| <b>Temperature Control<br/>(2 Channels)</b>   | Active heating/passive cooling<br>within ± 1°C of nominal set point  |
| <b>Sync Output</b>  | TTL, user specified timing<br>and phase  |
| <b>System Requirements:</b><br>Windows™ Vista, 7 or 8<br>Requires LabVIEW™ version 2010 or higher for use with LabVIEW™<br>instrument Library |  |

## ORDERING INFORMATION

| <i>Item</i>                    | <i>Part Number</i> |
|--------------------------------|--------------------|
| LC Digital Interface           | D5020              |
| LC Digital Interface (20V rms) | D5020-20V          |
| SMA to SMB Cables              | SMA-SMB            |
| Sync Cables (SMB to BNC)       | SMB-BNC            |

*Please contact a sales engineer for more information.*