



Features

- External Power Supply: 12V, 5A
- PCB Dimensions: 70.6(2.78) x 21.6(.85) mm(in)

Electrical Cell Lysis

- Two Lysis Cell Controller
- Voltage Level: 32V
- Frequency Range: 1kHz-100kHz
- Frequency Resolution: 0.1%
- Frequency Accuracy: 1.1%

PCR Temperature Regulation

- Six Temperature Regulation Channels
- Pulse Frequency: 10kHz
- Duty Cycle: 0-100%
- Duty Cycle Resolution: 3.125%
- 6W per channel for a total of 36W

Applications

- Electrochemical Sensing
- DNA/Protein Sensing
- Assay Automation
- Microfluidics
- Environmental Monitoring

Description

The ePCR-LYSIS-I enables biological sample preparation and allows for regulation of biological sample temperature using a control loop and heating elements. The PCR Temperature Regulation controls the high-voltage, high-current heaters while Electrical Lysis is the process of breaking the cell membrane to expose the internal contents under an applied high electric field. There are 2 Electrical Lysis channels and 6 heaters. The heaters require an external power supply and each heater can maintain 6W of heat for a total of 36W.

Block Diagram

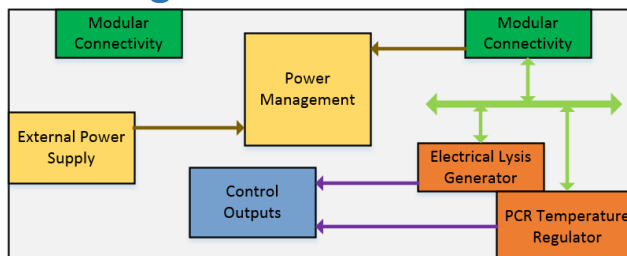


Fig. 1, Top level system diagram

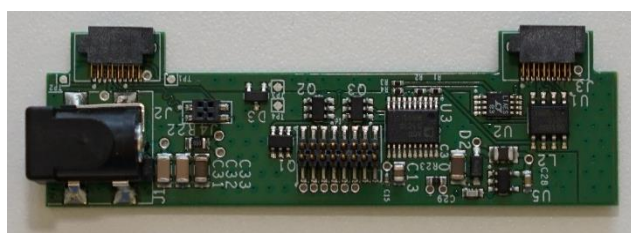


Fig. 2, ePCR-LYSIS-I PCB board (top view)