



# Gemini SC Twin Wave Electroporator

The Gemini SC Twin Wave Electroporators are flexible systems allowing both square wave and exponential decay wave electroporation in a single unit. Prokaryotic cells typically respond well to exponential decay wave pulses and eukaryotic cells are transfected most efficiently with square wave pulses. Combining these two waveforms gives researchers total flexibility to achieve the highest efficiency for their applications.

## Gemini SC

The Gemini SC system is designed specifically for cuvette-based *in vitro* transfections of eukaryotic or prokaryotic cells in suspension. With a wide range of pulsing parameters, advanced safety features as well as dozens of preset protocols, the Gemini SC is ideal for any lab requiring efficient cell transfection or transformation without the use of costly reagents.

## Key Features

- Square wave and exponential decay wave electroporation in a single unit
- Large, easy-to-use touch screen interface
- Universal electroporation – transfects cells *in vitro*, *in vivo*, *in ovo* and adherent forms
- Preset protocols for the most common eukaryotic and prokaryotic cell types and the ability to add and modify protocols
- Safety—displays resistance measurements for each pulse with three layers of arc protection

## Applications

- CRISPR transfections
- Suspension cells and adherent cells
- Transfection of eukaryotic cells and transformation of prokaryotic cells
- *In vivo*, *In ovo*, and *In utero* gene and drug delivery
- Tissue explants

## Specifications

Gemini SC	
<b>Voltage Range</b>	LV Mode: 10 to 500 V in 5 V steps HV Mode: 510 to 3000 in 10 V steps
<b>Capacitance (Exponential Decay Wave)</b>	LV Mode: 25 to 3275 $\mu$ F in 25 $\mu$ F steps HV Mode: 10, 25, 50 $\mu$ F
<b>Resistance (Exponential Decay Wave)</b>	All Modes: 50 to 1000 $\Omega$ in 50 $\Omega$ steps
<b>Maximum Time Constant (Exponential Decay Wave)</b>	3 s at 500 V peak 133 ms at 3,000 V peak
<b>Pulse Length Range w(Square Wave)</b>	LV Mode: 0.05 to 10 ms in 0.05 ms steps LV Mode 10 to 100 ms in 1 ms steps HV Mode: 50 $\mu$ s to 5 ms in 50 $\mu$ s steps
<b>Operational Status</b>	Internal self-test upon start-up
<b>Interface</b>	7 in color touchscreen
<b>Input</b>	100 to 240 VAC
<b>Charge Time</b>	LV mode <7 s, HV mode <4 s
<b>Programmability</b>	Store over 1000 protocols
<b>Safety</b>	Pre-pulse sample resistance check, pulse over current protection , instrument arc control

## Ordering Info

Item No.	Description	Included Items
45-2042	Gemini SC Electroporation System	Gemini SC Generator, Safety Dome, Cuvettes 1 mm, 2 mm, 4 mm, pkg. 30 (10 each), and Cuvette Rack 660
45-2043	Gemini SC Electroporation Generator Only	Gemini SC Electroporation Generator Only