

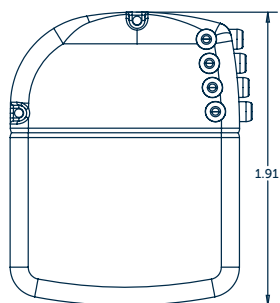
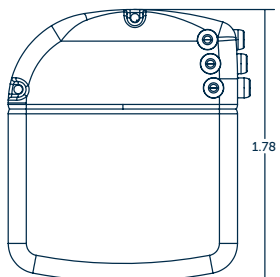
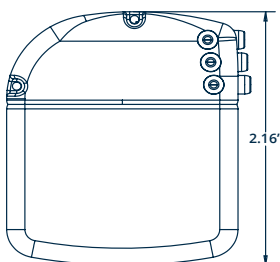
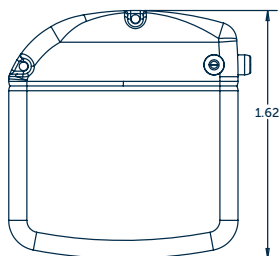
# ACCEL

## Neurostimulation System



The SIMPLIFI<sup>®</sup> Neuromodulation Solutions Platform offers uncompromising consulting, manufacturing, customization and engineering simplicity for advanced research and new product development. Lower the risk. Speed the success of your novel therapy or next generation device.

The platform consists of ACCEL+ and ACCEL, two neuromodulation systems that help turn concepts into clinical and commercial success. If full customization and high channel count is what you require, the ACCEL Neurostimulator System is the solution for you.



## COMPREHENSIVE & CUSTOMIZABLE

The ACCEL System can be used to advance research or to support your commercialization requirements.

The ACCEL System is adaptable for a variety of therapy applications.

- Choose from a number of customizable and off-the-shelf peripherals, components and leads.
- Further customization is available with one of Cirtec's off-the-shelf ASICs.
- Configurable up to 32 channels with independent current sources.
- Manufactured and configured to your specifications.

## WORKING TOGETHER

Partnering with us brings you closer to turning your innovative ideas into breakthrough therapies.

- Whether your goal is to bring a novel therapy to market or rapidly move to a next generation design suitable for high volume manufacturing, we can help.
- With more than three decades of experience, we understand the technical, practical and regulatory issues needed to bring new and next generation products to market.
- You can work confidently knowing our platform meets the highest quality standards.

## IMPLANTABLE PULSE GENERATOR

- Configurable from 2 to 32 channels
- 32 independent current sources (12.5 mA/electrode)
- Supports tonic, burst and high frequency pulse sequences
- Volume 15 cc to 17.5 cc
- Rechargeable battery with charge
- Communication:
  - ▶ Wake-up: 2.45 GHz (1 meter)
  - ▶ MICS: 403 MHz (5 meters)
- Can be packaged in one of two validated thermoform tray configurations
- All tissue contacting materials biocompatible



## TRIAL PULSE GENERATOR

- TPG functionality identical to IPG
- 4 lead ports with 8 contacts to support 32 electrodes
- 32 independent current sources (12.5 mA/electrode)
- Supports tonic, burst and high frequency pulse sequences
- Communication:
  - ▶ Wake-up: 2.45 GHz (1 meter)
  - ▶ MICS: 403 MHz (5 meters)
- Battery capacity: one-week, rechargeable battery with USB AC adapter
- Reusable main body housed in a detachable and disposable header and base
- TPG housing made of polycarbonate material
- Header and base provided in sterile packaging with three-year shelf life



## PATIENT REMOTE CONTROL

- Simple, hand-held rechargeable device to operate IPG/TPG
- Can be used for Patient/Clinician Programmer applications to communicate with IPG/TPG
- Basic functions:
  - ▶ Check battery and stimulation status
  - ▶ Select a pre-defined stimulation program
  - ▶ Turn stimulation ON/OFF
  - ▶ Change stimulation amplitude



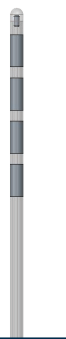

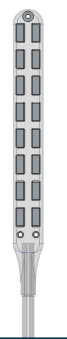
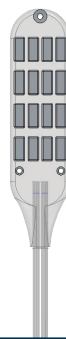
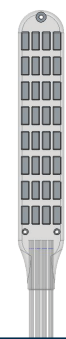
## CHARGER

- Placed over IPG and secured with a belt
- Provides audible feedback to guide patient for proper alignment
- Designed for repeated use
- Can be recharged from 0V to full charge in 3 hours



## LEADS

- Percutaneous (1x4 and 1x8) and Paddle (2x8, 4x4 and 4x8) leads available in multiple lengths with preloaded stylets (choose from 0°, 25° and 35°)
- 1x8 lead extensions and 1x4 splitters are also available for added convenience
- Standard lead body can be quickly customized for most percutaneous, paddle or cuff lead configurations
- Leads are all constructed with biocompatible means
- Validated standard packaging

<b>ACCEL LEAD PORTFOLIO</b>					
					
Lead Type	1 x 4 Percutaneous	1 x 8 Percutaneous	2 x 8 Surgical	4 x 4 Surgical	4 x 8 Surgical
Electrode Height (mm)	3 and 6	3	4	4	4
Vertical Electrode Spacing (mm)	1, 4 and 12	1, 4 and 6	6	6	6
Lead Lengths (cm)	35, 55, 75, 95	35, 55, 75, 95	35, 55, 75, 95	35, 55, 75, 95	35, 55, 75, 95

<b>ASIC OPTIONS</b>	<b>CSI020</b>	<b>CSI040</b>	<b>CSI040</b>	<b>Saturn1</b>	<b>Saturn2</b>
Number of independent channel outputs	32	4	16	26	26
Maximum single channel output current (mA)	12.7	6.12	25.4	15	15
Maximum stimulation voltage (V)	18	18	18	18	23
Maximum pulse frequency (kHz)	14.25	12.5	50	50	50
Pulse width range (µs)	20 - 1000	10 - 2550	2.5 - 1280	1 - 1500	1 - 1500
Pulse width resolution (µs)	10	10	2.5	1.0	1.0
Simulation type	Bipolar	Monopolar	Monopolar or Bipolar	Monopolar or Bipolar	Monopolar or Bipolar
Minimum supply operating voltage (V)	3.5	2.4	2.4	2.4	2.4
Integrated battery charge controller	Yes	No	No	No	No



Cirtec Medical is a vertically integrated, full-service outsource partner providing end-to-end product design, development and manufacturing of Class II and III medical devices and components. We specialize in today's most advanced product technologies, including: neuromodulation, implantable drug delivery, cardiac rhythm management, ventricular assist, structural heart and minimally invasive systems.

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