SENSUS® PAIN MANAGEMENT

SENSUS Technical Specifications

Output

Waveform	Biphasic with alternating leading phase, symmetrical, rectangular
Regulated Current or Voltage	Current
Net Charge per Pulse	0±1 µC into 500Ω load
Maximum Output Voltage (± 10%)	100 V
Maximum Output Current (<1KΩ load) (± 10%)	100 mA
Pulse Duration (± 4%)	200-400 µsec
Pulse Frequency (± 4%)	60-100 Hz, randomly varying
Pulse Pattern	Continuous
Maximum Phase Charge	20 µC
Maximum Current Density	0.71 mA/cm^2 into 500Ω load
Maximum Average Current	4 mA into 500Ω load
Maximum Average Power Density	7 mW/cm^2 into 500Ω load

Output Trips

No Load	Device not connected to patient
Insufficient Charge	Delivered charge below target
Over Load	Delivered charge above target
Short Circuit	Low impedance
Electrode Peeling	Electrode dislodging from skin

Therapy Session

Timer	60 minutes
Start Therapy	Briefly press button
Halt Therapy	Press button 4 times within 10 seconds
Manual Intensity Increase/Decrease	Increase +1.25% per second, decrease -5%
Habituation Compensation	Adaptive stepwise increase in intensity during session

Electrode

Type	Self-adhering, single-patient use, multiple applications
Materials	Mylar substrate, silver electrode pads
Number of Electrodes	2, outer electrode area 28 cm^2, inner electrode area 33 cm^2
Connector	Medical snap (male)
Dimensions	0.2 cm x 5.3 cm x 28.3 cm (exterior)

Power

Source	Permanent rechargeable battery
Battery Type	Rechargeable 3.7V Lithium-Ion battery
Charging Source	AC line adapter
Line Current Isolation	Patient disconnected when charging
Patient Leakage Current, DC	< 10 µA
Patient Leakage Current, Enclosure	< 100 µA

Physical

Dimensions	176 mm x 63 mm x 15 mm
Weight	82 g

Environmental

Operating	
Temperature Range	10° C to 40° C
Atmospheric Pressure Range	50 kPa to 106 kPa
Relative Humidity Range	30% to 75%
Transport and Storage	
Temperature Range	-40° C to 50° C
Atmospheric Pressure Range	50 kPa to 106 kPa
Relative Humidity Range	10% to 90%

Guidance Documents & Standards

FDA	Draft Guidance for Industry and Staff: Class II Special Control Guidance Document: Transcutaneous Electrical Nerve Stimulator for Pain Relief (April 5, 2010)
IEC	IEC 60601-1, IEC 60601-1-2, IEC 60601-1-6, IEC 62304