

Neuromodulation

Pioneering New & Emerging Therapies

Advances in clinical techniques and improvements in implantable devices now offer more reliable and specialized therapies for the treatment of many neurological disorders. By disrupting signals to the brain through the use of mild electrical pulses, neuromodulation therapies can often relieve debilitating symptoms where pharmaceuticals and other therapies offer little or no relief.

Benchmark's proprietary work in the field of neuromodulation offers innovative design solutions for lead extensions and lead connectors. Designs that deliver stronger, more consistent connections between the leads and the external pulse generator.

Extensive Engineering Expertise

Harness the strength of Benchmark's extensive engineering knowledge and expertise in the field of neuromodulation design and development in the following areas:

- Component Selection
- Antenna Selection
- 3D Modeling
- Circuit & PCB Design
- Design Verification & Testing
- Agency Safety & Performance Testing
- Manufacturing Test System Development
- Precision Alignment & Assembly
- Spray Coating & Hermetic Sealing
- Laser Welding & Helium Leak Testing
- Surface Finishing & Passivation

Key Medical Capabilities

- **Fluid Management**
drug delivery, sterile fluid control, lab on a chip, dialysis products
- **Radiological Imaging**
MRI, MRT, CT
- **Optical Imaging**
optical coherence therapy, visualization devices
- **Connected Medical Devices**
remote patient monitoring, wearables, connected medical products
- **Hand Held Devices**
surgical tools, diagnostic and interventional devices
- **Surgical Robotics**
fully-automated and surgeon assisted surgical robots

Our Medical Heritage

Since 1979, Benchmark has established a legacy of best-in-class medical device engineering and design. Our passion for innovation incorporates the latest technologies while ensuring the highest quality and adhering to the most stringent regulatory guidelines. As a result of our legacy and our specialized processes, Benchmark continues to flawlessly pass all FDA-related audits and inspections. We are proud of this hard-earned status and you can trust that we will deliver robust, highly-configurable, cost-effective solutions designed to address your unique needs.

Ongoing Research & Investments

Benchmark is continually investing in new research, designs, techniques and processes. Our goal is to reduce time in the product development cycle, help lower costs on capital design investments and alleviate design transfer challenges when preparing for production. We also work seamlessly with supply chain, operations and manufacturing to develop and deliver complete, customized solutions.

From Concept to Complete Product Lifecycle Management

Benchmark's full-system solutions and global footprint of certified facilities provide you with a dedicated team to optimize all facets of design, development and production. Designs can be managed at both single and multiple locations to ensure the highest quality and go-to-market readiness.

Concept/Design Circuit Design Software Development Hardware Development Industrial, Interaction & Mechanical Design PCB Layout DFM Services	New Product Introduction Quick-turn Flexible Scheduling Mechanical Components Placement Build Feedback	Supply Chain Management Supply Chain Design Sub-tier Management Local Sourcing EDI Execution EOL/OBS Management Global Agreements	PCB Assembly Surface Mount Technology Ball Grid Array Chip on Board Multi-chip Module Plated-through Hole Inspection: Laser, X-Ray, Visual, ICT/ FCT Development
Precision Machining 5-axis Vertical Mills E-beam Welding Horizontal Mills Lathes Laser Cutting CMM Inspection Chemical Cleaning	System Integration/Box Build Direct Order Fulfillment BTO, CTO B2B Hubbing & VMI Full Turnkey Manufacturing, Test, Debug Full Traceability	Test Development Requirements Specifications Prototyping Low-cost Solutions Dedicated testers Automation Large Scale Equipment Design & Build Advanced Technologies	Post-Delivery Support & Logistics Upgrades Field Spares Warranty Repair/Out of Warranty Repair Real-time SPC Local Partners Global Agreements

When It Matters

Navigating a complex world demands a forward-thinking partner with the technology, cutting-edge engineering, precision manufacturing, and supply chain agility to move quickly. From idea to realization, Benchmark is able to meet and adapt to your unique needs and requirements. To learn more, contact us today.

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