

APPLICATION NOTE

MEDICAL LASERS AND AESTHETIC EQUIPMENT

Challenges

The medical laser industry faces many challenges. There is a greater need for multifunction equipment that addresses a wider range of treatments (for example Laser and IPL in one system). Treatments can take place in hospitals, but can also be carried out in clinics and surgeries, so portability, size, and weight become more important features for all end-customer equipment. Lower acoustic noise of the equipment is preferred in these environments to maximize patient comfort through treatments. The main challenge within the medical and aesthetic laser industry is to source medically certified power supplies that are quiet and compact, while delivering multiple output voltages.

Typical Applications

- Surgical Lasers
 - Ophthalmic
 - LASEK (eye surgery)
 - Laser Ablation
 - Cosmetic/Aesthetic Equipment: IPL, Laser, Laser Diode for Skin Treatment, Tattoo Removal, Skin Tightening, Hair Removal
- Efficiency and reliability are key criteria for system



OUR SOLUTIONS

Advanced Energy has a reputation of providing reliable, flexible, high-performance power solutions for medical laser equipment. In response to customer demands for smaller solutions for mobile equipment, we have a wide range of compact power supplies designed with best-in-class power density and reliability providing single and multiple outputs for all aspects of the equipment. We have several fanless and low noise power solutions which reduce system acoustic noise. The platform nature of our low voltage products allows scale up to higher power application, where the same base design/solution can power many variations of the customers medical and aesthetic laser product (skin treatment, and tattoo removal). In addition, we can also address the capacitor charging needs for IPL, laser and laser diode applicators with our high voltage expertise.

Benefits Of Using Advanced Energy

- Fanless solutions for low acoustic noise
- Isolated multiple outputs for capacitor charging, diode driving and system voltages
- Compact size for mobile systems
- Flexible and controllable outputs ideal for diode driving applications

Recommended Products

Low Voltage

- CoolIX® Series
- UltiMod Series
- LCC
- LCM
- uMP (MicroMP)
- CPS250-M
- CNS650-M

High Voltage

- C Series
- HVA Series
- US Series
- FlexiCharge Series
- AEQ Series

What We Power

Low Voltage

- CRF
- Cooling Pumps
- TEC Elements
- Control Electronics

High Voltage

- Charging Capacitors for Laser, IPL
- Pockels Cells



FlexiCharge 1500 Series



CoolX Series



LCM Series



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. We design and manufacture highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE | TRUST

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