

MEDICAL LASER

Advanced Energy supports the medical laser market with AC-DC power supplies and high-voltage charging solutions, offering a complete portfolio for advanced product development.



1 Why do they need Capacitor Charger Power Supplies?

- **Delivers High-Energy Pulses:** Capacitor charger power supplies energize capacitors to create powerful pulses essential for medical laser treatments.
- **Adapts to Treatment Needs:** Voltage, energy, pulse duration, and frequency vary by procedure—chargers ensure the right energy levels every time.
- **Fast, Reliable Charging:** Keeps capacitors fully charged quickly to support uninterrupted and efficient treatments.

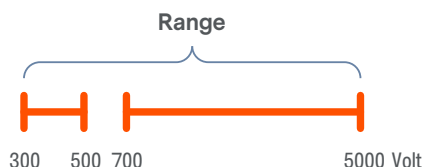
2 How do IPL (Intense Pulsed Light) and Laser Systems differ in their power needs?

- Light source difference and precision of targeting tissues
- **Laser:** single focused wavelength with higher precision and deeper penetration for medical and cosmetic treatments
- **IPL:** broad spectrum of wavelengths affecting a wider area, typically for aesthetic surface treatments
- Both require pulsed energy: Laser typically requires higher charge voltages than IPL
- Advanced Energy provide both AC-DC (Flexicharge) and DC-DC (C Series) capacitor chargers solutions for laser applications

Faster charging of capacitors across all voltages is advantageous.

3 Typical Charge Voltages for Laser and IPL

- For aesthetics lasers typically 700 V to 5000 V
- For IPL the typical charge voltage is 300 V to 500 V



4 Advantages of Constant Power Charging for IPL and Laser Systems

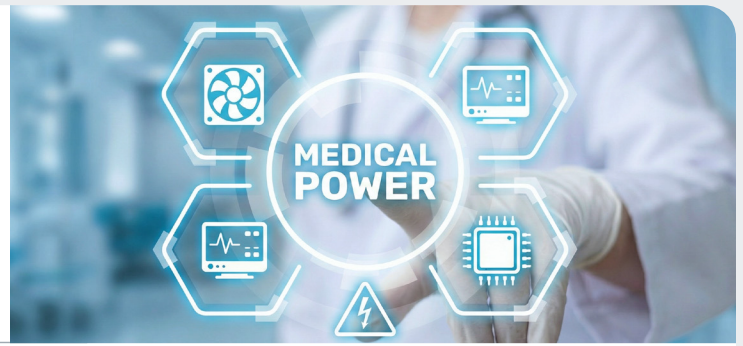
- Mixed-use systems combine IPL and laser treatments.
- Constant current chargers charge faster at lower voltages.
- Constant power chargers maximize available power from wall sockets.



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Need for Other Power?

- Cooling elements, pumps, monitors, and processors need low-voltage power.
- Multiple power supplies increase leakage, safety, and EMI compliance challenges.



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FlexiCharge Preferred for Medical Laser Systems

- **Constant Power Charging:** Operates across a wide voltage range, ideal for mixed-use systems combining IPL and laser treatments
- **Certified for Medical Safety:** Fully compliant with IEC60601-1, simplifying system safety and regulatory approvals
- **Integrated Design:** Combines capacitor charging and low-voltage system power in one unit, saving space and easing EMI compliance



FC1500

High voltage 1.5 kJ capacitor charger and 800 W system power (low voltage)



FC2500

High voltage 2.5 kJ capacitor charger and 800 W system power (low voltage)



FC4000

High voltage 4 kJ capacitor charger and 800 W system power (low voltage)

