



## SOLUTION OVERVIEW

Aesthetic medical laser systems are often multi-functional and can deliver a range of treatments in addition to laser, such as IPL (Intense Pulsed Light). Each of these treatments have their own specific power needs (volts and amps) .

There is also system house-keeping power required for cooling, control, touch panels and processing. Often, this results in several different discrete power supplies designed into these systems, adding

complexity to the design while creating challenges in meeting EMI requirements due to leakage current. These systems also need to be light weight, compact and mobile for ease of movement within clinics.

Our power solutions such as FC1500 and FC2500, CoolIX1800, LCM3000, LCM1500, AEQ, uMP10 and NGB425 enable laser manufacturers to optimize designs for high performance, reliability, and regulatory compliance.



### Target Markets/Customers

#### Aesthetic treatment OEMs with laser and/or IPL treatments for:

- Hair Removal
- Skin tightening
- Tattoo removal
- Varicose Vein treatments
- Skin discoloration
- Wrinkle removal
- Age spot treatment
- Vascular Lesions
- Pigmented Lesions

#### Target Customers:

- Lumina
- OEM Tech
- Excelitas/Kasiertech
- Lumenis
- Alma

- Viora
- Candela
- Sciton
- Cutera
- Sharplight
- Venus Concept
- Sinclair
- Ilooda
- Lutronic,
- Jeisys,
- Peninsula,
- Miracle,
- Cynosure
- Endymed
- Elen (Deka)
- Cocoon
- Deleo

### Where to Avoid

- Very low power systems <100W

### Audience – who to engage and when

#### Who to engage:

- Focus on OEMs of aesthetic equipment
- Engineering Manager, R&D Director, Principal, R&D Manager, Electronic Engineer, Electrical Engineer, Electromechanical Engineer, System Engineer
- Seniority levels such as VP, Director or Manager

Engage when prospects are in early design stages or have completed their system architecture approach and are now looking for required solutions

### Business Benefits

- Ideal for multi-functional systems with IPL and Laser, the constant power capability of Flexicharge allows faster cap charging at lower enabling faster treatments for patients
- Space saving for mobile equipment. High power density PSU's and Flexicharge all in one solution resulting in space and weight savings of 30%
- Fully safety certified solutions for faster system compliance and reducing compliance cost
- Our configurable, flexible solutions can be easily modified/adjusted during design cycle to reduces development times
- Application experts and customer support accelerating development time

# AESTHETIC LASERS

## INTERNAL CONTACTS



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## Qualifying Questions

- What is the application
- What is the capacitance that needs to be charged
- What is the Charge voltage of the capacitor
- What is the voltage after the capacitor discharges
- What is the duration between pulse
- What is the frequency of the pulse
- How do you adjust the charge voltage (for IPL vs Laser)
- What are the other voltages and currents required in the system and what are the powering
- What is the input AC voltage range
- What is the wall socket rating

## Cross Sell Ops

- HV DC/DC for pockel cell drivers and Q switches
- Open frame AC/DC for low power systems



## Customer Challenges

Speed of charging across wide range of charge voltages. Traditional capacitor chargers are optimized for a particular charge voltage, 800V for example in lasers. but when charging to a lower voltage, for IPL (350V), the charge rates are the same, thereby underutilizing the power capability.

Systems are limited by the amount of current they can draw from a standard wall socket (15A/20A/30A

etc), therefore charge speed at lower voltages under utilizes the available wall current.

Multiple PSUs (capacitor charger and system power), take up space, which is problematic in mobile systems.

Multiple PSUs result in multiple sources of EMI, making system compliance challenging. Multiple PSUs contribute to higher leakage current.



## Key Features & Specs (high-level differentiators)

The FC1500 and FC2500 deliver highly efficient programmable capacitor charging power over a wide range of voltages and has a built in AC-DC configurable power supply providing end users up to 800 W of low voltage power for other system needs.

Constant power charging maximizes the use of available current and allows faster charging at lower voltages for IPL, enabling faster treatments. Capacitor Charger and system power in one package simplifies EMI compliance and reduces time/cost.

Full safety certified capacitor charger and system power with <300uA leakage current simplifies safety and reduces time/cost. Configurability and digital communications allow system designers to easily adjust power supply parameters during system development.

Excellent pulse to pulse repeatability

The high power density all-in-one design saves 30% space in the system while also simplifying integration.

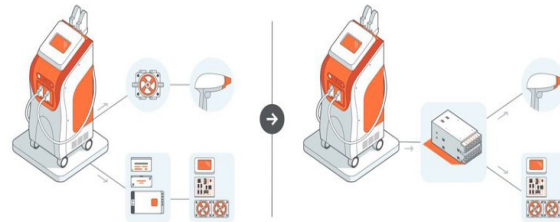
# AESTHETIC LASERS

## COMPETITIVE ANALYSIS



| Competitor                                    | Lumina Power   | OEM Tech  | Excelitas (Kaisertech)   |
|---|--|---|--|
| <b>Their Positioning &amp; Selling Points</b> | <ul style="list-style-type: none"><li>Established leading supplier of cap charging power supplies for laser-based applications</li><li>High Reliability with a proven track record</li><li>Broad product offering for Industrial and Medical applications</li></ul>  | <ul style="list-style-type: none"><li>They are price leaders for capacitor charging power supplies</li><li>Focussed on cap charging power supplies for laser-based applications</li><li>Privately owned company in Europe</li></ul>   | <ul style="list-style-type: none"><li>Proven supplier of cap charging power supplies for laser applications. Offer new product releases but known to modify standard products for some applications</li><li>Worldwide locations serving the full Photonics market</li><li>Have auxiliary system power of 200W/24V built in</li></ul>   |
| <b>Our Differentiation</b>                    | <ul style="list-style-type: none"><li>The fully integrated Flexicharge not only charges capacitors but also delivers all of the power for system electronics, allows space saving and reduces development time and compliance costs</li><li>AE's track record for reliability and performance, particularly constant power and digital control capabilities, make us ideal for system engineers</li><li>AE focus on developing new innovative power specifically for medical laser systems sets us apart</li></ul> | <ul style="list-style-type: none"><li>Lower total cost solution from Flexicharge (cap charging + system power), full safety certification, as well as communications and controls</li><li>The fully integrated FlexiCharge allows space saving while reducing development time and compliance costs</li><li>Publicly listed company with a global footprint</li></ul>                           | <ul style="list-style-type: none"><li>AE track record for reliability and performance, particularly constant power and digital control capabilities make us ideal</li><li>Global AE footprint, focus on medical applications, and our investment in developing innovative power for laser systems</li><li>Flexicharge delivers relevant levels of system power for multifunctional systems</li></ul> |
| <b>Comparative Positioning</b>                | <ul style="list-style-type: none"><li>No low voltage outputs in their systems. Designer needs to have a separate AC-DC for system power, increasing complexity</li><li>AE is well established as an innovative, reliable and quality focused manufacturer of AC-DC power supplies used for laser systems</li><li>Our expertise in medical applications with expert global sales and FAE support</li></ul>  | <ul style="list-style-type: none"><li>Compliance is a competitive advantage, coupled with our extensive experience in helping customers in their compliance journey</li><li>No low voltage outputs in their systems. Designers need to have a separate AC-DC for system power increasing compliance complexity</li><li>Expertise in medical coupled with global sales and FAE support</li></ul> | <ul style="list-style-type: none"><li>AE is well established as a high reliability manufacturer of AC-DC power supplies used for system power in medical laser. Our reputation for quality and innovation is very high due to our engineering bandwidth</li><li>System designers will still need to have a separate AC-DC for system power increasing compliance complexity</li></ul>                |

# AESTHETIC LASERS



In medicine, lasers allow surgeons to work at high levels of precision by focusing on a small area, damaging less of the surrounding tissue. If you have laser therapy, you may experience less pain, swelling, and scarring than with traditional surgery.

- Skin Lasers
- Cryotherapy
- Ophthalmology
- Laser Diodes

