



Development Series Capacitor Charging Power Supplies



2 kW, 3 kW and 4 kW

Excelitas® Development Series Capacitor Charging Power Supplies are designed for rapid prototyping and early-stage development for advanced laser systems and high-energy research applications.

The Development Series is “generic” by design as most high-voltage systems require customized load matching to achieve optimal performance. This fine-tuning ensures the system operates at peak efficiency, maintains optimal power draw, minimizes thermal load, and protects both the power supply and connected equipment.

The Development Series Capacitors offer flexible high-voltage solutions, easy integration, and collaborative engineering support to reduce development time, mitigate risk, and reach performance targets more efficiently.

Three product variants are available, each offering different voltage and power specifications to meet a wide range of application requirements.

Key Advantages

- Access to a broad range of Excelitas’ high-voltage power technologies
- Ideal for startups, universities, and emerging laser developers
- Enables close collaboration for customers who have minimal power-supply expertise

Key Features:

Compact size, high efficiency

Active PFC, PF > 0.99

Open circuit, short circuit, Arc, Over-temperature, Over-voltage protections

Low EMI, High EMI-RFI immunity

Safety Certified to EN 60601-1 (Medical) or EN 61010-1 (Industrial)

Medical laser power supply applications:

Surgery

Dermatology & Cosmetic Medicine

Dentistry



Model	XLS202	XLS302	TLX402
Part Number	1102217-G	1102286-G	1102950-G
Input Voltage (VAC)	180-264	180-264	180-264
Output power	2 kW	3 kW	4 kW
Output voltage	4 kV	2 kV	1.3 kV
Mains to SELV insulation	4 kV	4 kV	4 kV
Leakage current	<100 μ A	<100 μ A	<100 μ A
Size L x W x H (inches)	12.5 x 5.5 x 5.8	14 x 5.8 x 5.8	14 x 6.8 x 8
24 VDC auxiliary up to 200W	√	√	Yes
Simmer up to 200W	√	√	2 Simmer Outputs
Trigger output up to 20 kV	√	√	2 Trigger Outputs
Interfacing options	Analog	Analog	Digital

Note: √ indicates this option is available upon request

“TLX” means modular power supply with simmer and trigger.

“XLS” means modular power supply without simmer and trigger.



About Excelitas

Excelitas® is a leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor and avionics end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of advanced technologies, offering leading-edge innovation in sensing, detection, imaging, optics and specialty illumination for customers worldwide.

Excelitas is at the forefront of addressing many of the relevant megatrends impacting the world today, including precision medicine, industrial automation, artificial intelligence, and connected devices (IoT).

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