

LEANGEN-2450M-500-M

500W Solid-State Microwave Generator

LEANGEN-2450M-500-M is a compact, light-weight and highly reliable OEM microwave generator module for ISM applications at 2450MHz, fully based on steady solid-state technology with high power efficiency. The module is powered by a single 32Vdc power supply and it features a 0-500W CW output with exceptional spectral purity at all power levels and absolute reliability thanks to built-in circulator with integrated dummy load. Its output power can be precisely regulated from zero to 500W and its output frequency can be selected in the range 2400-2500MHz. The product is equipped with an analogue control interface and a digital serial interface, allowing smart industrial applications in solid-state dynamic modular systems counting multiple modules controlled by a central digital brain. The module has been conceived to drive probes or to radiate resonant cavities, with plenty of applications as solid-state cooking, microwave chemistry, plasma generation, organic tissue ablation and automotive ignition.

LEANGEN-2450M-500-M is fully tested with pulsed power applications and is designed to operate with liquid cooling. In order to guarantee straightforward and successful integration, it is equipped with accurate real-time measurement of forward and reflected power and with a user-friendly control interface for comprehensive setting and control.

This exclusive module on the market is a building block for LEANFA's award-winning **KOPERNICOOK®** system, a revolution in Microwave and RF processing of food and agricultural commodities introduced by an intelligent use of innovative solid-state generators.



QUICK OVERVIEW

Compact, light-weight and top-reliable

Single 32Vdc power supply

CW 0-500W with top spectrum purity in full power range

2400-2500MHz frequency range

Can drive probes or radiate resonant cavities

Real-time measurement of reflected power

Analogue and digital control interface

Designed for pulsed power applications

High-efficiency

Liquid cooling

Built-in circulator with integrated dummy load

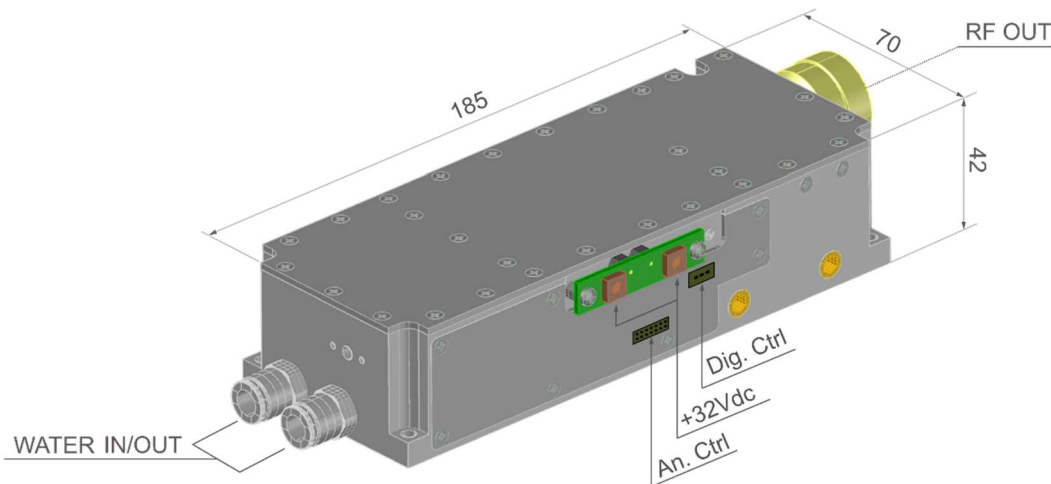
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Technical Specifications

Output Power	0-500W CW @2400-2500MHz
Power Modes	Tested with CW and Pulsed modes, compliant with industrial applications
Output Connector	7/16 DIN 50Ω
Technology	Fully Solid-State: LDMOS driver and power stage
Output RF Isolation	Built-in circulator with integrated dummy load ^(*)
Operating Frequency	2400-2500MHz (step 100kHz with RS485 interface)
Power Supply	32Vdc
Power Efficiency	50%
Forward and Reflected Power Meas.	Real-time
Control&Monitoring	Analogue interface and RS485 interface
GUI for PC Control	Available on request
Cooling Water Temperature	18°C – 28°C non-condensing
Cooling Water Flow	≥ 8 liters/min
Size	185x70x42mm
Weight	1.3kg

(*) The integrator shall avoid excessive load mismatch by proper reflected power monitoring



RS485 Bus Port pinout



Connector mounted on the generator: JST B3B-XH-A(LF)(SN)
Mating connector for cable: JST XHP-3

Analogue Control Port pinout



Connector mounted on the generator: HIROSE DF11-14DP-2DSA(24)
Mating connector for cable: DF11-14DS-2C

1	Forward Power (out)	2	GND
3	Reflected Power (out)	4	Temperature (out)
5	ON (0V)/OFF (5V)	6	Not Used (leave open)
7	DC Voltage (out)	8	DC Current (out)
9	Not Used (leave open)	10	Power Control (in)
11	Not Used (leave open)	12	Interlock (0V OK)
13	Not Used (leave open)	14	DIG (5V)/ANL (0V)