

LUMILOOP



Datasheet

— LSPM 1.0 — | — LSPM 2.0 —
9 kHz - 8.2 GHz | 9 kHz - 26.5 GHz

High-Speed RF Power Meters

LSPM 1.0/2.0 Triple High-Speed Power Meters are three channel, high speed, high accuracy and high dynamic range RF Power Meters. Single and dual channel versions are available as well. Their frequency range is 9 kHz to 8.2 GHz for LSPM 1.0 and 9 kHz to 26.5 GHz for LSPM 2.0. Operation at higher frequencies is supported with reduced performance.

Compensation of linearity, frequency and actively controlled power sensor temperature guarantee accurate measurements. A dynamic range of 80 dB for LSPM 1.0 and 63 dB for LSPM 2.0 is achieved for many frequencies.

The LSPM 1.0/2.0 Power Meters' high sampling rate allows for high resolution time-domain signal analysis. Power Meters can be synchronized with signal generators in order to realize high resolution pulse analysis.

LSPM 1.0/2.0 Power Meters can be combined with LUMILOOP's LSProbe E-Field Probes to accelerate standard EMC measurements such as IEC 61000-4-3 and 61000-4-21 by a factor of more than 100 over traditional setups.

LSPM 1.0/2.0 allow for RF power measurements, automated test setups, ISO 11452-4 BCI tests and ISO 11452-9 portable transmitter tests. LSPM 2.0 is particularly well suited for ETSI EN 300 328 wide band transmission system tests and ETSI EN 301 893 broad band radio measurements.



LSPM 1.0+ with 4.3" touchscreen and Ethernet Interface

Optionally, the LSPM 1.0/2.0 RF Power Meters are available as stand-alone LSPM+ devices. Please see last page for further information. Rear connectors are available for LSPM 1.0/2.0 upon request.

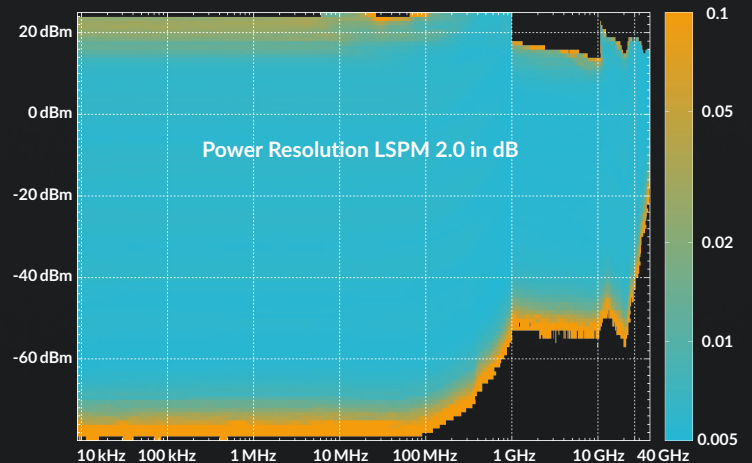
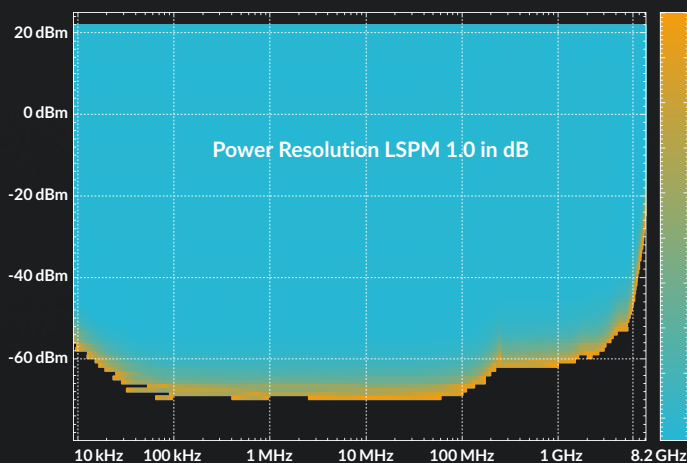


LSPM 1.0 with rearward connectors (optional)

LUMILOOP offers an all-round carefree service of accredited calibration according to ISO 17025. This includes checking your measuring equipment and handling the accredited calibration for you.

Specifications	LSPM 1.0	LSPM 2.0
Frequency Range		
Low Band	9 kHz ... 400 MHz	9 kHz ... 1 GHz
High Band	30 MHz ... 8.2 GHz	700 MHz ... 26.5 GHz
Analog Rise Time		
Low Band	1.0 ms (VBW 460 Hz)	1.1 ms (VBW 400 Hz)
Low Band	800 ns (VBW 510 kHz)	550 ns (VBW 850 kHz)
High Band	190 ns (VBW 2.0 MHz)	20 ns (VBW >50 MHz)
VSWR	<1.20:1	<1.22:1 up to 12 GHz <1.42:1 up to 26.5 GHz
Sampling Rate	2 MSamples/s	2 MSamples/s
Minimum Pulse Width	500 ns	500 ns
Measurement Range & Dynamic Range		
Low Band	<-68 dBm ... >20 dBm 0.1 to 100 MHz <-50 dBm ... >20 dBm 9 kHz to 400 MHz	<-75 dBm ... >23 dBm up to 100 MHz <-60 dBm ... >23 dBm up to 1 GHz
High Band	<-60 dBm ... >20 dBm up to 1 GHz <-43 dBm ... >20 dBm 1 ... 6 GHz <-20 dBm ... >20 dBm 6 ... 8.2 GHz	<-45 dBm ... >12 dBm 1 ... 22 GHz <-40 dBm ... >12 dBm 22 ... 26.5 GHz (<-14 dBm ... >12 dBm 26.5 ... 40 GHz*)
Amplitude Accuracy**	0.1 dB	0.15 dB
Linearity Error	0.15 dB	0.15 dB
Temperature Stability	0.1 dB	0.1 dB
Power Resolution	<0.1 dB (see plot below)	<0.1 dB (see plot below)
Channel Isolation	>50 dB	>60 dB up to 26.5 GHz
Damage Level	>30 dBm	>25 dBm
RF Connectors	Type N	2.92 mm
Application Software	LUMILOOP TCP-Server + GUI, Callimport	LUMILOOP TCP-Server + GUI, Callimport
PC Interface	USB 2.0	USB 2.0
Trigger Voltage	5 V	5 V
Trigger Connector	BNC	BNC
Input Voltage	5 V \pm 5 %	5 V \pm 5 %
Input Current	<3 A	<3 A
Ambient Temperature	10 ... 40 °C	10 ... 40 °C
Dimensions (W \times D \times H)	165 \times 142 \times 61 mm ³	165 \times 142 \times 61 mm ³
Certifications	CE	CE

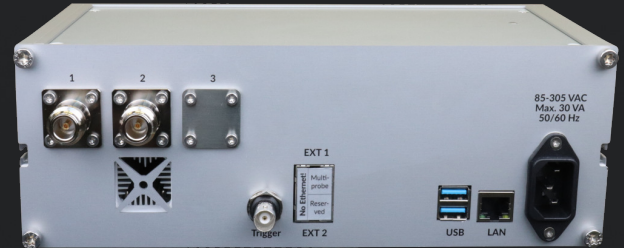
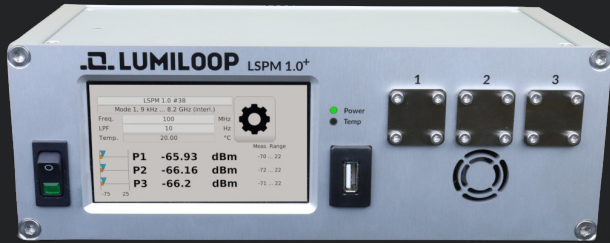
*) Usable up to 40 GHz with reduced performance. **) At 0 dBm, CW, accredited Calibration at esz AG calibration & metrology.



LSPM 1.0+ and LSPM 2.0+

Optionally, LSPM 1.0/2.0 RF Power Meters are available as LSPM+ devices. LSPM+ are equipped with 4.3" Touch-screens and Ethernet Interfaces.

RF power of all channels is displayed a glance. Third party EMC software integration is quick and easy - just enter the IP address, connect and start measuring.



Dual channel LSPM 1.0+ with rear connectors, front view and rear view

PC Interface	Ethernet
Trigger Voltage	5 V
Trigger Connector	BNC
Input Voltage	5 V ± 5%
Input Current	<3 A
Ambient Temperature	10 ... 40 °C
Dimensions (W x D x H)	260 × 150 × 88 mm ³
Certifications	CE

LSPM 19" Rack Integration

LSPM 1.0/2.0 RF Power Meters can be used as stand-alone devices or integrated into a 19" frame.

This flexibility allows for the optimum fit to your measurement needs and the lab space available.



19" Front Panel with two CI-250 and one LSPM 1.0



19" Front Panel with two LSPM 1.0



LSPM 1.0+ with 19" Rack Mount Kit

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Register your LUMILOOP device and get a free one year warranty extension!

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