

LUMILOOP

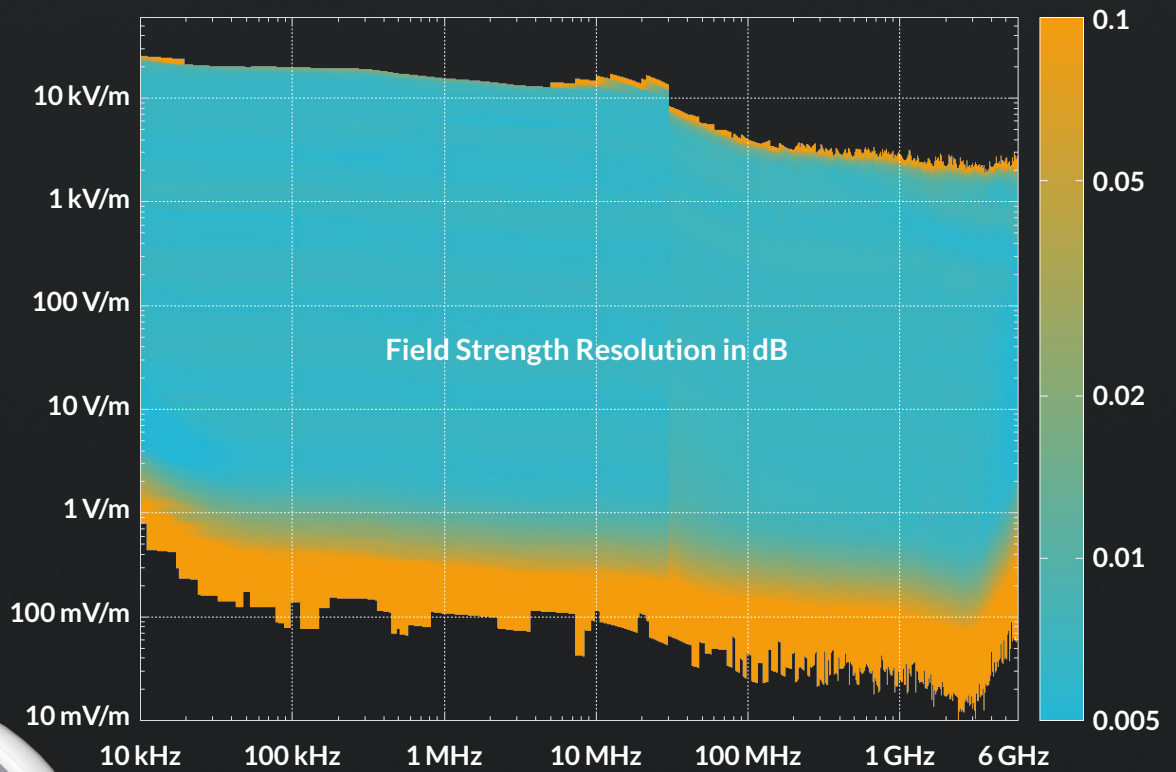
LASER-POWERED SENSOR SYSTEMS



———— LSProbe 1.2 ————

10Hz - 8.2GHz
3D E-FIELD PROBE

The LSProbe 1.2 E-Field Probe is a high speed, high accuracy and high dynamic range electric field probe. Its standard frequency range of 10 kHz – 6 GHz can be extended to 10 Hz – 8.2 GHz. Best-in-class compensation of linearity, frequency and temperature guarantees accurate measurements from less than 0.1 to at least 1,000 V/m. A high field version of the E-Field Probe, supporting more than 30,000 V/m. A dynamic range of 100 dB is achieved for many frequencies, enabling field measurements at more than 10,000 V/m.



Laser powered operation eliminates battery recharging and replacement. Extensive calibration data are provided with each field probe and handled automatically by the accompanying software. EMC software support includes EMC32, BAT-EMC, Win6000, Compliance5, Radimation and many more.

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- Laser-Powered – No More Empty Batteries**
 - Ultra-Fast Pulse Response**
 - Continuous Real-Time Data Streaming and Statistics**
 - Best-in-Class Linearity and Temperature Compensation**
 - Rugged and Reliable by Design**
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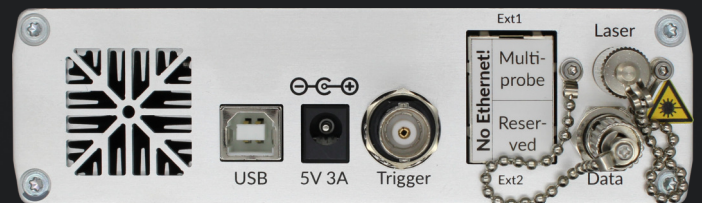


Field Sensor

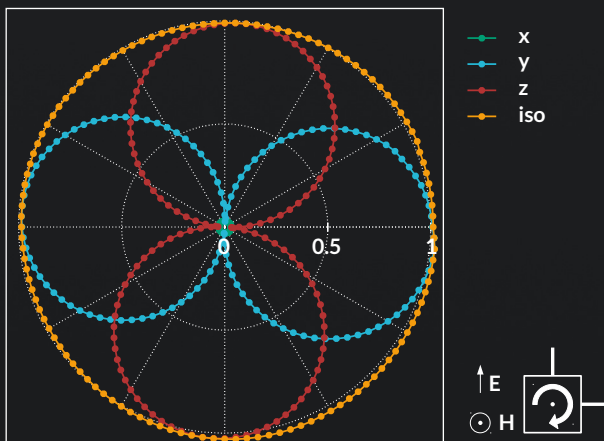
Frequency Range	
Standard	10 kHz ... 6 GHz
Option LO	10 Hz ... 6 GHz
Option HI	10 kHz ... 8.2 GHz
Option HI+LO	10 Hz ... 8.2 GHz
Analog Rise Time	
Low Band, low bandwidth	1.9 ms
Low Band, high bandwidth	770 ns
High Band	330 ns
Minimum Pulse Width	
Burst Mode	500 ns
Streaming Mode	2 μ s
Resolution	<0.01 dB
Sampling Rate	
Burst Mode	2 MSample/s
Streaming Mode	500 kSample/s
Field Strength	
Low Band	<1 V/m ... >10 kV/m
High Band, standard version	<0.1 V/m ... >1 kV/m
High Band, high E version	<10 V/m ... >30 kV/m
Damage Level (standard/high) E	>25 kV/m / >100 kV/m
Dynamic Range (typical)	
Low Band	>100 dB
High Band up to 4 GHz	>90 dB
High Band 4 GHz ... 6 GHz	>80 dB
High Band above 6 GHz	>60 dB
Isotropy @ 1 GHz	better than 1 dB
Amplitude Accuracy @ 10 V/m	
10 Hz ... 10 MHz	1.3 dB
10 MHz ... 1 GHz	1.5 dB
1 GHz ... 8.2 GHz	1.0 dB
Linearity Error	<0.1 dB
Temperature Stability	0.1 dB
Fiber Optic Connectors	ST/FC
Standard Fiber Optic Cables	5 m permanently attached, 15 m ST/FC extension, two E2000 Sacrificial Cable Kits
Max. Fiber Optic Cable Length	1,000 m
Fiber Optic Cable Bending Radius	>30 mm
Ambient Temperature	10 °C ... 40 °C
Dimensions (W x D x H)	46 x 46 x 114 mm ³

Computer Interface

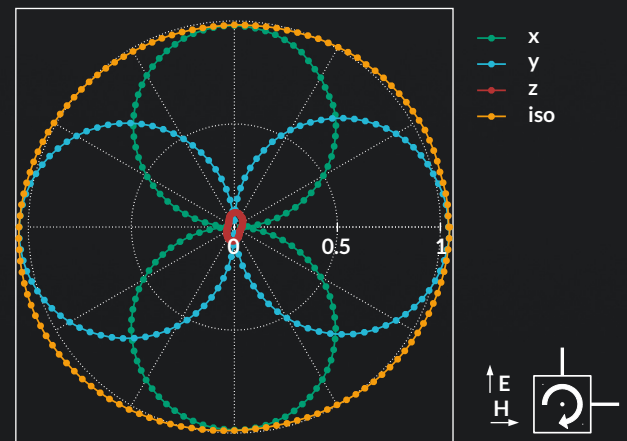
PC Interface	USB 2.0
Application Software	LSProbe TCP Server, LSProbe GUI
Trigger Voltage	5 V
Trigger Connector	BNC
Laser - Wavelength	830 nm
Laser - Max. Output Power	1,000 mW
Laser Class	1M
Laser - Shutdown Time	1 ms
Fiber Optic Connectors	ST/FC
Number of Fiber Optic Couplers	>6
Input Voltage	5 V \pm 5 %
Input Current	<3 A
Ambient Temperature	10 °C ... 40 °C
Dimensions (W x D x H)	135 x 120 x 38 mm ³
Certifications	CE, IEC 60825-1:2014



Computer Interface Rear Side View



Isotropy @ 1 GHz, normalized E-field rotating around H-vector



Isotropy @ 1 GHz, normalized E-field rotating in E-H-plane

Accessories

E2000 Sacrificial Cable Kit



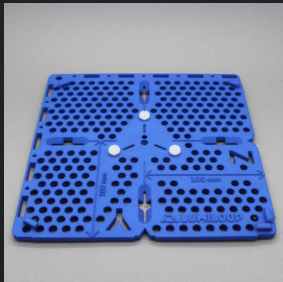
- prevents contamination of connectors
- quick and simple replacement in case of connector burn-in
- includes two 0.5 m E2000 to ST/FC cables
- includes E2000 and ST/FC couplers

Optic Fiber Cable Extension



- 5/10/15/20 m duplex fiber optic cable with ST/FC connectors
- includes ST/FC coupler
- arbitrary length of cable available on request

Tabletop Probe Stand Base



- quick positioning for table and ground-plane setups
- horizontal probe position 100 mm relative to all edges
- relative permittivity better than 2.7 @ 1 kHz

Tabletop Probe Stand Mounting Pole



- vertical position either 100, 125, 150, 200 or 300 mm above surface
- well-defined field probe alignment with quick mount/release
- relative permittivity better than 2.7 @ 1 kHz

Flexible Probe Stand



- flexible tripod feet for versatile positioning
- vertical position approximately 150 to 250 mm above surface
- strong magnetic feet with rubber coating
- no metal parts
- quick mount/release

Fiber Connector Cleaning Pen



- cleaning pen for ST, FC and E2000 connectors
- supports cleaning inside couplers
- up to 800 cleaning cycles



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EUROPÄISCHE UNION

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aufgrund eines Beschlusses
des Deutschen Bundestages

EXIST
Existenzgründungen
aus der Wissenschaft