

**Model FL7030**  
**Electric Field Probe**  
**5kHz–30MHz**  
**1.5–300 V/m**  
**User-Selectable X, Y, Z Axes**



The FL7030 is a smart, fast, extremely accurate electric field probe that contains an internal microprocessor to provide linearization, temperature compensation, control, and communication functions. Noise reduction and temperature compensation allow accurate measurements down to 1.5 V/m without zero adjustment. When rotated about its critical angle mount, the probe provides isotropic response of  $\pm 0.5$  dB over its specified frequency range.

The FL7030 is laser powered to allow for continuous operation without battery recharging or replacement.

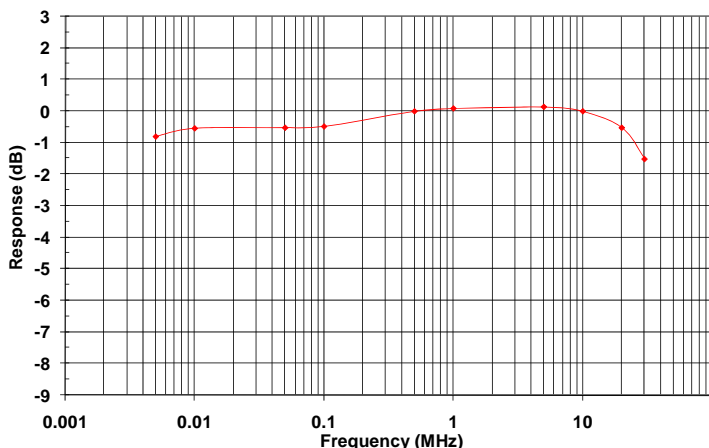
Correction factors are provided with the probe. These factors can be loaded into the Model FM7004 Field Monitor (sold separately) to automatically correct the probe readings at user-specified frequencies. When correction factors are applied, the true accuracy of the probe can be realized.

It communicates and is powered through glass fiber optic cables, up to 100 meters long, to the FI7000 interface. X, Y, Z, and isotropic readings can be returned through an FI7000 in 20 msec.

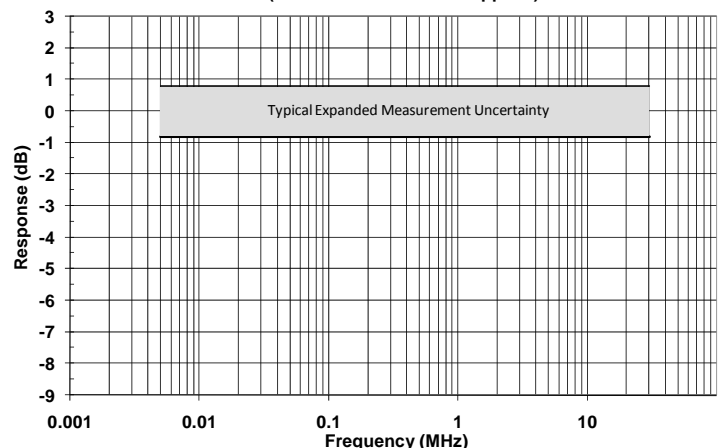
The FL7030 extends the range of AR laser powered E-field probes down to 5kHz. It offers an extended post-detection response-smoothing time constant to provide more consistent readings for carrier frequencies down to 5kHz.

*NOTES: This probe requires an FI7000 for power and communication.  
 FM7004 is recommended for local monitoring and control.*

FL7030 Typical Uncalibrated Frequency Response



FL7030 Typical Calibrated Frequency Response (with correction factors applied)



## SPECIFICATIONS, FL7030

Amplitude Accuracy (field aligned with sensor axes)	
Without correction factors applied .....	±1.0 dB @ 10 MHz
With correction factors applied.....	Typical expanded measurement uncertainty (95% confidence interval) 0.8 dB, 5 kHz–30 MHz
Response Time/ Sampling Rate (through FI7000).....	20 msec/up to 50 samples per second at FI7000 USB and GPIB interfaces
Response smoothing time constant.....	10 msec nominal
Isotropic Deviation (measured at the critical angle) .....	±0.5 dB @ 10 MHz ±0.5 dB, 5 kHz–30 MHz (typical)
Operating Range .....	1.5–300 V/m
Linearity, 1.5 to 300 V/m .....	±0.5 dB AND ±0.9 V/m
Temperature Stability.....	±0.5 dB over operating temperature range
Damage Level.....	1000 V/m continuous field
Ranges .....	Single range
Data returned from probe .....	X, Y, Z axes, and composite
Power Requirements .....	Laser powered from FI7000 interface
Dimensions.....	5.7 x 5.7 x 5.7 cm (2.25 x 2.25 x 2.25 in) 2.92 cm (1.15 in) DIA spherical housing 3.18 cm (1.25 in) sensor radome per axes
Weight .....	62.5 g (2.2 oz)
Operating Temperature Range .....	10°C to 40°C (50°F to 104°F) @ 5% to 95% RH non–condensing
Fiber Optic Cable Connectors .....	Two E2000 compact duplex connectors at 1 meter, includes fiber optic verification loop.
Calibration Data .....	Accredited Calibration Report (A2LA) supplied with probe