



## CPL490

Elite Series

**Highest resolution**  
**Widest bandwidth (50)**  
**Five-element range indicator**  
**Zero adjust**  
**Front-panel BNC analog output**  
**Differential output to National Instruments 68-pin connector**  
**Uses 2nd Generation Probes**

### Specifications

Resolution <sup>1</sup> :	0.0004% @1 kHz 0.0007% @ 15 kHz 0.002% @ 50 kHz
Selectable Bandwidth:	1, 10, 15, 50 kHz
Linearity <sup>2</sup> :	<0.2% F.S. typical
Max Drift:	0.02-0.04% F.S./°C
Operating Temp:	15-40 °C
Front-Panel BNC:	±10 V, 0 Ω, 10mA max
Rear-Panel National Inst.:	±10 V, 0 Ω, Differential
Multiple Sensors:	Up to 3

(Contact Lion Precision for more than 3)

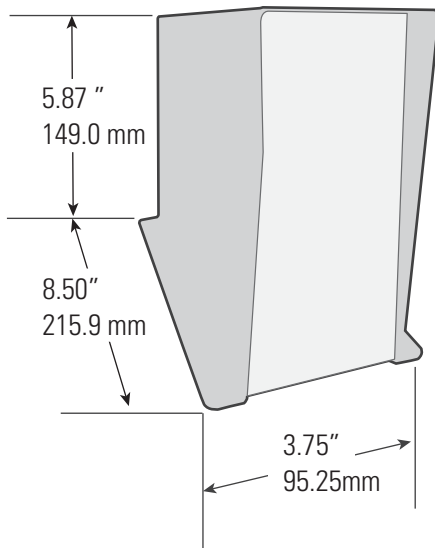
1 Dependent on probe, range, and bandwidth. See next page for details.  
2 Dependent on probe and range. See next page for details.

Listed specifications assume a two meter probe cable;  
Flat measurement area diameter at least 1.3 times larger than  
the Sensing Area diameter with no customizations.

The CPL490 uses 2nd Generation Probes.

### Export License

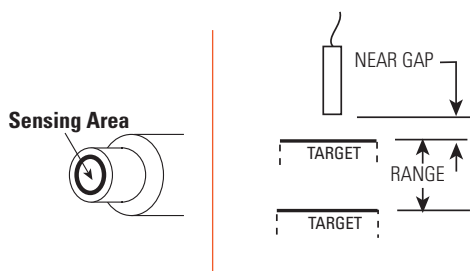
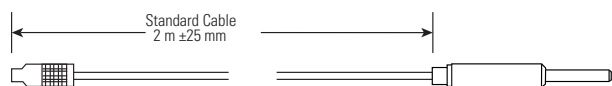
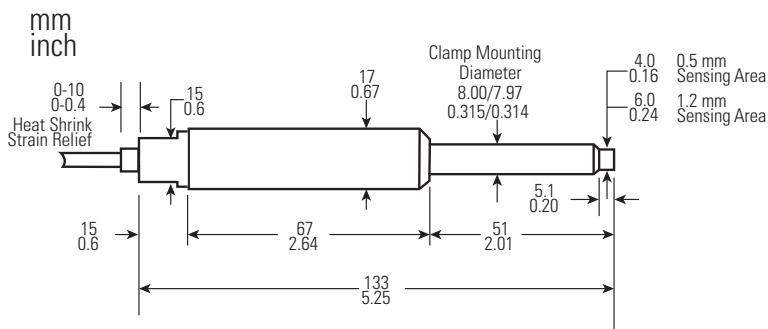
Because of high resolutions, export of the Elite Series to some  
countries require an export license.



## 2nd Generation Probes

The CPL490 uses 2nd Generation Capacitive Probes which include electronics in the probe housing. The probes are mounted by the 8mm diameter probe body extending from the larger housing. Two models are available differing only in the sensing area diameter and associated measurement ranges.

2G-C8-0.5: 0.5 mm sensing area  
 2G-C8-1.2: 1.2 mm sensing area



### CPL490 Probe Measurement Ranges and Resolutions

Sensing Area Diameter mm (Probe Model)	Range Type	Range µm mils	Near Gap µm mils	1 kHz nm µin	10 kHz nm µin	15 kHz nm µin	50 kHz nm µin	Probe Maximum Drift % FS/°C
0.5 (2G-C8-0.5)	Fine	10 0.4	20 0.8	0.05 0.002	0.07 0.003	0.09 0.004	0.26 0.010	0.04
	Standard	50 2.0	25 1.0	0.17 0.007	0.27 0.011	0.35 0.014	1.0 0.040	0.02
	Extended	100 4.0	50 2.0	0.38 0.015	0.80 0.031	1.0 0.039	3.3 0.14	0.03
1.2 (2G-C8-1.2)	Fine	50 2.0	25 1.0	0.15 0.006	0.20 0.008	0.22 0.009	0.63 0.025	0.02
	Standard	100 4.0	50 2.0	0.33 0.013	0.40 0.016	0.52 0.021	1.7 0.065	0.02
	Extended	200 8.0	100 4.0	0.68 0.027	1.0 0.040	1.3 0.050	3.8 0.15	0.02

Range is determined by the sensing area diameter. The larger the diameter, the larger the range. Flat target surface must be 1.3 times larger than the sensing area diameter.