

## Electro-optic E-field sensor controller unit

### Description

Partow THz E-field sensor uses electro-optic Micro-ring and Mach-Zehnder modulators made from lithium niobate thin films. The controller unit consists of a laser, a detector and microcontroller unit. For microring sensors, the controller laser wavelength is locked to the sensor wavelength. The sensor is attached to the front panel of the controller unit using fiber-optic connectors. The detector generates a signal that is directly proportional to the electric field that is impinging on the sensor. This signal is available on the front panel SMA connector. Two different controller bandwidths are available.

**E-field sensor controller system P/N: L-1550-40-D-XX-B**

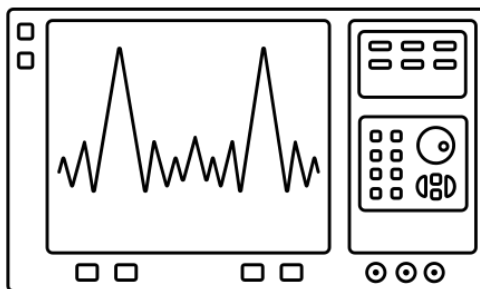
<i>Parameter</i>	<i>High Bandwidth</i>
<i>Laser power</i>	<b>40 (mW)</b>
<i>Operating wavelength</i>	<b>1550 (nm)</b>
<i>Balanced detector bandwidth (XX)</i>	<b>2500:1-2500(MHz) 400:DC-400MHz</b>
<i>Typical response gain (depending on the sensor)</i>	<b>0.1-10(<math>\mu V/(V/m)</math>)</b>
<i>Rise time (XX)</i>	<b>2500:0.14(nsec) 400:0.87(nsec)</b>
<i>Interrogator dimension</i>	<b>200x275x40(mm)</b>
<i>Interrogator weight</i>	<b>1(kg)</b>
<i>Interrogator output</i>	<b>SMA-50 ohm</b>
<i>Input power</i>	<b>110V-220V,50-60Hz</b>



**Controller unit**



**Mach-Zehnder sensor element**



**Spectrum analyzer, oscilloscope, or other data acquisition system (not provided by Partow)**