m924 OEM Module

- 4 channels, expandable up to 64 with RS485 Modbus
- Custom probes for medical and general purpose applications
- Builds on proven design with thousands of systems installed worldwide
- Single PCB design with options for Analog Output and Metal Enclosure
- Probes are immune to electromagnetic interference such as High Voltage, RF, Plasma, and Microwave

The LUXTRON m924 OEM Module is designed for Medical Research and Original Equipment Manufacturing (OEM) applications, and is used in General Purpose Research and Development Labs.

The m924 solution uses LumaSense’s trusted LUXTRON Fluoroptic® technology, based on a temperature sensitive phosphorescent sensor attached to the end of an optical fiber. The complete LumaSense m924 OEM system consists of the electronics module assembly plus LUXTRON probes and accessories. The system provides precise and repeatable in-situ temperature measurements for control of processes involving RF, EMI, magnetic fields and high voltages.

The m924 Module is designed to replace the LUXTRON m600 OEM Series module and FOT Lab Kit with better performance and a modern architecture.

Safe, Non-Metallic Temperature Sensing

The standard OEM Module is a single printed circuit board (PCB) with an optional DIN-rail mountable enclosure. The standard m924 Module has RS232 (ASCII) and RS484 (Modbus) digital communications, and optional Analog Output for easy OEM system integration.

Compatible with LUXTRON Probes and Custom Probes

Non-metallic and electrically non-conductive, the Fluoroptic® temperature probes are immune to EMI and voltages that adversely affect conventional sensors, such as thermocouples, RTDs and thermistors. By using material of minimal thermal conductance, LumaSense’s probes measure temperature on minute samples without perturbing or heat sinking the sample. LumaSense offers its diverse medical, industrial, and process experience to develop custom probes to meet specific Lab and OEM requirements.

Field Proven Fluoroptic® Technology

LumaSense pioneered the field of fiber optics more than 40 years ago with our trusted Fluoroptic technology. Thousands of our OEM modules have been installed in various, challenging applications with reliable, repeatable performance.

Typical Applications

- MRI and RF Medical Treatment
- Pace Makers and Implantable Device Testing
- Temperature Monitoring of Critical Military Equipment and Facilities
- Temperature Control of Microwave Processes
- Monitoring of Semiconductor Wafer Temperatures during RF and Plasma Applications
### Specifications

<table>
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<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Probe Type</strong></td>
<td>STB &amp; STF</td>
</tr>
<tr>
<td><strong>Channels</strong></td>
<td>4 or up to 64 with RS485 Modbus</td>
</tr>
<tr>
<td><strong>Sampling Rate</strong></td>
<td>Up to 50 Hz per channel</td>
</tr>
<tr>
<td><strong>Temperature Range</strong></td>
<td>- 100 ... 330 °C</td>
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<tr>
<td><strong>Accuracy after Calibration</strong></td>
<td></td>
</tr>
<tr>
<td>Single Point Calibration</td>
<td>± 0.5 °C, ± 50 °C of Calibration Point</td>
</tr>
<tr>
<td>Three Point Calibration</td>
<td>± 0.1 °C over a 100 °C range (probe dependent)</td>
</tr>
<tr>
<td>Custom Calibration (Contact LumaSense):</td>
<td>± 0.05 °C over complete calibration range</td>
</tr>
<tr>
<td><strong>Operating Temperature Range</strong></td>
<td>- 40 °C ... 85 °C</td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>&lt; 0.1 °C, (1-sigma STD @ 1 Hz)</td>
</tr>
<tr>
<td><strong>Storage Temperature Range</strong></td>
<td>- 30 °C ... 75 °C</td>
</tr>
<tr>
<td><strong>Relative Humidity</strong></td>
<td>80% RH (max.) non-condensing</td>
</tr>
<tr>
<td><strong>Measurement Resolution (Digital Output)</strong></td>
<td>0.01 °C</td>
</tr>
<tr>
<td><strong>Analog Output</strong></td>
<td>4 ... 20 mA or 0 ... 10 V</td>
</tr>
<tr>
<td><strong>Serial Communication</strong></td>
<td>RS232 &amp; RS485</td>
</tr>
<tr>
<td><strong>Protocol</strong></td>
<td>ASCII (RS232) &amp; Modbus (RS485)</td>
</tr>
<tr>
<td><strong>Input Voltage</strong></td>
<td>5 ... 24 V DC + 5%</td>
</tr>
<tr>
<td><strong>Overall Dimensions</strong></td>
<td>23.7 mm (H) x 100.6 mm (W) x 134.4 mm (L)</td>
</tr>
<tr>
<td><strong>Enclosure Dimensions</strong></td>
<td>47 mm (H) x 114 mm (W) x 144 mm (L)</td>
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**Note:** Product specifications are subject to change.

### Dimensions

![Dimensions Diagram](image-url)

**Dimensions in inches [mm]**

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