External European ISM Antenna
868 MHz

**Electrical Specifications**
Typical Characteristics on circular 120 mm diameter ground plane

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>868 MHz ± 20 MHz</td>
</tr>
<tr>
<td>Return Loss</td>
<td>&lt; -10 dB</td>
</tr>
<tr>
<td>Efficiency</td>
<td>70%</td>
</tr>
<tr>
<td>Peak Gain</td>
<td>1.0 dBi</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

**Mechanical Specifications & Ordering Part Number**

<table>
<thead>
<tr>
<th>Ordering Part Number</th>
<th>9000046-XLPDNB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (mm)</td>
<td>101.0 ± 3.0 height</td>
</tr>
<tr>
<td></td>
<td>11.16 ± 1.0 diameter</td>
</tr>
<tr>
<td>Connector Type</td>
<td>SMA Male</td>
</tr>
<tr>
<td>Weight (grams)</td>
<td>6</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Operating Temperature (°C)</td>
<td>-40 to +120</td>
</tr>
</tbody>
</table>

**Global Operations & Design Support**
Ethertronics' global operations supports an integrated network of design centers that can take projects from concept to production.

**APPLICATIONS**
- Medical applications
- Home automation
- Smart metering
- M2M, Industrial devices
- Point of Sale
- Tracking
- Commercial/Communication
- Radar
- Wireless
- Monitoring
- Industrial
- Automotive
- Healthcare
- IoT

**KEY BENEFITS**
- **Reduced Costs and Time-to-Market**
  Standard antenna eliminates design fees and cycle time associated with a custom solution; getting products to market faster.
- **Greater Flexibility with Unique Form Factors**
  Ethertronics' technology helps you deliver more advanced ergonomic designs without adverse impact on product performance.
- **RoHS Compliant**
  Products are the latest RoHS version compliant.

Ethertronics family of external antennas are designed to offer the best performances for a wide range of applications. This sleek External ISM antenna covers the European 868 MHz band and is specifically designed for industrial communication implementation requiring a plug-and-play solution.
External ISM/LoRa/Sigfox antenna specifications
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Return Loss and Efficiency Plots
Typical Characteristics on circular 120 mm diameter ground plane

Return Loss

Efficiency
External ISM/LoRa/Sigfox antenna specifications
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

**Antenna Radiation Patterns**
Typical Characteristics on circular 120 mm diameter ground plane

Measured at 868 MHz

- **Phi = 0deg**
- **Phi = 90deg**
- **Theta = 90deg**
External ISM/LoRa/Sigfox antenna specifications
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

### Mechanical Dimensions
Typical antenna dimensions (mm)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000046-XLPDNB</td>
<td>101.± 3.0</td>
<td>11.16 ± 0.1</td>
<td>8.08 ± 0.1</td>
<td>SMA (Male)</td>
</tr>
</tbody>
</table>

![Antenna Diagram]