**Overview**

The W-RL-6B-9296 is a beam forming Rotman lens antenna optimised for use in the 92-96 GHz band. The assembly is milled out of high quality low loss materials to realise a waveguide module.

It can be supplied with a low loss switch matrix to enable switching and therefore electronic scanning.

This lens antenna overcomes the problems of scanning electronically at high frequencies where mechanical scanners are big and heavy and phase shifters are too large and lossy.

*This product is filed under EU Patent Application EP15159261 and is subject to an EU Export License.*
6 Beam Rotman Lens Antenna*
product datasheet - Preliminary Data

**Specification Overview**
*Option 01 (open waveguide elements) is baseline for other options unless otherwise specified.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>-01</th>
<th>-02</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>92 – 96 GHz</td>
<td>92 – 96 GHz</td>
<td>GHz</td>
</tr>
<tr>
<td>Angular Range</td>
<td>±20 Degrees</td>
<td>±20 Degrees</td>
<td>Degrees</td>
</tr>
<tr>
<td>No of Beams</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Scan Angle Step</td>
<td>8 Degrees</td>
<td>8 Degrees</td>
<td>Degrees</td>
</tr>
<tr>
<td>HPBW</td>
<td>10 Degrees</td>
<td>10 Degrees</td>
<td>Degrees</td>
</tr>
<tr>
<td>Lens Loss</td>
<td>&lt; 3 dB</td>
<td>&lt; 3 dB</td>
<td>dB</td>
</tr>
<tr>
<td>Gain</td>
<td>14 dB</td>
<td>21 dB</td>
<td>dB</td>
</tr>
<tr>
<td>Dimensions</td>
<td>85 x 87 x 23 mm</td>
<td>110 x 87 x 23 mm</td>
<td>mm</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10 to +40 °C</td>
<td>-10 to +40 °C</td>
<td>°C</td>
</tr>
</tbody>
</table>

**Options**

- **01** Open waveguide antenna elements
- **02** Integrated horn antennas
- **03** Waveguide switch module
- **04** Gold-plated construction

*all options can be combined except -01 and -02

**Measured Performance Data**

**Gain (Option -01)**

![Rotman Gain](image)

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Outline Drawing

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