

W band Antenna 6 Beam Rotman Lens

W-RL-6B-9296 Previously named TU-WRT94-6-10

6 Beam Rotman Lens Antenna*

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.



Features

- Complete waveguide assembly.
- Gain 14dB typical.
- Low sidelobes.
- Matching switch and horn modules.

Specification Overview

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

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

Options

- | | |
|---|---|
| 01 Open waveguide antenna elements | 04 Gold-plated construction |
| 02 Integrated horn antennas | *all options can be combined except -01 and -02 |
| 03 Waveguide switch module | |

Measured Performance Data Gain (Option -01)

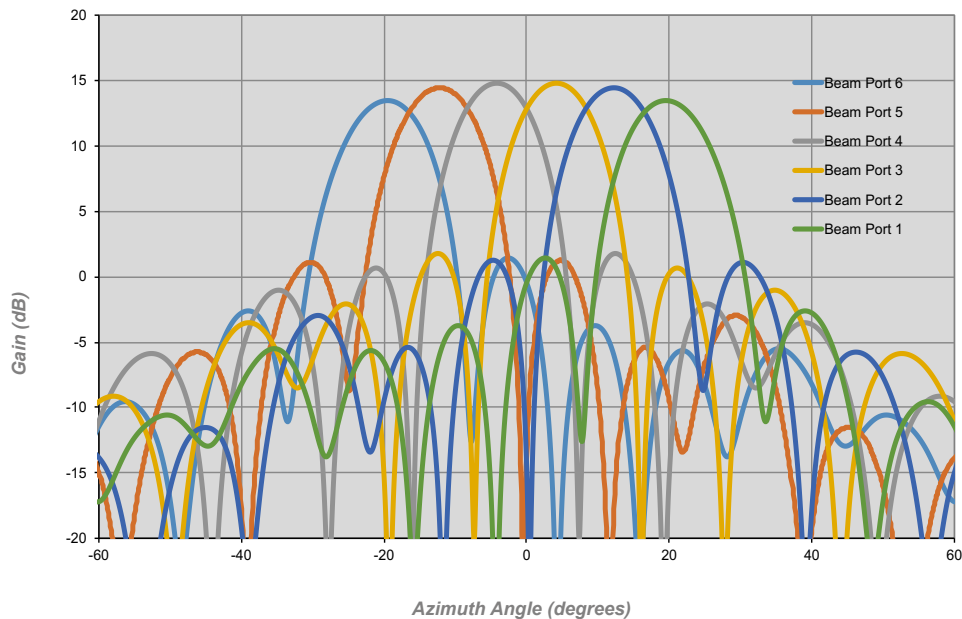
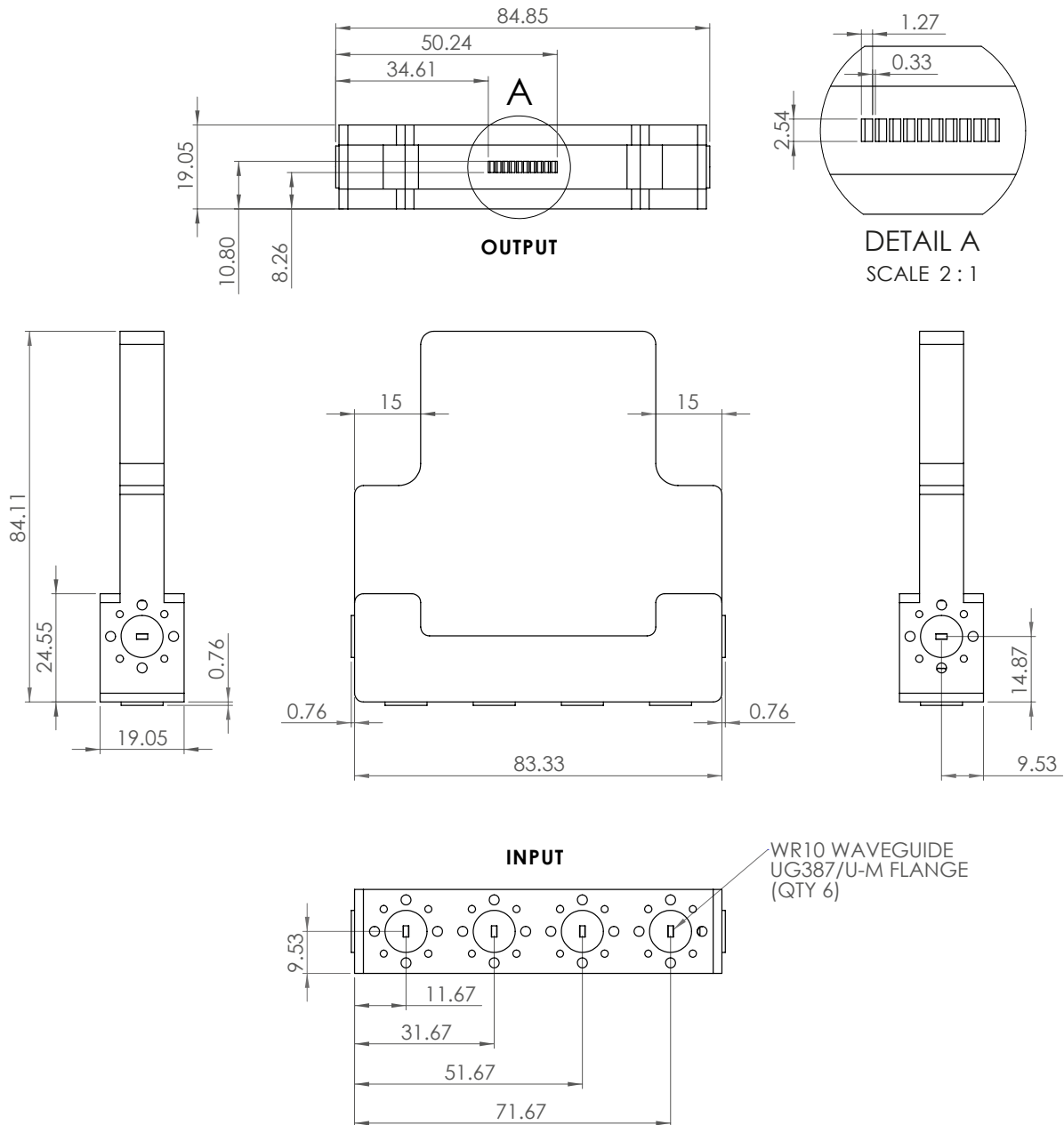


Figure 1
Rotman Gain

Outline Drawing



Disclaimer

The information contained herein is believed to be reliable; however, Arralis makes no warranties regarding the information and assumes no responsibility or liability whatsoever for the use of the information contained herein. All information is subject to change without notice, therefore customers should obtain the latest relevant information before placing orders for Arralis products. The information contained herein does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights.

This information does not constitute a warranty with respect to the product described, and Arralis disclaims any and all warranties either expressed or implied, relating to sale and/or use of Arralis products including liability or warranties relating to fitness for a particular purpose, consequential or incidental damages, merchantability, or infringement of any patent, copyright or other intellectual property right.

Without limiting the generality of the foregoing, Arralis products are not warranted or authorised for use as critical components in medical, life-saving, or life-sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

Copyright 2021 © Arralis

©2021 Arralis Ltd. All rights reserved. Trademarks and registered trademarks are the property of their respective owners.

Arralis European Offices
t: +(44) 1793 239670 (UK)
e: sales@arralis.com

arralis.com

Arralis USA Office
+(1) 386 301 3249 (USA)
e: emilie.wren@arralis.com

	W band Preliminary	W-RL-6B-9296	Issue date: 30 April 2021	DOC REV 3	Page 4 of 4
---	---------------------------	---------------------	---------------------------	------------------	-------------