



WR-12 Waveguide Conical Gain Horn Antenna  
Operating from 77 GHz to 87 GHz with a Nominal  
25 dBi Gain with UG-387/U Round Cover Flange

Gain Horns Technical Data Sheet

PEWAN1048

**Features**

- Circular Waveguide Interface
- 77 GHz to 87 GHz
- 25 dBi Nominal Gain
- UG-387/U Round Cover Flange

**Applications**

- Antenna Measurements
- Wireless Communication
- Laboratory Use
- Microwave Radio Systems

**Description**

Waveguide conical gain horn antennas are used in a wide variety of applications due to their high power handling capability, low loss, high directivity, and near constant electrical performance across a broad bandwidth. Pasternack's PEWAN1048 WR-12 waveguide conical gain horn antenna operating from 77 GHz to 87 GHz with a nominal 25 dBi gain is part of our full line of RF components available for same-day shipping. This Pasternack circular horn antenna has a gold plated brass body and a precision tolerance UG-387/U round cover flange. The PEWAN1048 WR-12 waveguide conical gain horn antenna offers low gain variation across its operating frequency range.

**Configuration**

|              |                         |
|--------------|-------------------------|
| Design       | WR-12 Conical Gain Horn |
| Pattern      | Directional             |
| Polarization | Linear                  |

**Electrical Specifications**

| Description                      | Minimum | Typical | Maximum | Units   |
|----------------------------------|---------|---------|---------|---------|
| Frequency Range                  | 77      |         | 87      | GHz     |
| Nominal Gain                     |         | 25      |         | dBi     |
| Horizontal Half Power Beam Width |         | 10      |         | Degrees |
| Vertical Half Power Beam Width   |         | 9       |         | Degrees |
| VSWR                             |         | 1.15:1  |         |         |

**Mechanical Specifications**

|             |                    |
|-------------|--------------------|
| <b>Size</b> |                    |
| Length      | 3.66 in [92.96 mm] |
| Width       | 1.09 in [27.69 mm] |
| Height      | 1.09 in [27.69 mm] |
| Weight      | 0.06 lbs [27.22 g] |

**Waveguide Interface**

|                    |             |
|--------------------|-------------|
| Waveguide Size     | WR-12       |
| Flange Type        | Round Cover |
| Flange Designation | UG-387/U    |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-12 Waveguide Conical Gain Horn Antenna Operating from 77 GHz to 87 GHz with a Nominal 25 dBi Gain with UG-387/U Round Cover Flange PEWAN1048](#)



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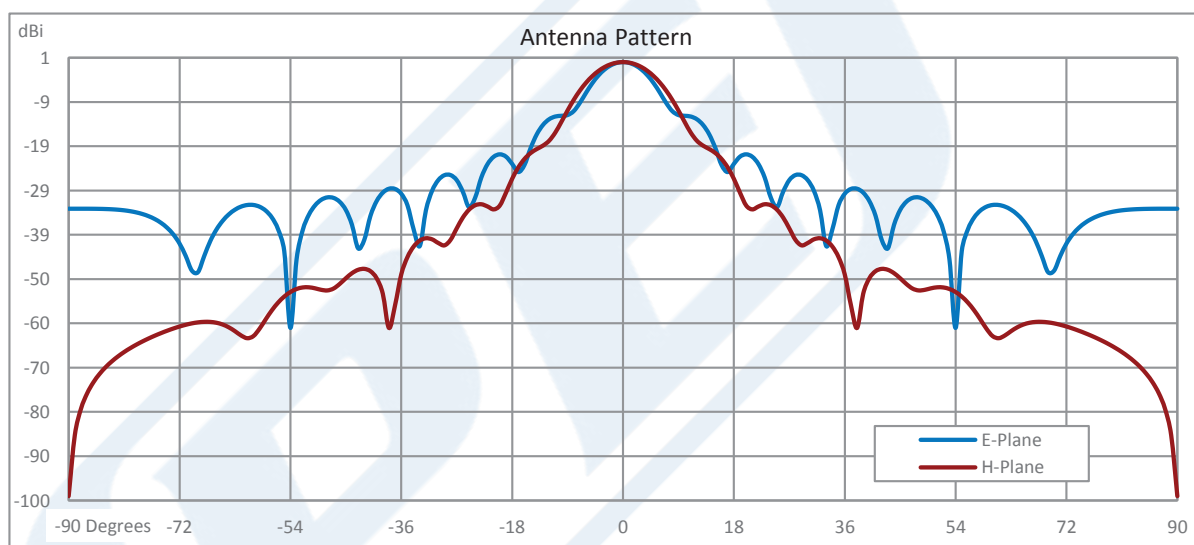
Body Material and Plating

Brass, Gold

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

#### Typical Performance Data



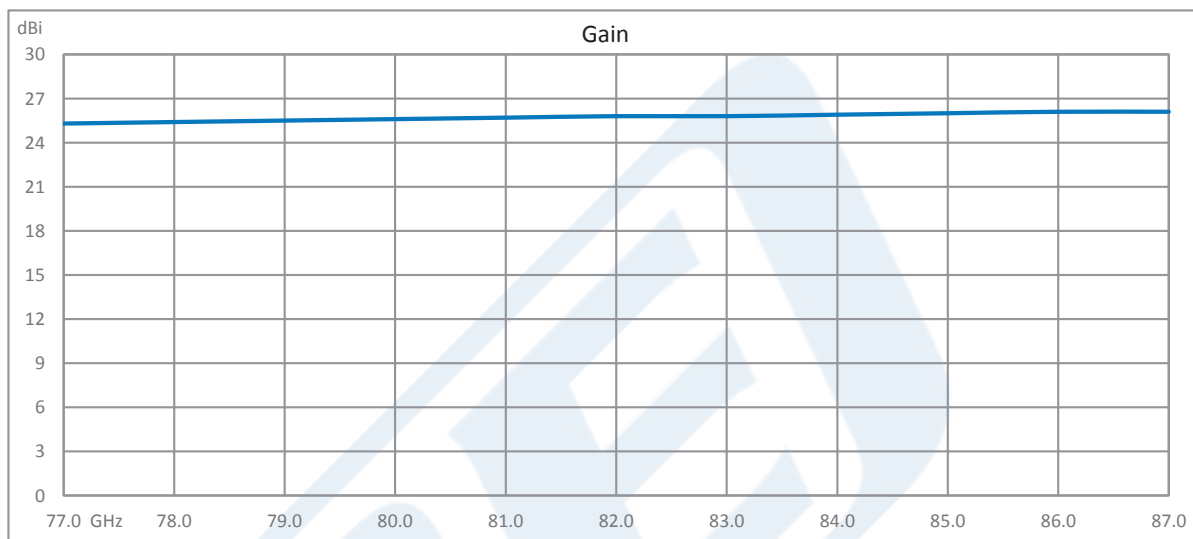
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WR-12 Waveguide Conical Gain Horn Antenna Operating from 77 GHz to 87 GHz with a Nominal 25 dBi Gain with UG-387/U Round Cover Flange from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-12 Waveguide Conical Gain Horn Antenna Operating from 77 GHz to 87 GHz with a Nominal 25 dBi Gain with UG-387/U Round Cover Flange PEWAN1048](https://www.pasternack.com/wr-12-waveguide-gain-horn-antenna-25dbi-ug-387-round-flange-pewan1048-p.aspx)

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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

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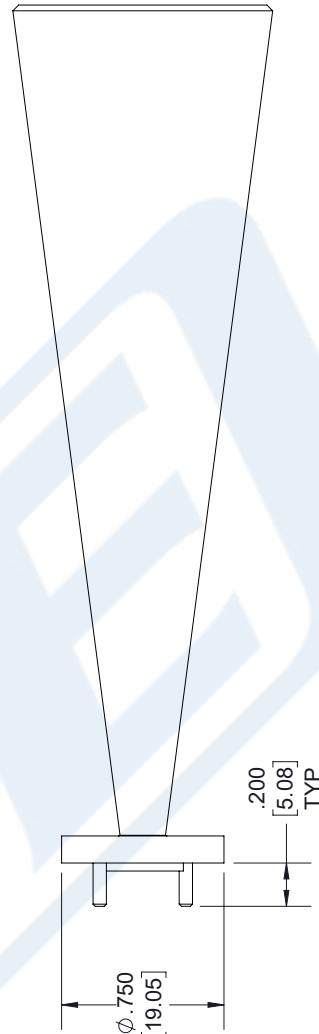
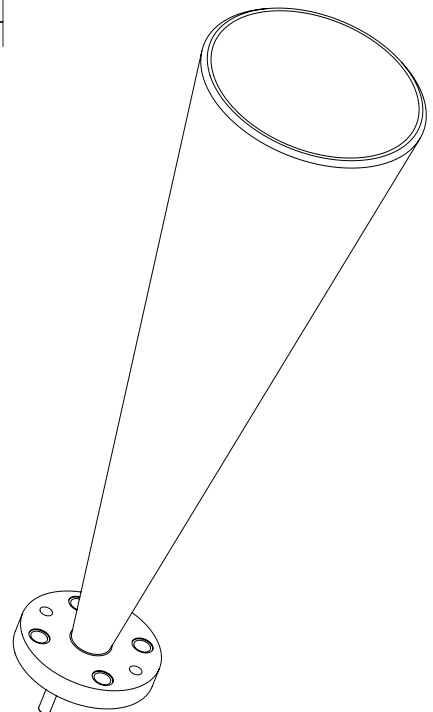
Technical drawing of a circular waveguide assembly, showing a top view and a side view.

**Top View Dimensions and Labels:**

- Overall diameter:  $\phi .110 \pm .001$  [2.79  $\pm$  0.03]
- CIRCULAR WAVEGUIDE
- 2X  $\phi .0615$  [1.562] DOWEL PINS
- 2X  $\phi .067$  THRU HOLE
- 4X 4-40 UNC THRU HOLE
- $\phi .375$  [9.53]
- WR-12 UG-387/U-MOD ROUND FLANGE

**Side View Dimensions:**

- Overall height: 4.000 [101.60]
- Top flange thickness: .162 [4.11]
- Bottom flange thickness: .037 [0.94]
- Top flange outer diameter:  $\phi 1.200$  [30.48]



|                                                                                                               |  |                                                                                                                                                                                                                                                                           |  |                                                                                                                       |  |
|---------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------|--|
| UNLESS OTHERWISE SPECIFIED<br>LEADING DIMENSIONS ARE IN INCHES<br>DIMENSIONS IN [ ] ARE MILLIMETERS           |  |  <b>PASTERNAK</b><br>an INFINITE® brand                                                                                                                                                |  | THE INFORMATION AND<br>DESIGN IN THIS DOCUMENT<br>IS THE PROPERTY OF<br>PASTERNAK CORPORATION<br>ALL RIGHTS RESERVED. |  |
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| X±.2 [5.08] FRACTIONS<br>.XX±.01 [ .25] ±.1/32<br>.XXX±.005 [ .13] ANGLES ± 1°                                |  | ALL DIMENSIONS SHOWN<br>ARE FOR REFERENCE ONLY.                                                                                                                                                                                                                           |  | SCALE N/A                                                                                                             |  |
| THIRD-ANGLE PROJECTION<br> |  | SIZE [CAGE] DRAWN BY PART NUMBER                                                                                                                                                                                                                                          |  | REV A                                                                                                                 |  |
| A 53919 K.DANG                                                                                                |  | PEWAN1048                                                                                                                                                                                                                                                                 |  |                                                                                                                       |  |

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