



WR-90 Waveguide Standard Gain Horn Antenna
Operating from 8.2 GHz to 12.4 GHz with a
Nominal 20 dB Gain SMA Female Input

Technical Data Sheet

PE9856B/SF-20

Features

- WR-90 Rectangular Waveguide Interface
- 8.2 GHz to 12.4 GHz
- 15 dBi Nominal Gain
- SMA Female Connector

Applications

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

Description

The Proline series PE9856B/SF-20 standard gain horn antenna (also known as waveguide horn) from Pasternack is part of our huge selection of waveguide antennas. This Pasternack standard gain horn antenna is manufactured with a WR-90 input and a waveguide to coaxial transition adapter. Our WR-90 standard gain horn antenna has a nominal gain of 20 dBi. This WR-90 standard gain horn has a SMA waveguide to coax transition adapter that is female gender. The Pasternack 20 dBi WR-90 horn antenna operates from 8.2 GHz to 12.4 GHz. The WR-90 PE9856B/SF-20 waveguide horn is US made and TAA compliant. It is part of over 40,000 RF, microwave and millimeter wave components available from Pasternack. Waveguide standard gain horn antennas, such as the PE9856B/SF-20, are used in a wide variety of applications due to their high power handling capability, low loss, high directivity, and near constant electrical performance. Pasternack's SMA female WR-90 standard gain horns are available in 10, 15 and 20 dBi models with pyramidal shape and rectangular input. Our WR-90 standard gain horn Proline antennas with SMA female interface can ship worldwide the same day as it is purchased as with our other available RF parts.

Configuration

| | |
|-------------------|--------------------------|
| Design | WR-90 Standard Gain Horn |
| Pattern | Directional |
| Polarization | Linear |
| Coaxial Interface | SMA Female |

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|-------------------------------------|---------|---------|---------|---------|
| Frequency Range | 8.2 | | 12.4 | GHz |
| Impedance | | 50 | | Ohms |
| Waveguide Standard Gain Horn | | | | |
| Gain | | 20 | | dB |
| Horizontal Half Power Beam Width | | 16.5 | | Degrees |
| Vertical Half Power Beam Width | | 16.5 | | Degrees |
| Waveguide to Coaxial Adapter | | | | |
| Input VSWR | | | 1.3:1 | |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Waveguide Standard Gain Horn Antenna Operating from 8.2 GHz to 12.4 GHz with a Nominal 20 dB Gain SMA Female Input PE9856B/SF-20](#)



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Mechanical Specifications

Size

Weight 0.5 lbs [226.8 g]

RF Connector

Type SMA Female

Waveguide Interface

Waveguide Size WR-90
Flange Designation UG-135/U
Body Material and Plating Aluminum

Environmental Specifications

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

Plotted and Other Data

2 Dimensional OML Drawing PE9856B/SF-20

Notes:

WR-90 Waveguide Standard Gain Horn Antenna Operating from 8.2 GHz to 12.4 GHz with a Nominal 20 dB Gain SMA Female Input 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-90 Waveguide Standard Gain Horn Antenna Operating from 8.2 GHz to 12.4 GHz with a Nominal 20 dB Gain SMA Female Input PE9856B/SF-20](#)

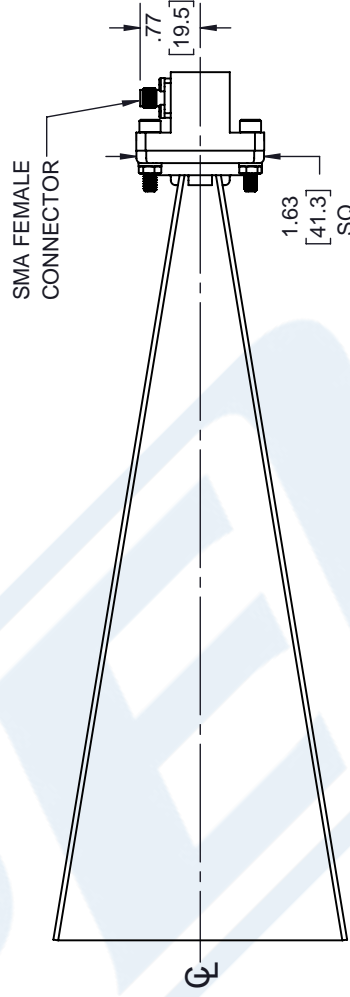
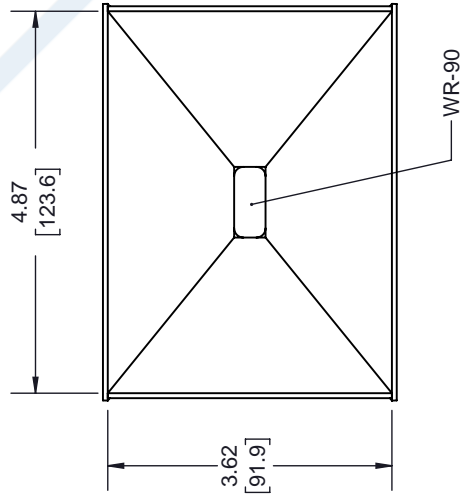
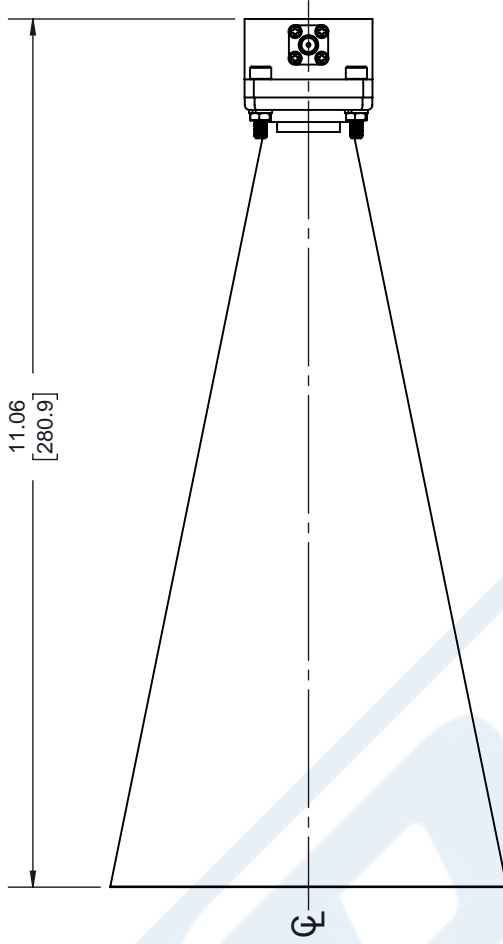
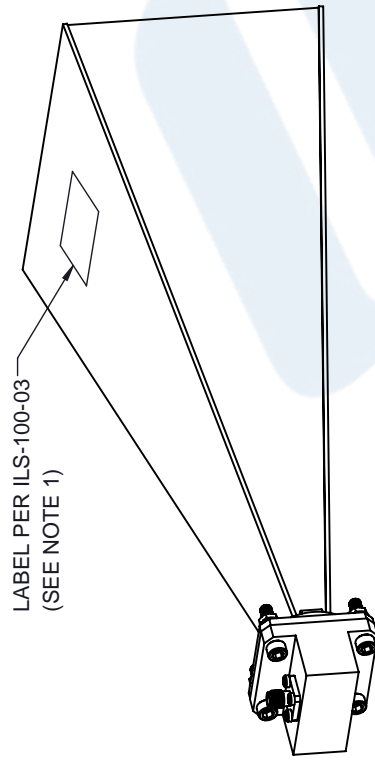
URL: <https://www.pasternack.com/wr-90-waveguide-standard-gain-horn-antenna-20-db-sma-pe9856b-sf-20-p.aspx>

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.

PE9856B/SF-20 CAD Drawing

WR-90 Waveguide Standard Gain Horn Antenna Operating from 8.2 GHz to 12.4 GHz with a Nominal 20 dB Gain SMA Female Input

| REVISIONS | | |
|-----------|-----------------|------------|
| REV. | DESCRIPTION | DATE |
| A | INITIAL RELEASE | 11/16/2020 |
| | | APPROVED |
| | | KHIETPAS |



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ± 1/32
.XX = ±.02 [.51] ANGLES ± 1°
.XXX = ±.005 [.13] CABLE LENGTH (L) TOLERANCES:
L ≤ 12 [305] = +1 [25] / -0
12 [305] < L ≤ 60 [1524] = +2 [51] / -0
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

PE PASTERNAK
an INFINITE brand

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SIZE A CAGE CODE 53919 DRAWN BY BPUCHASKI ITEM NO. PE9856B/SF-20

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

NOTES:
1. LABEL PER ILS-100-03 (FOR INTERNAL REFERENCE ONLY)
LABEL LOCATION FOR REFERENCE ONLY

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