Universal Waveguide Applicator, CPR159

GERLING

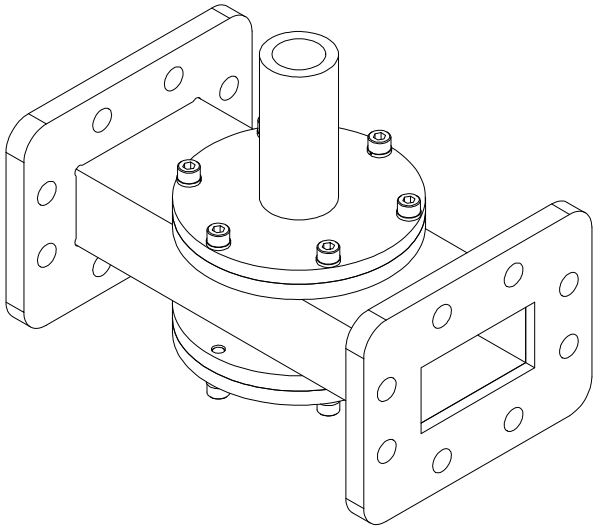
Model GA6005
Model GA6006

GAE has designed the Universal Waveguide Applicator (UWA) as a cost-effective means to fulfill the needs of a wide variety of laboratory heating requirements. The standardized waveguide chamber of the UWA can be used with standard or custom adapters (ordered separately) specially designed for heating specific materials. Typical applications include test tube samples, slabs, rods, fluids and plasmas.

The basic design of the UWA is that of a typical broadwall type waveguide applicator. Microwave energy propagates in the TE_{10} mode which orients the electric field perpendicular to the adapter ports. The e-field varies symmetrically in a sinusoidal manner from a maximum at the center to zero at the side walls. Thus, heating is relatively uniform with respect to sample height but can vary for large widths.

The UWA can be used with a Dummy Load (model GA1221) for traveling wave heating applications or a Sliding Short Circuit (model GA1223) for resonant chamber heating. Depending on the application, typical configurations might also include directional couplers for power measurement (model GA3114 or GA3115) and tuners for impedance matching (model GA1019).

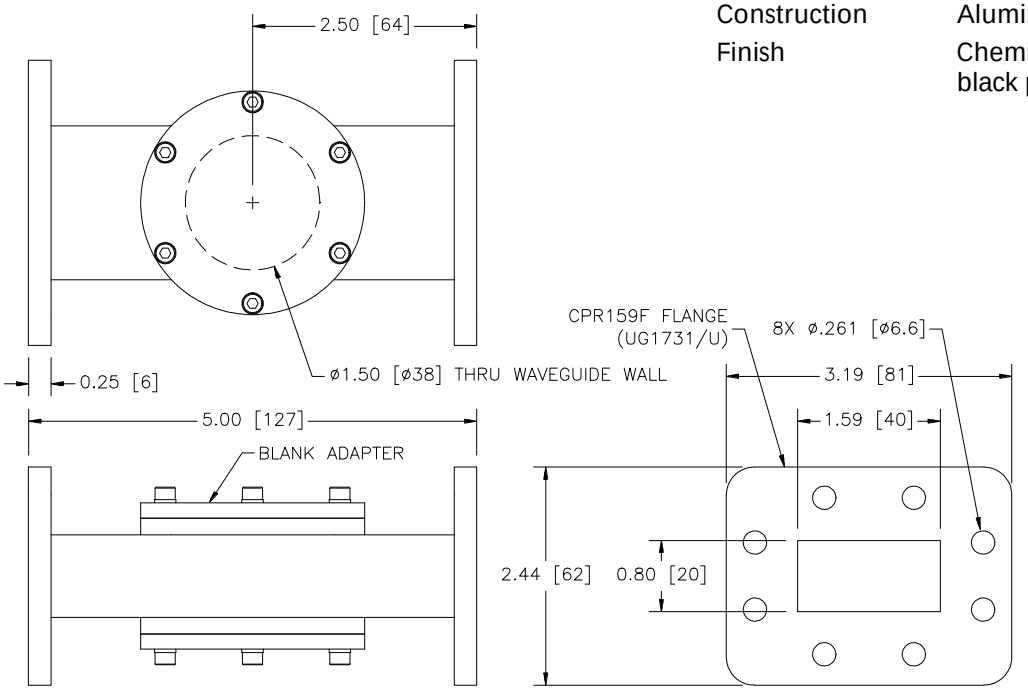
The model GA6005 applicator has a single adapter port on one broad wall, while the GA6006 has two ports on opposite walls. Blank adapters are provided for each port and can be modified by the customer for specific applications. Standard adapters for various applications are also available. Contact GAE for more information on the UWA and standard adapters or design assistance on custom adapters.



Model GA6006
(shown with GA8306-13 Test Tube Adapter)

General Specifications:

Frequency	5.8 GHz +/- 75 MHz
Input Power	3 kW continuous max.
Waveguide	WR159 (RG344/U)
Input Flange	CPR159F (UG1731/U)
Construction	Aluminum
Finish	Chemical conversion coating; textured black paint



Options:

- Water cooling and/or ventilation
- Ports for temperature probes
- Threaded inserts or studs on flanges
- Alternate flange styles
- Alternate construction materials (stainless steel, copper, etc.)
- Flange interlock switches

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All dimensions are in inches [millimeters].

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