

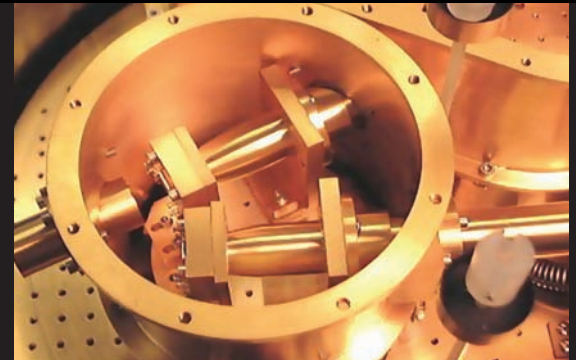
Winston Cones

Infrared Laboratories, Inc.'s Winston Cone condenser is a field optic designed for maximum concentration of far infrared and sub millimeter radiation. Its principal functions are to:

- Concentrate the radiation onto a detector smaller than the field aperture
- Restrict the field of view of the detector
- Distribute the incoming energy uniformly across the detector

Side by side comparative performance tests of Winston Cone Optics vs. Spherical/Parabolic Mirror Optics indicate a substantial improvement in collection efficiency with identically shaped detectors.

Infrared Laboratories maintains an expanding stock of over 75 optical designs. Call to discuss your needs; we may have a design available.



FROM TOP:

- 1) Dual Gold Plated Cone Assemblies.
- 2) Winston cones with polished interior finish shown.
- 3) General Purpose 4.2K bolometer cone assembly with bolometer sub-straight attached.
- 4) Winston cone assembly and bare nickel F#3.8 cone

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Selecting a Winston Cone

There are three parameters that correctly define a Winston Cone, all of which are dependent on the incoming F/# of light.

1. Entrance Diameter
2. Exit Diameter
3. Length

One of the most important criteria in defining a Winston Cone is the F/# of the incoming beam. By knowing this value the Winston Cone can be optimized to have maximum concentration.

The next value to define is either the Entrance or Exit Diameter.

Typically, the Exit Diameter is the Detector or Absorber dimension. By tailoring the Winston Cone to the Detector/Absorber dimension, the cone will yield optimal results.

