

OMEGA VANZETTI®
**The Leader in Infrared
 Temperature Measurement
 and Control**

Sales and Service
1-800-342-3747SM
1-800-FIBER-IR
 vanzetti.com
 e-mail: info@vanzetti.com

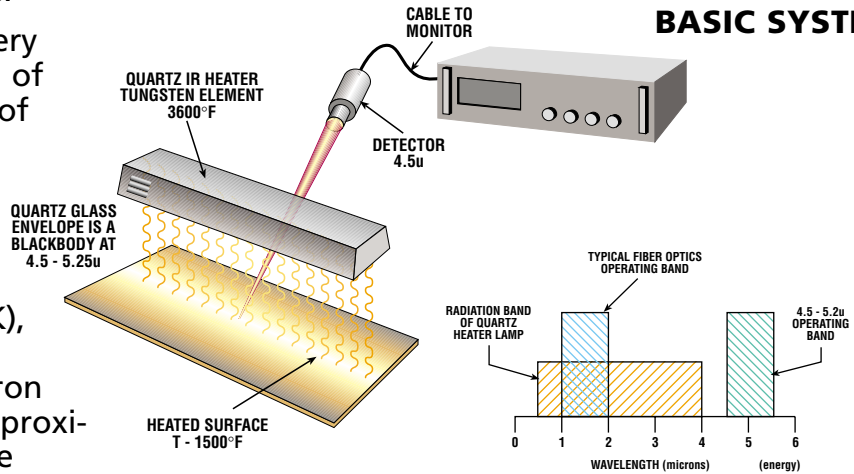
QUARTZ INFRARED HEATING APPLICATION

Certain industrial heat-treating is done with the use of quartz IR heaters.

A quartz IR heater is akin to a very hot electric light bulb comprised of a tungsten filament or an array of these filaments vacuum-sealed inside a clear quartz glass envelope. Electric current passed through the tungsten filament heats them from 3000° to 4000°F (1922° to 2478°K), with peak infrared emissions occurring from 1.17 to 1.51 micron wavelengths. Quartz glass is approximately 90% transparent at these wavelengths and therefore is ideal for allowing these peak radiant emissions through to heat the target surface. Quartz IR heaters can be used to heat anything, and are a "clean" source of heat. They are ideal for thin film, solid plastics and small metal objects.

The enormous amounts of IR radiant emissions that quartz IR heaters generate in the 1-2 micron wavelength region precludes the use of fiber optics, as they are sensitive to this radiation band. Quartz does not transmit radiation beyond about 4 microns. An **OMEGA VANZETTI®** detector operating between 4.5 and 5.25 micron is therefore insensitive to the tungsten filament radiation and is ideally suited for this application.

\$5,600.00
BASIC SYSTEM



Advantages of the line of sight infrared approach as illustrated are:

- Fast response time to 10 mSec (0 to 63%)
- Operational wavelength not effected by the quartz heaters
- Increase accuracy do to the use of the 4.5 micron wavelength
- Multichannel capability
- Adjustable emissivity for various materials
- Ability to control temperature with both hi-low logic and/or proportional control options if desired
- Optional outputs include: 4-20 md, 0-10 vdc and thermocouple ranges from 75-3700°C (in sub ranges 3:1)
- Adjustable emissivity control



OMEGA VANZETTI, INC. Six Merchant Street, Sharon, MA 02067
 Tel: (781) 784-4733 • Fax: (781) 784-2447

D-01