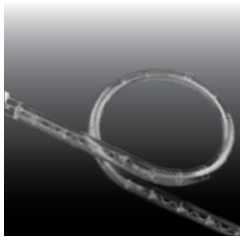
SPECIALTY LAMPS

USHIO has engineering expertise to meet specialized requirements for custom products. We regularly produce specialized lamps in small quantities with short lead times to meet customer specific goals.

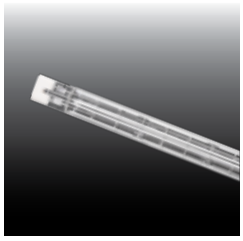
USHIO OREGON GENERAL CAPABILITIES	
Quartz Length	180 - 1600mm
Quartz Tube Diameter (O.D.)	6 - 14mm
Quartz Bending Radius	20 -250mm
Color Temperature	1600 - 3200K
Voltage	Any
Wattage	12,000W Max*
Amperes	25A Max*
Filament Structure	Standard Coil, Segmented Coil, Wave Coil
Reflective Coatings	White
Operating Position	Any

*(Dependent on other parameters)

U-Shaped Lamps



Circular-Shaped Lamps



Twin Tube Lamps

Omega-Shaped Lamps

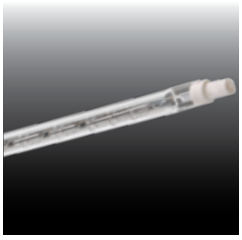
Bend-Shaped Lamps

Curved-Shaped Lamps

Reflective White Coatings Lamps

Ruby Tube Lamps

Wave Coil Lamps



Segment Filament Lamps

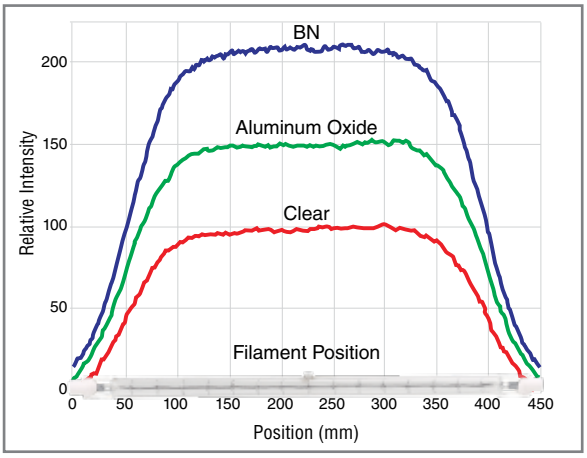
REFLECTIVE WHITE COATING LAMPS

For many years, USHIO has provided lamps with a reflective white coating applied to the lamp. This aluminum-oxide coating increases the efficiency of the (QIH) IR radiation in the direction of the target by approximately 50%.

USHIO has recently developed a new white coating which we call our BN coating. It increases the efficiency of the lamp by another 30% over our standard aluminum-oxide coating.

Please inquire with USHIO to learn if either of these coatings can be applied to your lamp of interest.

Reflective White Coating Chart



RUBY TUBE / GLARE REDUCTION LAMPS

In those applications where the intensity of the lamp is too bright and is exposed to the naked eye, a reduced glare version is often available.

These are available in:

- Translucent (a soft satin looking quartz)
- Frosted (sand blasted quartz)
- Ruby Tube (red pigmented quartz)
- Ruby Jacket (red tube sleeve placed over existing lamp)

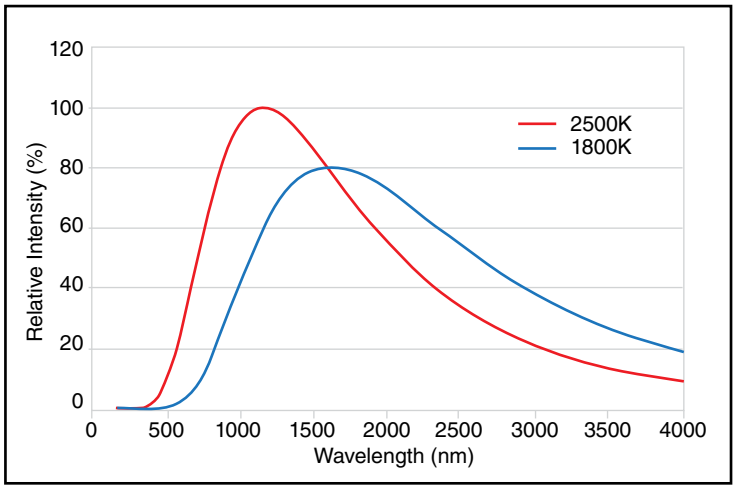
WAVE COIL LAMPS

Short Wave (2500K) and Fast Response Medium Wave (1800K)

Ushio's QIH lamps can be tailored to provide outputs varying from Short Wave radiation to the beginning of Medium Wave radiation to suit the needs of the application. The output of a QIH lamp is a broadband IR radiation which means slight changes to the operational controls will have little effect on the spectral response of the lamp.

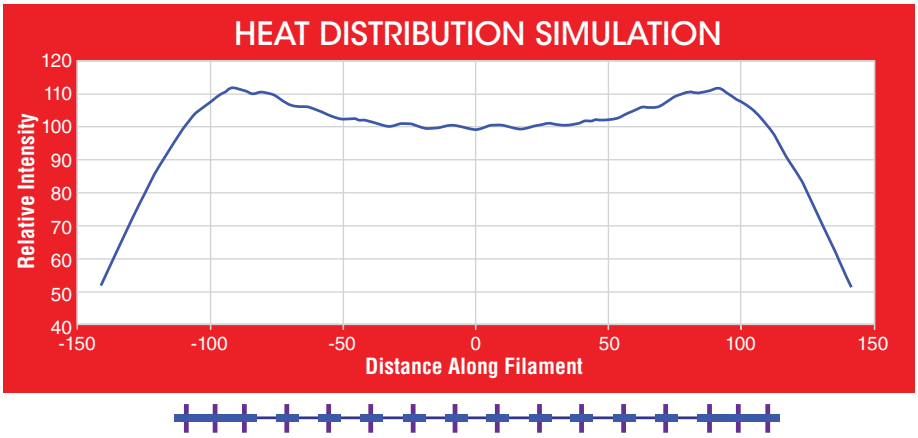
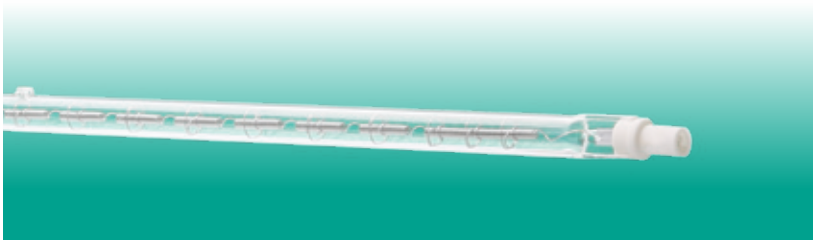
The choice of using a Short Wave lamp or Fast Response Medium Wave (FRMW) lamp depends on the target material. For example, if water were to be heated, wavelengths higher than about 2 or 3 microns would be the most efficient as this is where water has a strong absorption band. This would mean a FRMW lamp would be a better choice for this application. This principle is not always straightforward, for in some cases multiple target materials are involved and one material may absorb the IR radiation which may then transfer it to the other material through conduction. The FRMW lamp comes in two configurations depending on the design constraints: Standard Coil Filament or Wave Coil Filament (pictured below).

Calculated Spectral Distribution with Equal Input Electrical Energy



SEGMENTED FILAMENT LAMPS

Where uniform distribution is required, USHIO has the capability to divide the filament into discrete segments. This segmented design tailors the radiation pattern to provide uniform radiation intensity on the target.



Segmented Filament