

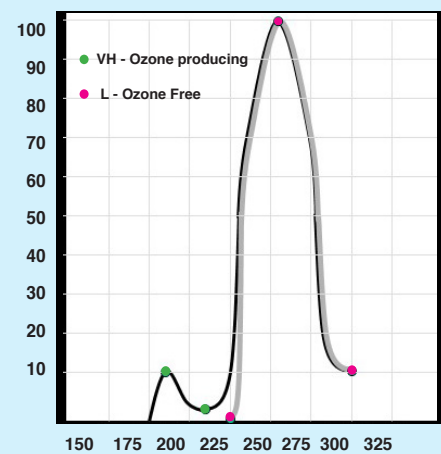
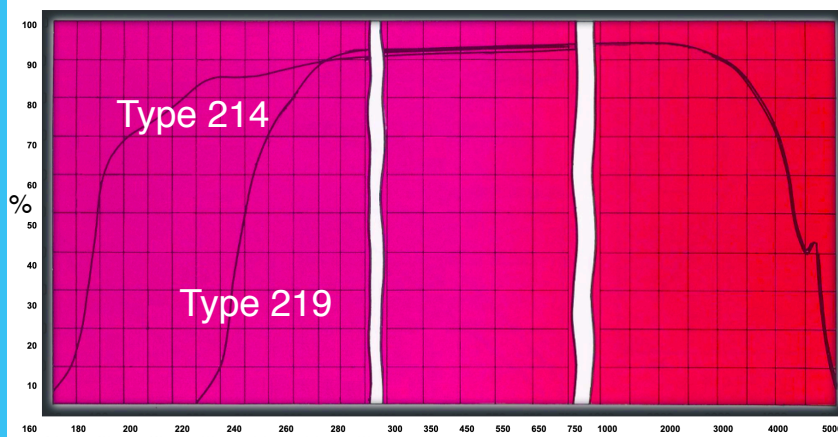
# Quartz Glass, Transmission and Wavelengths

UV lamps produce 254 nm UVC light. Quartz naturally allows 254 nm through. 260-265 nm is the actual peak germicidal range. Quartz material is very close to that “peak” range.

UV lamp quartz tubing (**Type 219**), which contains approximately 100 ppm Ti, has a UV cutoff at ~ 230 nm for a 1 mm thick sample. This blocks lower ozone wavelength which are 185 nm and used for oxidation.

Quartz sleeves that protect the lamps - **Type 214** have a UV cutoff at < 160 nm, small absorption at 245 nm and no appreciable absorption due to hydroxyl ions. It will pass ozone, but not if the lamp does produce it.

The quartz chart details the percent transmittance for **Types 214** and **219** fused quartz, including the losses caused by reflections at both surfaces. The other graphics: wavelength graph of 254 and 185 nm lamps, electromagnetic spectrum and a spectral analysis of a low-pressure lamp.



This spectral analysis was conducted in 2002 on our GHO64T5L lamp (low pressure high-output 155 watt).

Ultraviolet is a part of the electromagnetic spectrum and found between (100-400 nm).

UVC band is used for germicidal disinfection.

