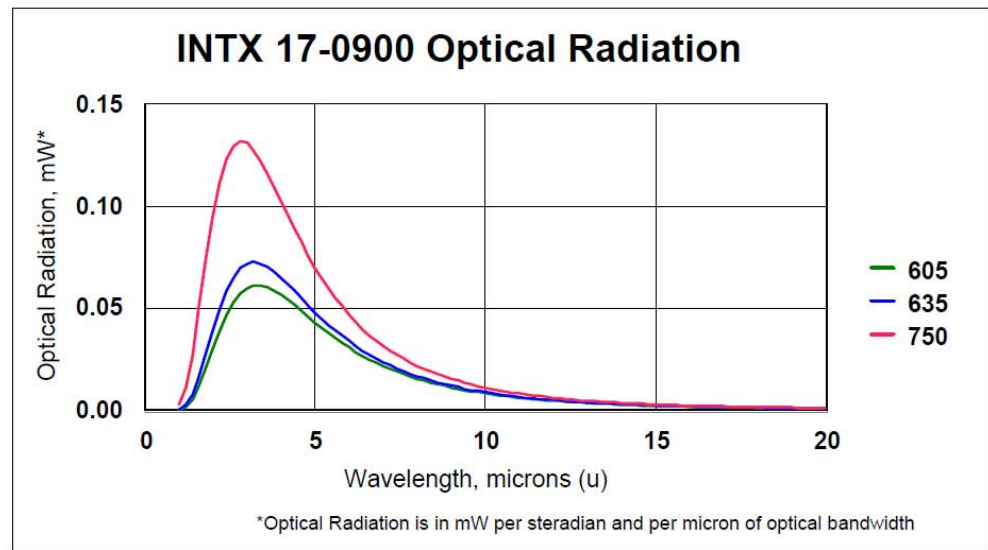




## Emission Spectra and Temperature

Intex's pulsed infrared (IR) light sources are thermal sources emitting infrared energy over a wavelength range of 1-20 microns. The energy output at each wavelength is given by Planck's law so the optical energy density at any wavelength is known based on the temperature, size and emissivity of the emitter. All Intex Emitters are designed and specified to operate up to 750° C. Operation at lower temperatures is possible. Many present applications are operating at 605° C. The graph below shows the optical radiation delivered by the INTX 17-0900 series when operated from 605° C to 750° C. Notice that the peak emission shifts slightly to shorter wavelengths as the temperature increases. However, a higher temperature delivers a higher energy output at all wavelengths.



## Emission Spectra and Area

Intex's pulsed infrared (IR) light sources have three different emitting area sizes. Increasing membrane area gives increased optical output and a small increase in input power. Plotted below is the energy output from the different size emitters operating at 750° C. The output at every wavelength is affected the same by a change in emission area. Selecting the proper size device is a matter of system optical aperture, S/N ratio desired and energy available to power the emitter.

