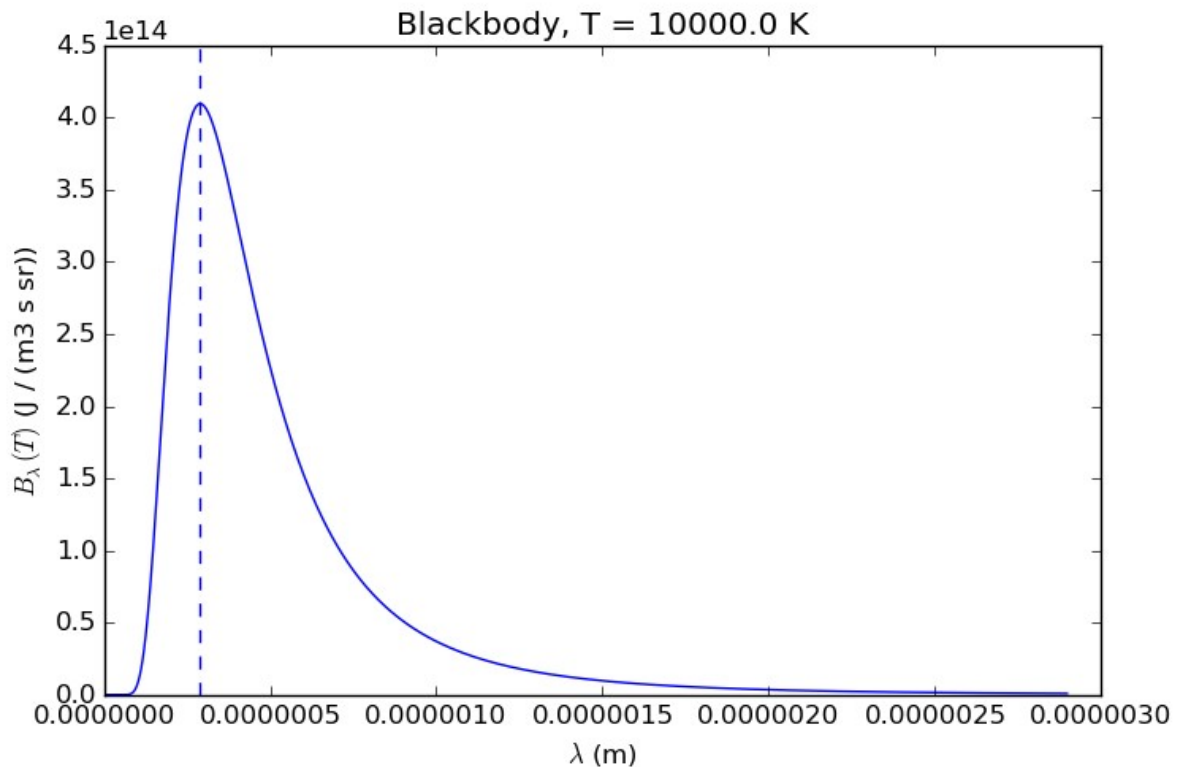


Plot of flux v/s wavelength of black body at temperature of 10,000 K.



Wavelength at the maximum value of flux is 2.8977721e-07 m or 2897.7721 Angstrom
Total radiated flux = 567037300.0 W / m²

The magnitude for ultraviolet filter is 3.68481994686

The magnitude for Blue filter is 4.35505047031

The magnitude for Violet filter is 4.18357782118

The magnitude for Red filter is 4.00735131196

The possible reasons for difference in value of magnitude with the given curve :

1. The reference value of centre wavelength, band width of filters and the value of reference flux (star Vega) is quoted different in different journals which hence is different from the values taken in the given curve.

Given Curve: <http://astro.unl.edu/classaction/animations/light/bbexplorer.html>

Reference values: <http://www.stsci.edu/instruments/observatory/PDF/scs8.rev.pdf>

2. The filters are assumed to have 100% transmittance along the bandwidth in my code while the given code and the other available filters have varied transmittance across spectrum.