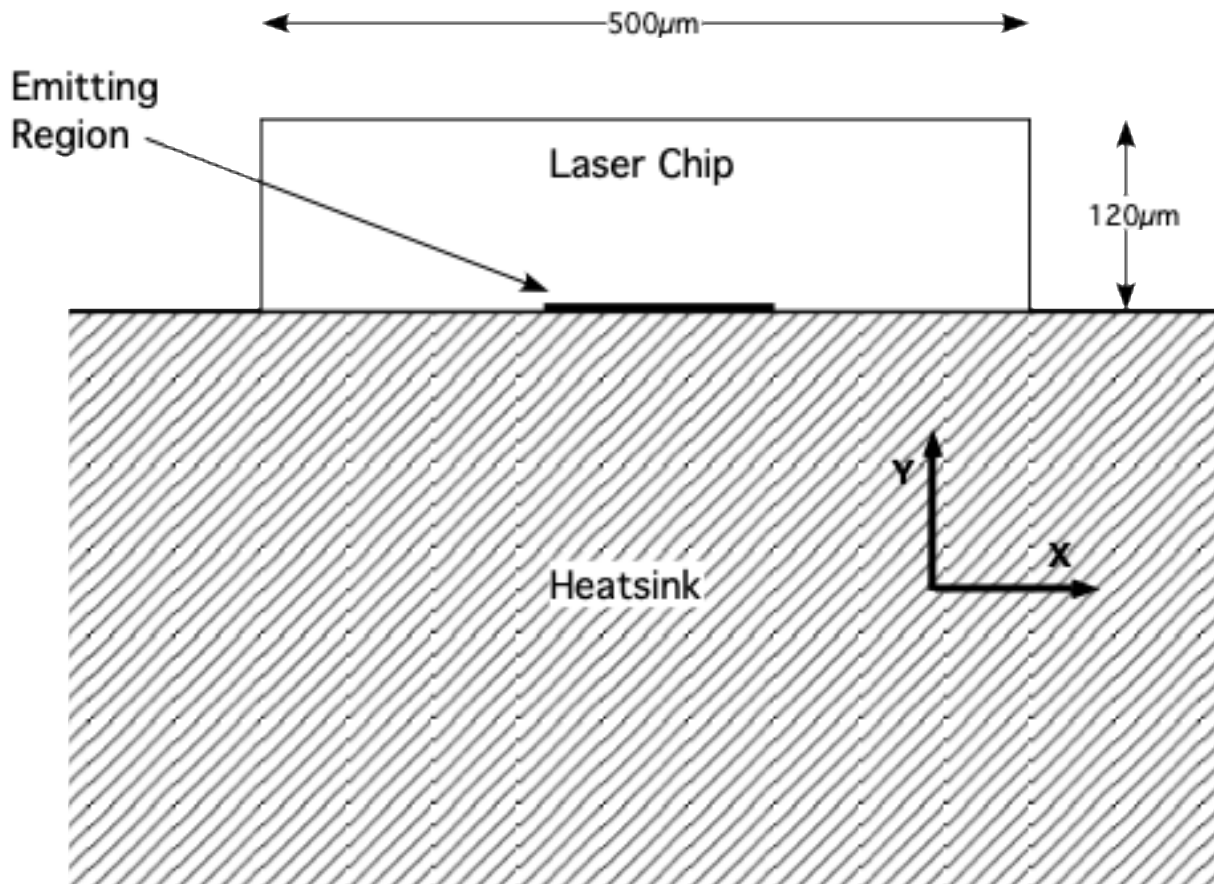


**AN-02 LASER CHIP MOUNTED ON A HEATSINK**

A high-power multimode laser chip is typically  $\sim 500$  microns wide and  $\sim 120$  microns thick. However, the emitting region is much smaller. It is centered along one surface of the chip, against the heatsink. The width of the emitting region (stripe width) is typically 50 to 300 microns, depending on the laser type. The thickness of the emitting region is only 1~2 microns.

The laser chip is oriented so that the wide dimension (e.g.,  $150\mu\text{m}$ ) is along the X-direction shown above. The narrow dimension (e.g.,  $1\mu\text{m}$ ) is along the Y-direction. The light diverges at  $\sim 5\text{-}10^\circ$  FWHM (Full Width at Half-Maximum) in the X-direction (slow axis), and at  $\sim 25\text{-}45^\circ$  FWHM in the Y-direction (fast axis). The output is linearly polarized, typically to a ratio of 50:1 or more. For TE-polarized lasers, the electric field vector is along the X-direction. TM-polarized lasers are polarized along the Y-direction.