

44. (a) At the left end, the plates touch, so $L = 0$ there, which is clearly consistent with Eq. 36-35 (the destructive interference or “dark fringe” equation) for $m = 0$.
- (b) Eq. 36-35 shows a simple proportionality between L and λ . So as we slowly increase L (from zero – its value in part (a)), the smallest nonzero value of L for which the equation (which specifies destructive interference) is satisfied occurs for the lowest possible value of λ . Wavelengths for blue light are the shortest of the visible portion of the spectrum.