

Chapter 23

Light

23.1 (a) 3×10^8 m/s, (b) It is the same (the more precise the values of k and k_m , the more precise your calculation of c) and which implies that electric information travels at the speed of light

23.2 (a) true, (b) true, (c) true

23.3 (a) 0.24 s, (b) 2.1×10^5 s (almost two and a half days), (c) 0.24 s

23.4 (a) 0.24 s, (b) 7.2×10^{-5} s, (c) 21.6 km

23.5 ethyl alcohol

23.6 6.8×10^{14} Hz

23.7 D

23.8 1200 Hz