

20. Using the notation of Sample Problem 37-6 (which is in the textbook supplement), the minimum separation is

$$D = L\theta_{\text{R}} = L \left( \frac{1.22\lambda}{d} \right) = \frac{(6.2 \times 10^3 \text{ m})(1.22)(1.6 \times 10^{-2} \text{ m})}{2.3 \text{ m}} = 53 \text{ m} .$$