

- 18** A parallel beam of monochromatic light of wavelength λ is incident normally on a diffraction grating. The angle between the directions of the two second-order diffracted beams is θ .

What is the spacing of the lines on the grating?

A $\frac{\lambda}{\sin \theta}$

B $\frac{\lambda}{\sin\left(\frac{\theta}{2}\right)}$

C $\frac{2\lambda}{\sin \theta}$

D $\frac{2\lambda}{\sin\left(\frac{\theta}{2}\right)}$

