

29 A beam of red light of wavelength 720 nm is incident normally on a diffraction grating and produces a diffraction pattern on a screen placed parallel to the grating.

The beam of red light is replaced with a beam of electromagnetic radiation of wavelength X , which is incident normally on the same diffraction grating.

The third-order maximum for the electromagnetic radiation of wavelength X is at the same position on the screen as the second-order maximum for the red light.

What is wavelength X ?

A 480 nm

B 540 nm

C 960 nm

D 1100 nm