84. Since intensity is power divided by area (and the area is spherical in the isotropic case), then the intensity at a distance of $r = 20$ m from the source is

$$I = \frac{P}{4\pi r^2} = 0.040 \text{ W/m}^2 \ .$$

as illustrated in Sample Problem 34-2. Now, in Eq. 34-32 for a totally absorbing area A, we note that the exposed area of the small sphere is that on a flat circle $A = \pi(0.020\,\text{m})^2 = 0.0013 \text{ m}^2$. Therefore,

$$F = \frac{IA}{c} = \frac{(0.040)(0.0013)}{3 \times 10^8} = 1.7 \times 10^{-13} \text{ N} \ .$$