

An α particle source of $25 \mu\text{Ci}$ is placed in contact with one face of a large ionization chamber. The source emits a single α particle of energy 6.20 MeV . If the α particles that enter the chamber lose all their energy in the chamber, what is the current produced at the output of the chamber? Assume 100% efficiency for collecting the charges in the chamber. Also assume that the average energy to create an ion pair in the gas is 34 eV .