

## EXTENSION CORD

A five foot long extension cord carries its rated current of 10 amps. It is an ordinary UL cord like you have at home.

- a. Estimate the diameter of each of the 2 conductors in the wire. Assume the wires are made of copper, and each atom has one conduction electron. What is the drift velocity of the conduction electrons?  
 $v_{\text{drift}} = ?$
  
- b. How many watts are dissipated in the wire?  $P_{\text{diss}} = ?$