



Smoke Alarms — A Lifesaving Device

Underwriters Laboratories Inc. (UL) recommends that utilization of both photoelectric and ionization technologies optimize detection and permit the public the best available escape time in residential fire situations.

Demonstrated Research

Research has shown that the two prevalent technologies available today, photoelectric and ionization, each demonstrate superior performance characteristics depending on the specific fire scenario (i.e., slow smoldering vs. fast flaming fires). Extensive research programs at the National Institute of Standards and Technology (NIST), Underwriters Laboratories Inc. (UL) and the National Fire Protection Association's (NFPA) Fire Protection Research Foundation (FPRF) have all shown that ionization alarms typically respond faster to flaming fires, whereas photoelectric alarms typically respond faster to smoldering fires.

Standards Activities

UL is currently working through UL's nationally accredited standards development process to pursue requirements that address recent smoke research findings and which take advantage of recent technological improvements. Specifically, UL is:

- Working to amend the current performance requirements in UL's smoke detector standards, ANSI/UL 217 and ANSI/UL 268, to shorten response times of these devices when reacting to a broader array of fire sources, pursuant to improving egress times during fire events.
- Working to develop new procedures and test requirements, which reflect newer building construction and content materials.
- Supporting the acceptance of a proposal to revise the National Fire Alarm Code, NFPA 72 to provide information through the code regarding the benefits of utilizing the dual ionization and photoelectric technologies in smoke alarm installation practices to optimize warning time for a nonspecific fire.

Technological Neutrality

The performance based requirements in UL standards have been carefully developed to allow for future innovation in smoke detection technologies. UL believes it is the right of the consumer to have access to the safest products available and by remaining technology neutral and instead focusing on establishing state-of-the-art test protocols and improved performance requirements, the consumer will maintain access to new and improved safety technologies coming to market without requiring additional standards revisions or lawmaking.