Illumination at the front entrance is mainly for the identification of callers. Luminaires on either side of the door aid recognition by lighting the face from two directions (Figure 18.9). Luminaires should not be located directly above or behind where a person at the door would be standing. The minimum vertical illuminance at head height should be 10 lx (Van Bommel and Van Dyk, 1984).

Figure 18.9
A recessed doorway with lighting at the sides of the door

The front, back and sides of the house are best illuminated using luminaires mounted on the building itself. This method increases the illumination on the face if the correct luminaires are selected and should be controlled with a motion sensor. As a person approaches, the sensor will activate the luminaires, confronting an intruder with a well-lit environment.

The minimum maintained vertical illuminances for the surfaces of a private house should be in the range 5 to 20 lx, the actual illuminance being determined by the risk of crime and the ambient illuminance. The minimum maintained minimum/average illuminance ratio for all surfaces is 0.25.

18.4.4 Multi-occupancy dwellings

Multi-occupancy dwellings present additional security lighting challenges to those posed by single-family houses. Outside the dwelling, the challenges are the same as for single-family houses and can be dealt with as described above (Leslie and Rodgers, 1996) but when the occupants are inside the building, they are not in a totally secure environment. The building is accessible to the other residents and their guests so occupants may be at risk when moving about within the building.

For hallways, stairways and laundry rooms, lighting that enables recognition of faces is essential to determine who belongs in the space and who doesn't; who is perceived as safe and who may present a danger. Corridors tend to be dark in many multi-occupancy dwellings. A minimum maintained illuminance of 100 lx should be provided at floor level.

18.5 Lighting equipment

18.5.1 Light sources

Most general-purpose light sources can be used for security lighting (see Chapter 3). HID lamps tend to be used for all-night security lighting because they have high luminous efficacies and long lives, they are unaffected by the ambient operating temperature and are available in a wide range of lumen ratings, colours and wattages.