



UNDERSTANDING VISUAL ALARM DEVICES- VADS

The introduction of AS 7240.23 was an important shift in the provision of Visual Alarm Devices (VADs) in Fire Detection and Alarm Systems (FDAS) in Australia.

For the first time, a standard provided equipment with acceptable performance and with clear requirements on the spacing and location of that equipment. Previous editions of AS 1603.11 covered product performance but several key points were not addressed:

- Both flashing beacons and signs were treated as being equally suitable to provide a visual warning of an emergency.
- The standard provided no information on spacing or location of the approved devices
- Unfortunately, neither AS 1670.1 or 4 covered spacing or location of VAD's

AS 1603.11:2018 now only covers visual warning signs and their application is supplementary such as in gas suppression systems. VWDs cannot be used as a substitute for VADs.

VADs are classified into one of the three categories listed below and approval is not based on the intensity of the flash but rather the area of coverage of the device.

VAD categories:

- ceiling mounted,
- wall mounted,
- open category (only suitable in limited applications)

VADs do not depend on line of sight but on the intensity of illumination, specifically 0.4 lux which is developed on the surfaces within a defined test area.

The most efficient light source is white LED light source fitted with a clear lens and this is the most popular VAD available. Models using a red LED light source fitted with a clear lens are also available but may be less efficient than the white LED models.

Either colour is acceptable to AS 1670.1 & 4 but only one colour should be used within an FDAS.

The popular categories are defined as:

Ceiling Mounted

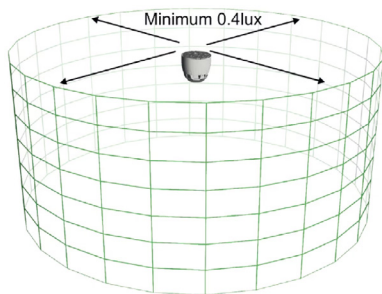
AS7240.23 evaluates the performance of each model and produces a result based on the area in which the VAD achieves the required illumination

x = The maximum mounting height (3, 6 or 9 m)

y = The diameter of the cylindrical area covered

A Classification of C-3-10 means:

- Ceiling mount
- 3m Mounting height
- 10 m Diameter coverage



Where are VADs required?

- External alarm adjacent to the Designated Building Entry Point
- Areas designated for persons with hearing impairment
- Areas of high ambient noise
- Where hearing protection is worn
- Where an audible warning is not provided

Wall Mounted

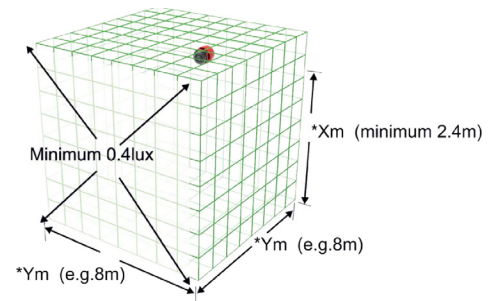
AS7240.23 evaluates the performance of each model and produces a result based on the area in which the VAD achieves the required illumination

x = The mounting height (minimum is 2.4m)

y = The width of the square area covered

A Classification of W-2.4-12 means:

- Wall mount
- 4m Mounting height
- 12m square coverage



VADs may also be installed where speech intelligibility cannot be achieved. An example of this is in carparks where the reverberation from hard surfaces makes it difficult to achieve speech intelligibility. In this case, VADs must be installed throughout the circulation spaces