



Laser classifications and potential hazards

INFORMATION SHEET

Lasers are commonly used for alignment, levelling, control and survey tasks for construction work. The Work Health and Safety (WHS) Regulations impose certain requirements in relation to the safe use of laser equipment at the workplace.

The WHS Regulations prohibit the use of laser classes 3B and 4 in construction work. Laser classes that can be used for construction work are classes 1, 2, 3A, and 3B(Restricted). Although class 3B(Restricted) lasers can be used for construction work they should not be used in dimly lit work areas.

The table below sets out the system of classification of laser devices and the potential hazards of the laser classes from *Australian Standard 2397:1993 – Safe use of lasers in the building and construction industry*. Further information on the safe use of lasers for construction work is available in this standard.

Laser classifications and potential hazards

Laser Class	Description	For use in building and construction industry
Class 1	Safe for use under all conditions of exposure.	✓
Class 2	Low-powered lasers that may require some administrative controls but present little hazard (for example, eye protection is usually provided by normal blink and aversion responses).	✓
Class 3A	These lasers emit higher levels of light and their use requires more stringent engineering and administrative precautions in order to ensure they are not used with optical instruments (for example, a builder’s level or theodolite) which would concentrate the beam so that it would all enter the eye.	✓
Class 3B (Restricted)	These lasers operate at the same power levels as Class 3A but have higher levels of irradiance (power density). These lasers can be used for building or construction applications but should not be used in dimly lit building or construction applications (that is less than approximately 100 lux).	✓
Class 3B	These lasers emit either invisible or visible radiation potentially hazardous to the eye and skin. These lasers must not be used for building or construction tasks.	X
Class 4	These lasers are high-power devices capable of producing diffuse reflections hazardous to the eye. Skin exposure to the direct beam of a Class 4 laser is also hazardous. These lasers must not be used for building or construction tasks.	X

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