

Australian/New Zealand Standard™

Safety of laser products

**Part 3: Guidance for laser displays
and shows**

AS/NZS 2211.3:2002

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-019, Personal Protection Against Laser Radiation. It was approved on behalf of the Council of Standards Australia on 30 August 2002 and on behalf of the Council of Standards New Zealand on 3 September 2002. It was published on 1 October 2002.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee SF-019, Personal Protection Against Laser Radiation.

This Standard is identical with and has been reproduced from IEC 60825-3:1995, *Safety of laser products, Part 3: Guidance for laser displays and shows*.

The objective of this Standard is to provide guidance on the planning and design, set-up and conduct of laser displays and shows that use high power lasers.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text, 'this part of IEC 60825' should read 'this Australian/New Zealand Standard'.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

References to International Standards should be replaced by references Australian Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
IEC		AS/NZS	
60825	Safety of laser products	2211	Safety of laser products
60825-1	Part 1: Equipment classification, requirements and user's guide	2211.1	Part 1: Equipment classification, requirements and user's guide

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AUSTRALIAN/NEW ZEALAND STANDARD

Safety of laser products

Part 3:

Guidance for laser displays and shows

1 Scope and object

1.1 Scope

The laser power needed to produce effective theatrical or artistic displays in large spaces such as theaters, arenas, or architectural sites is great enough to pose a severe accidental exposure hazard, for even when personal exposure is very brief. For this reason, subclause 12.4 of IEC 825-1 specifies that lasers that exceed Class 1 or Class 2 should not be used for display purposes except under carefully controlled conditions and under the control of a trained experienced operator. This technical report gives guidance on the planning and design, set-up and conduct of laser displays and shows that use of high power lasers.

This guidance is not intended to include the display or demonstration of scientific, medical or industrial laser products at trade shows, etc. This guidance provides recommendations for safety for those laser displays or demonstrations that are shows, artistic displays or light sculptures or museum pieces used to demonstrate optical principles, etc.

1.2 Object

This guidance is intended to be used by those who design, manufacture, assemble, install or operate lasers that exceed Class 1 or Class 2 for display and entertainment purposes, by those who operate arenas, theatres, planetaria, discotheques or other places where such lasers may be installed and operated, and by those who are responsible for reviewing the safety of such equipment, installations or displays. This guidance is not normative, but rather a code of practice for the design, installation, operation and evaluation of the safety of laser light shows and displays and the equipment employed in their production. This guidance is also intended for persons who modify laser display installations or equipment.

This guidance contains safety criteria for the protection of the public or persons in the vicinity of laser displays in the course of their employment.

In some countries, there may be specific requirements, such as notifications of shows, or prohibitions, such as against laser scanning of spectators. This guidance is not to be understood as in conflict with such requirements but merely to be supplementary.