AS/NZS 2211.9:2002
IEC TR 60825-9:1999

Australian/New Zealand Standard™

Safety of laser products

Part 9: Compilation of maximum permissible exposure to incoherent optical radiation

Standards Australia
STANDARDS NEW ZEALAND Paerewa Aotearoa

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.

The following are represented on Committee SF-019:

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PREFACE

This Standard was prepared by the Standards Australia Committee SF-019, *Safety of Laser Products*.

It is identical with and has been reproduced from the European IEC TR 60825-9:1999, *Safety of laser products*—Part 9: *Compilation of maximum permissible exposure to incoherent optical radiation*.

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.

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References to international Standards should be replaced by references equivalent to Australian or Australian/New Zealand Standards, as follows:

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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
ISO		AS ISO	
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11145	Optics and optical instruments—Lasers and laser-related equipment—Vocabulary and symbols	—	
ISO/IEC		—	
Guide 51	Safety aspects—Guidelines for their inclusion in standards	—	

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Compilation of maximum permissible exposure to incoherent optical radiation

1 Scope and Object

This Technical Report reconciles current **M**aximum **P**ermissible **E**xposure (MPE) values for the exposure of the human eye and skin to incoherent optical radiation from artificial sources in the wavelength range from 180 nm to 3000 nm with the ultimate goal of harmonisation. Exposure limits between 3000 nm and 1 mm wavelength are currently undefined.

These values are based on the best available information from experimental studies and should be used only as guides in the control of exposure to radiation from artificial sources and should not be regarded as a precise line between safe and dangerous levels.

NOTE The values of this report are applicable to most individuals, however, some individuals may be hypersusceptible or otherwise unusually responsive to optical radiation because of genetic factors, age, personal habits (smoking, alcohol, or other drugs), medication, or previous exposures. Such individuals may not be adequately protected from adverse health effects from exposure to optical radiation at or below the maximum permissible exposure values of this report. Medical advise should be sought to evaluate the extent to which additional protection is needed.

These values were mainly developed for exposure to artificial sources. They may also be used for the evaluation of exposure to sunlight.

The MPE values should not be applicable to exposure of patients to optical radiation for the purpose of medical treatment.

Maximum permissible exposure values for the exposure to radiation from laser sources are defined in IEC 60825-1.

NOTE 1 Basic documents of this report were IEC 60825-1 (addressing lasers) and the IRPA/ICNIRP Guidelines (addressing incoherent sources). ACGIH limits are slightly different in wavelength ranges and in limit values.

NOTE 2 In spite of the fact that LEDs emit mainly incoherent radiation they are currently dealt with in IEC 60825-1.