

AS 2144—1995

Australian Standard[®]

Traffic signal lanterns

This Australian Standard was prepared by Committee LG/6, Road Traffic Signals. It was approved on behalf of the Council of Standards Australia on 23 June 1995 and published on 5 November 1995.

The following interests are represented on Committee LG/6:

Australian Chamber of Manufactures
Australian Electrical and Electronic Manufacturers Association
Australian Road Research Board
AUSTROADS
Brisbane City Council
Department of Road Transport, S.A.
Department of Urban Services, A.C.T.
Metal Trades Industry Association of Australia
Roads and Traffic Authority, N.S.W.
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PREFACE

This Standard was prepared by the Standards Australia Committee on Road Traffic Signals to supersede AS 2144—1989. It is one of a number of Standards which set out requirements for the equipment associated with traffic signal installations. As at the date of publication of this Standard, these include the following:

AS

- 2144 Traffic signal lanterns (this Standard)
- 2339 Traffic signal posts and attachments
- 2353 Pedestrian push-button assemblies
- 2578 Traffic signal controllers
- 2578.1 Part 1: Physical and electrical compatibility
- 2703 Vehicle loop detector sensors
- 2979 Traffic signal mast arms
- 4113 Traffic signal lamps
- 4113.1 Part 1: Lamps for 240 V a.c. operation
- 4113.2 Part 2: Lamps for a.c. operation at extra-low voltage
- 4191 Portable traffic signal systems

AS/NZS

- 4192 Illuminated flashing arrow signs

In this Standard the photometric requirements for vehicular lanterns have been derived from the considerable body of research which has been conducted in Australia, into factors affecting the visibility of these signals (see references in Appendix C).

The Standard includes requirements for the dimensions of certain features of traffic signal lanterns and associated components, arising from a specific desire on the part of road and traffic authorities for uniformity in the appearance of traffic signalling equipment to road users, and from the need to facilitate the compatibility of equipment from different manufacturers. In particular, Appendix E gives recommended dimensions for the attachment of visors and target boards which have the objective of achieving interchangeability between components supplied by different manufacturers.

The requirements of this Standard have the objective of ensuring that, with the exception of replaceable items such as lamps, lanterns will continue to function effectively for a period of at least 20 years; furthermore, that surface finishes applied to the exterior of lanterns (e.g. powder coatings, paint) will last for at least 10 years without the need for further treatment.

The photometric requirements of this Standard apply to new lanterns. In service the photometric performance will deteriorate, sometimes appreciably. Therefore to ensure that the lanterns continue to perform at a satisfactory level a maintenance program will be necessary; see Ref. 3 in Appendix C.

It is recommended that the tests necessary to determine compliance with this Standard be conducted by laboratories that are independently accredited as having competence to carry out the type of measurements involved.

A number of changes have been introduced in this edition of the Standard, the most significant being as follows:

- (a) Revised requirements for the colours of signal lights, to correspond with more recent recommendations of the International Commission on Illumination (see Table 2.1 and Figure 2.1).

- (b) Amended requirements for the intensity/luminance of yellow signals (see Clauses 3.2.1 and 3.2.2, and Tables 3.1 and 3.2).
- (c) Amended requirements for luminous intensities at positions 20° left/right of the beam axis (see Tables 3.1 and 3.2).
- (d) Amended requirements for intrinsic sun-phantom (see Clause 3.2.3.1).
- (e) Amended requirements for operating temperatures (see Clause 4.7).
- (f) Amended requirements for the dimension of target boards (see Table 6.1 and Figure E3, Appendix E).
- (g) Inclusion of a new 'U-turn' symbolic display (see Figure 6.8).
- (h) Inclusion of recommendations for alternative forms of pedestrian signal displays that utilize light emitting diodes (see Appendix F).

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