

AS/NZS 2144:2002

AS/NZS 2144

Australian/New Zealand Standard™

Traffic signal lanterns



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ARRB Transport Research
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
AUSTROADS
Brisbane City Council
Road and Traffic Authority of N.S.W.
Transport SA
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Traffic signal lanterns

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee LG-006 Road Traffic Signals to supersede AS 2144—1995. It is one of a number of Standards which set out requirements for the equipment associated with traffic signal installations. These include the following:

AS

- 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

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- 2144 Traffic signal lanterns (this Standard)
- 4192 Illuminated flashing arrow signs

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 F 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 have the objective of ensuring that, with the exception of replaceable items such as lamps and LED arrays, 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 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 photometric requirements 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.

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, all with the objective of enlarging the scope of the Standard to cover traffic signals using light emitting diodes (LEDs) as the light source.

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