ROADS AND MARITIME SERVICES

TRAFFIC SYSTEMS

SPECIFICATION No. TSI-SP-073

COMBINED PEDESTRIAN AND BICYCLE CROSSING LANTERN

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1 SCOPE

1.1 Purpose

This specification covers the requirements for the combined pedestrian and bicycle crossing lantern for use at signalised crossings.

2 REFERENCES AND APPLICABLE DOCUMENTS

2.1 Australian Standards


2.2 Roads and Maritime Services Documents

[3] TS201 Approval of ITS Field Equipment

3 BACKGROUND

3.1 Existing Separate Pedestrian and Bicycle Crossing Lanterns Arrangement

Currently where pedestrian and bicycle crossing lanterns are required for shared paths at signalised crossings, a standard pedestrian and bicycle lantern are mounted beside each other as per Figure 1.

![Figure 1 Separate Pedestrian Crossing and Bicycle Crossing Lanterns](image)

The display symbols for these standard pedestrian and bicycle crossing lanterns are defined in AS 2144 [1] as supplemented by TSI-SP-045 [2].
3.2 Combined Pedestrian and Bicycle Crossing Lantern

As an alternative to the separate standard pedestrian and bicycle crossing lantern arrangement, this specification defines a single combined pedestrian and bicycle crossing lantern for use in New South Wales as per figure 2.

![Combined Pedestrian and Bicycle Crossing Lantern](image)

**Figure 2 Sample Combined Pedestrian and Bicycle Crossing Lantern**

The dimensions and arrangement of the symbols for the combined pedestrian and bicycle crossing lantern are defined as per this specification.

4 OVERALL REQUIREMENTS

4.1 Traffic Signal Lanterns

This specification defines the display symbols for the combined pedestrian and bicycle crossing lantern. All other features of the traffic signal lantern shall comply with RMS specification TSI-SP-045 [2] and AS 2144 [1] as referenced.

4.2 Display Symbols

The display symbols shall be as depicted below in figures 3 and 4 provide a guide to the dimensions and layout of the symbols for the combined pedestrian and bicycle crossing lantern.

*Note: The gaps shown in the bicycle symbols in figures 3 and 4 may not be necessary with some manufacturing processes; subject to RMS approval.*
Figure 3 Display Symbol for Combined Walking Pedestrian and Bicycle Crossing Lantern
4.3 Photometric Performance

The display symbols shall comply with the relevant clauses of section 3 of AS 2144.

4.4 Test Conditions and Procedures for Photometric and Colorimetric Measurement

The test conditions and procedures for photometric and colorimetric measurement shall be as per Appendix D of AS 2144[1], Clause D3.4 Luminance with the following amendments:
4.4.1 Diffused Aspects that Display Symbols

Paragraph 1 of Clause D3.4.1 of AS 2144 [1] shall be replaced with the following:

“The luminance measurement shall be made at the centre of each of the symbols as per the locations depicted figure 5 for each symbol; i.e. seven points per symbol measured at the centre axis of each symbol in each display”.

![Figure 5 Locations for Luminance Measurement](image)

4.4.2 Non-diffused Aspects that Display Symbols

Clause D3.4.2 of AS 2144 [1] shall be applicable with the following amendments:

The area of the symbol viewed normally is taken as follows:

I. 0.00472 m² for the combined standing man/bicycle; and
II. 0.00455 m² for the combined walking man/bicycle.

5 APPROVAL

To seek approval for the combined pedestrian and bicycle crossing lantern:

a) The supplier shall follow the process defined in TS201 [3]

b) Before seeking approval for the combined pedestrian and bicycle crossing lantern, the vendor shall obtain approval for the traffic signal lanterns as per TSI-SP-045.

c) Photometric measurement shall be conducted by an approved laboratory for the combined pedestrian and bicycle crossing lantern as per Clause 4.3 of this specification. Test results shall be submitted to RMS as part of the assessment.