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Cooperative Engineering Program

SAE J1395

**Turn Signal Lamps
for Use on Motor
Vehicles 2032 mm or
More in Overall Width**

SAE Standard
Issued April 1985

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TURN SIGNAL LAMPS FOR USE ON MOTOR VEHICLES 2032 mm OR MORE IN OVERALL WIDTH—SAE J1395 APR85

SAE Standard

Report of the Lighting Committee, approved April 1985. Rationale statement available.

1. **Scope**—This SAE Technical Report provides test procedures, requirements, and guidelines for turn signal lamps intended for use on vehicles 2032 mm or more in overall width. Turn signal lamps conforming to this report may also be used on vehicles less than 2032 mm in overall width except on passenger cars.

2. Definitions

2.1 **Turn Signal Lamp**—The signaling element of a turn signal system which indicates a change in direction by giving a flashing light on the side toward which the turn will be made. (For flash rate and percent on time, see SAE J590, Turn Signal Flashers.)

3. **Lighting Identification Code**—Turn signal lamps for use on vehicles 2032 mm or more in overall width, may be identified by the codes in accordance with SAE J759, Lighting Identification Code.

16 Front turn signal lamps spaced 100 mm or more from headlamps. Rear turn signal lamps.

17 Front turn signal lamps spaced from 75 mm to less than 100 mm from headlamps.

18 Front turn signal lamps spaced from 60 mm to less than 75 mm from headlamps.

19 Front turn signal lamps spaced less than 60 mm from headlamps.

4. Tests

4.1 SAE J575, Tests for Motor Vehicle Lighting Devices and Components is a part of this report. The following tests are applicable with the modifications as indicated:

4.1.1 Vibration Test

4.1.2 Moisture Test

4.1.3 Dust Test

4.1.4 Corrosion Test

4.1.5 Photometry Test

4.1.5.1 Photometric measurements shall be made with the light source of the signal lamp at least 3 m from the photometer. The H-V axis shall be taken as parallel to the longitudinal axis of the vehicle.

4.1.5.2 Photometric measurements shall be made with the bulb filament steadily burning. Photometric measurements of a turn signal lamp, each compartment of a multiple compartment lamp, and each lamp of a multiple lamp arrangement (limited to two maximum) shall be made separately by aligning the axis of each lamp or compartment with the photometer.

Each lamp or compartment utilized in this manner shall meet the one lighted lamp or compartment value for all functions for which it is designed.

4.1.6 WARPAGE TEST ON DEVICES WITH PLASTIC COMPONENTS

4.2 **Color Test**—SAE J578, Color Specification for Electric Signal Lighting Devices is a part of this report.

5. Requirements

5.1 **Performance Requirements**—A device, when tested in accordance with the test procedures specified in Section 4, shall meet the following requirements:

5.1.1 VIBRATION—SAE J575

5.1.2 MOISTURE—SAE J575

5.1.3 DUST—SAE J575

5.1.4 CORROSION—SAE J575

5.1.5 PHOTOMETRY—SAE J575

5.1.5.1 The lamp under test shall meet the photometric performance requirements contained in Table 1—Photometric Requirements and its footnotes. The summation of the luminous intensity measurements at the specified test points in a zone shall be at least the value shown.

5.1.5.2 When a tail lamp, clearance lamp, or parking lamp is combined with the turn signal lamp, the signal lamp shall not be less than three times the luminous intensity of (a) the tail lamp at any test point, (b) the clearance lamp at any test point, or (c) the parking lamp at any test point on or above horizontal, except that at H-V, H-5L, H-5R, and 5U-V, the signal lamp shall not be less than five times the luminous intensity of the tail lamp, clearance lamp, or parking lamp. When a tail lamp or clearance lamp is combined with the turn signal and the maximum luminous intensity of the tail lamp or clearance lamp is located below horizontal and within an area generated by a 1.0 deg radius around a test point, the ratio for the test point may be computed using the lowest value of the tail lamp or clearance lamp luminous intensity within the generated area.

TABLE 1—PHOTOMETRIC REQUIREMENTS^{a,b,c,d}

Zone	Test Results (Deg)	Minimum Luminous Intensity Total for Zone (cd)		
		Front Signal		Rear Signal
		Yellow	Red	Yellow
1	10U —5L 5U —20L 5D —20L 10D —5L	130	50	84
2	5U —10L H —10L 5D —10L	250	100	165
3	5U —V H —5L H —V H —5R 5D —V	950	380	590
4	5U —10R H —10R 5D —10R	250	100	165
5	10U —5R 5U —20R 5D —20R 10D —5R	130	50	84
Maximum Luminous Intensity (cd)			300	750

^a The measured value at each test point shall not be less than 60% of the minimum in Table 3.

^b The maximum value shall not be exceeded over any area larger than that generated by a 0.5 deg radius within the solid angle defined by the test points in Table 3.

^c Ratio requirements of paragraph 5.1.5.2 apply.

^d Multipliers of Table 2 are applicable per paragraph 5.1.5.

5.1.5.3 Rear signals from double-faced turn signal lamps need only meet the performance requirements contained in Table 1—Photometric Requirements, from directly to the rear to the left for a left hand lamp, and from directly to the rear to the right for a right hand lamp. (The intent of this provision is to permit the manufacturer to provide glare protection for the driver.)

5.1.5.4 In the case where the front turn signal is mounted in close proximity to the low beam headlamp or any additional lamp used to supplement or used in lieu of the low beam, such as an auxiliary low beam or fog lamp, Table 2—Luminous Intensity Multipliers for Front Turn Signal Lamp spacing shall be used to modify Table 1—Photometric Requirements.

5.1.5.5 Spacing for a direct light source type design front turn signal lamp, that is, a lamp primarily employing a lens to meet photometric

TABLE 2—LUMINOUS INTENSITY MULTIPLIERS FOR FRONT TURN SIGNAL LAMP SPACING

Spacing to Lighted Edge of Low Beam Headlamp ^a	Multiplier of Table 1 and Table 3 Values to Obtain Minimum Luminous Intensities
100 mm or Greater	1.0
75 mm to Less than 100 mm	1.5
60 mm to Less than 75 mm	2.0
Less than 60 mm	2.5

^a See paragraph 5.1.5 for methods to be used for measurements of spacings.