



Technical Report Preprint

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J887

SOCIETY OF AUTOMOTIVE ENGINEERS, INC.
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SCHOOL BUS RED SIGNAL LAMPS - SAE J887

SAE Standard

Report of Lighting Committee approved July 1964.

DEFINITION

School bus red signal lamps are alternately flashing lamps mounted horizontally both front and rear, intended to identify a vehicle as school bus and to inform other users of highway that such vehicle is stopped on highway to take on or discharge school children.

IDENTIFICATION CODE DESIGNATION

The identification code designation will be W2.

GENERAL REQUIREMENTS

The effective projected illuminated area measured on a plane at right angles to the axis of the lamp must not be less than 19 sq in.

The following sections from SAE J575 are a part of this standard.

- Section B - Samples for Test
- Section C - Lamp Bulbs
- Section D - Laboratory Facilities
- Section E - Vibration Test
- Section F - Moisture Test
- Section G - Dust Test
- Section H - Corrosion Test
- Section L - Warpage Test on Devices with Plastic Lenses
- Bulb Sockets - See SAE J567.
- Color Test - See SAE J578.
- Photometric Test - See Section J of SAE J575.

All beam candlepower measurements shall be made with a bar photometer, or equivalent, with the filament of the lamp at a distance of at least 10 ft from the photometer screen. The lamp axis shall be taken as the horizontal line through the light source parallel to what would be the longitudinal axis of the vehicle, if the lamp were mounted in its normal position on the vehicle.

An aiming tolerance of $\pm 1/2$ deg vertical and ± 1 deg horizontal should be allowed for manufacturing and laboratory variations.

AIMING PROVISIONS

The lamps should be equipped with aiming pads on the lens face suitable for use with mechanical headlamp aimer. See SAE J571 (Figs. 1 and 3) for aiming pad dimensions and locations. The lamp should be designed so that with the

aiming plane normal to the photometer axis, the beam shall meet the photometric specifications indicated in Table 1.

GENERAL SIGNAL SYSTEM RECOMMENDATIONS

(These general recommendations are not a part of the test specifications.)

Each vehicle should be equipped with two alternately flashing red lamps on the rear and two alternately flashing red lamps on the front. They should be controlled by a manually actuated switch and shall flash alternately at a rate of 60-120 cycles per minute. The "on" period of the flasher should be long enough to permit the bulb filament to come up to full brightness. There should be a visible or an audible means of giving a clear and unmistakable indication to the driver when the signal lamps are turned on. Front and rear signal lamps should be spaced as far apart laterally as practical but in no case shall the spacing between the lamps be less than 40 in.

The signal lamps should be mounted on the same horizontal center line as high as practical at the front above the windshield and on the same horizontal center line as high

Table 1 - Minimum Photometric Candlepower for Red School Bus Warning Lamps

Test Point	Candlepower	Test Point	Candlepower
5U 20L	150	5D 30L	30
10L	300	20L	200
5L	300	10L	300
V	300	5L	450
5R	300	V	450
10R	300	5R	450
20R	150	10R	300
		20R	200
H 30L	30	30R	30
20L	180		
10L	400	10D 5L	40
5L	500	V	40
V	600	5R	40
5R	500		
10R	400		
20R	180		
30R	30		