

7.2 Dimensional interchangeability among types and voltages make it possible for the equipment designer or operator to choose units to suit the wide variety of lighting tasks met in service.

7.3 These units have been selected with special emphasis on light for working conditions and lamp durability which are best provided by units producing only a single beam. Because machines that travel on construction haul roads often encounter traffic similar to highway conditions, careful aiming of the lighting units is required. Headlamp systems composed of these single beam types have been made that restrict glare to acceptable limits, while maintaining adequate illumination for the work areas. This approach avoids the necessity of using dimming switches. Systems employing four or more units, combining headlamps and

floodlamps, without dimming switches, have been devised which provide a marked improvement in operating efficiency.

7.4 Good results from a construction and industrial machinery lighting system require ample provision for individual adjustment of the lamp unit aim, depending on the particular lighting task. Some applications have been used to advantage with vertical aims from 30 deg below to 15 deg above the horizontal and with lateral aims from 15 deg left to 15 deg right.

7.5 Service life or units may be materially prolonged by mountings properly designed to cushion the unit from shock and vibration loading inherent in construction machinery. Where space permits, it is recommended that the 145 mm (5-3/4 in) nominal diameter units be specified to obtain maximum illumination.

TABLE 7—SEALED UNITS FOR CONSTRUCTION AND INDUSTRIAL MACHINES

Type of Service (a)	Trade No.	Design		Rated Average Lab Life Hr at V.	Max AMP of Design Volts	Filament Type	Bulb Size	Maximum Diameter		Max Overall Length		Dimensional Specification	Terminal
		Watts	Volts					mm	in	mm	in		
6 VOLT CIRCUITS													
1	4078	50	6.4	500 at 7	8.2	C-6	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
2	4080	60	6.4	500 at 7	8.2	C-6	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
12 VOLT CIRCUITS													
1	4406	35	12.8	300 at 14	2.93	C-6	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
1	4410	35	12.8	300 at 14	2.93	C-6	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
3	4411	35	12.8	300 at 14	2.93	C-6	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
1	4478	60	13	800 at 14	4.9	2-C6 in Ser.	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
2	4480	60	13	800 at 14	4.9	2-C6 in Ser.	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
24 VOLT CIRCUITS													
1	4578	60	28	800 at 28	2.3	2-C6 in Ser.	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
3	4589	50	28	400 at 28	1.95	CC-6	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
1	4593	50	28	400 at 28	1.95	CC-6	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
2	4750	60	28	800 at 28	2.3	2-C6 in Ser.	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
1	4752	60	28	800 at 28	2.3	2-C6 in Ser.	PAR 36	113.28	4.46	69.85	2-3/4	Fig. 2 (c)	Screw
2	4813	90	28	800 at 28	3.4	2-C6 in Ser.	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
4	4814	90	28	800 at 28	3.4	2-C6 in Ser.	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug
2	4880	60	28	800 at 28	2.3	2-C6 in Ser.	PAR 46	144.78	5.70	101.6	4	Fig. 1 (b)	Lug

NOTE: Service life of construction machine light units might not equal laboratory life because of vibration, shock and variations in vehicle voltage.

(a) Numbers designate type of service

1—Floodlamp

2—Headlamp

3—General Service Lamp

4—High-Speed Driving Lamp

(b) See SAE J572

(c) See SAE J760

REQUIREMENTS FOR SEALED LIGHTING UNIT FOR CONSTRUCTION AND INDUSTRIAL MACHINES—SAE J572 MAY93 SAE Standard

Report of the Construction and Industrial Machinery Technical Committee and Lighting Committee, approved May 1951, revised by the Off-Road Machinery Technical Committee May 1986. Rationale statement available. Reaffirmed by the SAE Off-Road Machinery Technical Committee SC5—Electrical Equipment May 1993. Rationale statement available.

Foreword—This reaffirmed document has been changed only to reflect the new SAE Technical Standards Board format.

1. Scope—This SAE Standard applies to 145 mm nominal headlamp and floodlamp units.

1.1 Purpose—To define the dimensional requirements for sealed lighting units and assure their interchangeability.

2. References—There are no referenced publications specified herein.

3. Requirements—See Table 1 and Figure 1.

TABLE 1—DIMENSIONS FOR SEALED LIGHTING UNIT

Letter	mm	Letter	mm	Letter	mm	Letter	mm	Letter	mm
A	144.78 ⁺⁰ / _{-2.54}	F	66.04	L	0.76	Q	0.88	U	23.36
B	138.17 ⁺⁰ / _{-1.01}	G	11.17 ⁺⁰ / _{-0.63}	M	13.58 ⁺⁰ / _{-1.77}	R	3.68 ^{+0.78} / ₋₀	V	1.98 ⁺¹⁵⁷ / ₋₀
C	130.04	H	17.01 ^{+0.88} / ₋₀	N	3.04 ^{+0.25} / ₋₀	S	126.52 ±3.04	W	6.35
D	133.73 ⁺⁰ / _{-0.76}	J	0.88	P	7.72 ^{+0.40} / ₋₀	T	13.46 ±1.01	X	8.76 ⁺¹⁵² / ₋₀
E	1.52	K	0.76 ±0.05						