



TECHNICAL REPORT

J573d

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LAMP BULBS AND SEALED UNITS—SAE J573d

SAE Standard

Report of Lighting Division approved March 1918 and last revised by Lighting Committee December 1968.

Scope—Many of the lighting devices on motor vehicles are legally required and are essential to safe operation on the highway. To maintain performance, it is important that the bulb and sealed unit types employed be readily available, when needed, throughout the country in normal service channels. Therefore, this SAE Standard lists an assortment of current popular types, together with their characteristics.

which are recommended for use wherever practicable. It is recognized that because of constantly changing and improving technology, the list may be incomplete. Also, instances may arise in the design of some devices which require the employment of other types while achieving the desired performance.

TABLE 1—MOTOR-VEHICLE ELECTRIC LAMP BULBS (FOR NEW DESIGNS OR ORIGINAL EQUIPMENT)

Typical Services ^a	Trade No.	Design					Rated Average Lab Life Design V, hr	Filament				Bulb Type ^b	Base	
		Mean Spherical, cp	CP Tolerance ±, %	Volts	Amps	Amp Tolerance ±, %		Type	Light Center Length (LCL), in.	LCL Tolerance, ±	Axial Alignment Tolerance, ± in.		Type ^b	Description
6-V Circuits														
A, C	51	1	20	7.5	0.22	10	1000	C-2R	0.500	0.093	0.093	G-3-1/2	A-1	Min Bay.
A	55	2	12	7.0	0.41	7	500	C-2R	0.562	0.093	0.093	G-4-1/2	A-1	Min Bay.
L, M, P, T	63	3	8	7.0	0.63	5	1000	C-2R	0.750	0.093	0.093	G-6	B-1	SC Bay.
E	81 ^c	6	9	6.5	1.02	5	500	C-2R	0.750	0.093	0.093	G-6	B-1	SC Bay.
E	209	15	9	6.5	1.78	5	100	C-6	1.062	0.062	0.062	B-6	B-1	SC Bay. ^f
E	210	15	9	6.5	1.78	5	100	C-6	1.062	0.062	0.062	B-6	B-2	DC Bay. ^f
E, D, S	1129	21	7	6.4	2.63	4	200	C-6	1.250	0.040	0.040	S-8	B-1	SC Bay. ^f
B	1133	32	7	6.2	3.91	4	200	C-2R	1.250	0.040	0.040	RP-11	B-1	SC Bay. ^f
D, L, S, T, P	1154	21	8	6.4	2.63	5	200	C-6	1.250	0.040	0.040	S-8	C-2	DC Bay. ^f
		3	12	7.0	0.75	8	1000	C-6	e	e	e	—	—	Indexing
12-V Circuits														
A, C	53	1	20	14.4	0.12	10	1000	C-2V	0.500	0.093	0.093	G-3-1/2	A-1	Min Bay.
A, C, H	53X	1	20	14.4	0.12	10	1000	C-2F	0.500	0.093	0.093	G-3-1/2	A-1	Min Bay.
A, C	57	2	20	14.0	0.24	10	500	C-2V	0.562	0.093	0.093	G-4-1/2	A-1	Min Bay.
A, C, H	57X	2	20	14.0	0.24	10	500	C-2F	0.562	0.093	0.093	G-4-1/2	A-1	Min Bay.
A, L, M, T	67	4	15	13.5	0.59	8	500	C-2R	0.812	0.093	0.093	G-6	B-1	SC Bay.
E, M	89	6	15	13.0	0.58	8	750	C-2R	0.750	0.093	0.093	G-6	B-1	SC Bay.
E, M	90	6	15	13.0	0.58	8	750	C-2R	0.750	0.093	0.093	G-6	B-2	DC Bay.
A, C	158	2	20	14.0	0.24	10	500	C-2V	0.562	0.093	0.093	T-3-1/4	W-2	Wedge
A, C	161	1	20	14.0	0.19	10	1500	C-2F	0.562	0.093	0.093	T-3-1/4	W-2	Wedge
A, C	194	2	20	14.0	0.27	10	1500	C-2F	0.562	0.040	0.060	T-3-1/4	W-2	Wedge
A, E, H, M, T	631	6	20	14.0	0.63	10	1000	2C-2R	0.750	—	—	G-6	B-1	SC Bay.
E	1003	15	9	12.8	0.94	5	100	C-6	1.062	0.062	0.062	B-6	B-1	SC Bay. ^f
E	1004	15	9	12.8	0.94	5	100	C-6	1.062	0.062	0.062	B-6	B-2	DC Bay. ^f
D, L, P, S, T	1034	32	10	12.8	1.80	5	200	C-6	1.250	0.040	0.040	S-8	C-2	DC Bay. ^f
		3	12	14.0	0.59	8	—	C-6	e	e	e	—	—	Indexing
B, D, S	1073	32	10	12.8	1.80	5	200	C-6	1.250	0.040	0.040	S-8	B-1	SC Bay. ^f
B, D, S	1141	21	10	12.8	1.44	6	500	C-6	1.250	0.040	0.040	S-8	B-1	SC Bay. ^f
B, D, S	1142	21	10	12.8	1.44	6	500	C-6	1.250	0.040	0.040	S-8	B-2	DC Bay. ^f
A, H, M, T, L	1155	4	12	13.5	0.59	8	—	2C-2R	0.812	—	—	G-6	B-1	SC Bay. ^f
B, D, H, S	1156	32	10	12.8	2.10	5	600	C-6	1.250	0.040	0.040	S-8	B-1	SC Bay. ^f
D, H, L, P, S, T	1157	32	10	12.8	2.10	5	600	C-6	1.250	0.040	0.040	S-8	C-2	DC Bay. ^f
		3	12	14.0	0.59	8	—	C-6	e	e	e	—	—	Indexing
G	1195	50	12	12.5	3.00	7	300	C-2V	1.250	0.030	0.030	RP-11	B-1	SC Bay. ^f
G	1507	50	12	12.5	3.00	7	300	C-2V	0.875	0.010	0.010	RP-11	F-1	SC Prefocus
A, C, H	1895	2	20	14.0	0.27	10	1500	C-2F	0.562	0.093	0.093	G-4-1/2	A-1	Min Bay.

^a Letter designations are defined as follows: A-Instrument; B-Back-up; C-Indicator; D-Turn signal; E-Interior; G-Auxiliary service; H-Heavy duty service; L-License; M-marker, clearance, and identification; P-Parking; S-Stop; T-Tail.

^b See Figs. 1-3.

^c When bulb No. 81 is operated at 5.5 V, it supplies approximately 3 cp. Therefore, it may be used instead of the 3 cp No. 63 in commercial vehicle applications wherein relatively high

voltage drop is experienced at the end of long lines.

^d Over 2000 hr at 14 V.

^e Filament spacing is denoted by dimension X(0.110×0.020 in.) in Fig. 1.

^f Plane of pins with respect to filament is 90±15 deg. On remaining types filament orientation is random.

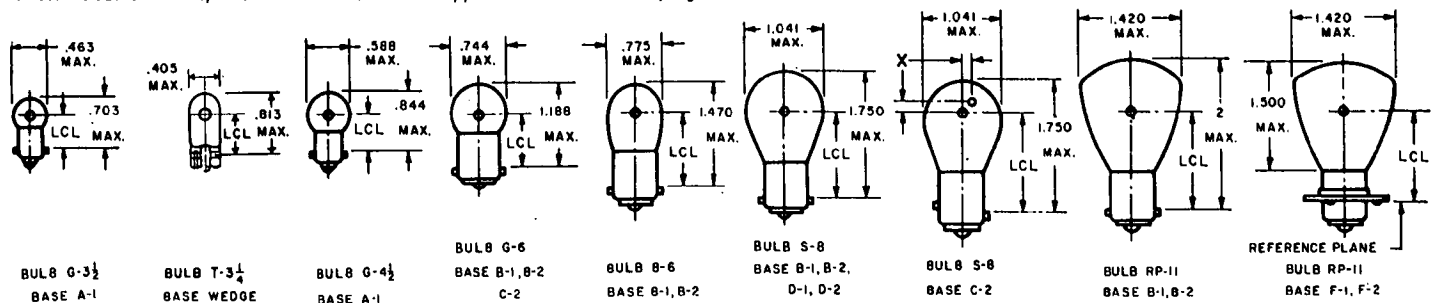


FIG. 1—BULB TYPES (THE LIGHT CENTER LENGTH (LCL) IS MEASURED FROM THE CENTER OF THE FILAMENT)

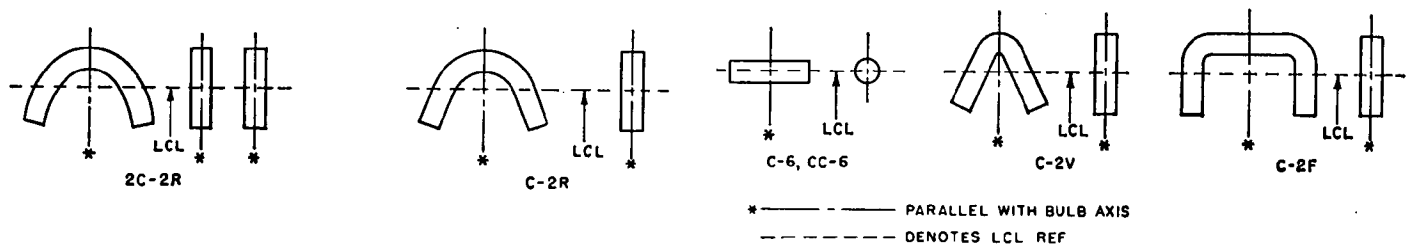


FIG. 2—FILAMENT TYPES

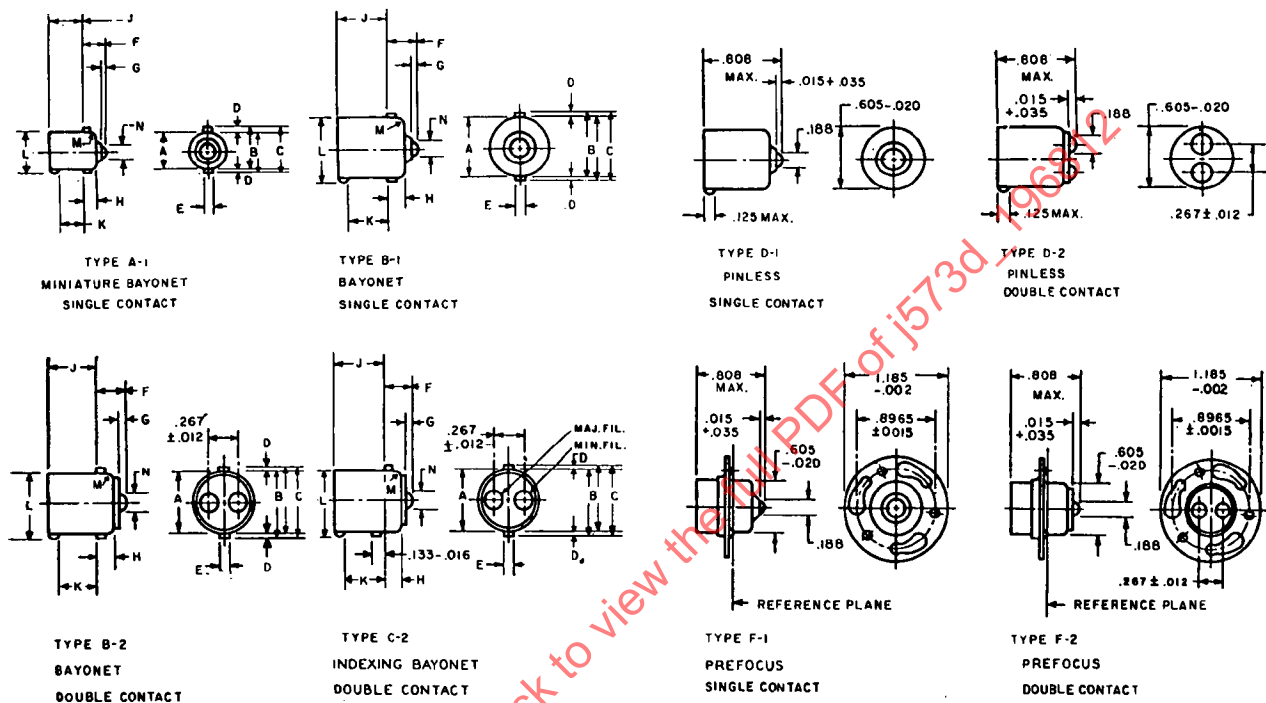


FIG. 3—BASE TYPES

TABLE 2—SEALED UNITS (FOR NEW DESIGNS OR ORIGINAL EQUIPMENT)

Type of Service ^a	Trade No.	Design		Rated Average Lab. Life, hr	Max Amps at Design Volts	Filament Type	Bulb Type	Dimensional Specification	Terminals	
		Watts	Volts						No.	Type
6-V Circuits at 7.0V ^b										
H	6006	50-40	6.1-6.2	75-150	8.60-6.80	C-6-C-6	PAR 56	Fig. 1 ^c	3	Lugs
F	4012	35	6.2	80	5.93	C-6	PAR 46	Fig. 1 ^d	2	Screws
F	4015	35	6.2	80	5.93	C-6	PAR 36	Fig. 2 ^d	2	Screws
S	4515	30	6.4	35	4.95	C-6	PAR 36	Fig. 2 ^d	2	Screws
S	4535	30	6.4	35	4.95	C-6	PAR 46	Fig. 1 ^d	2	Screws
12-V Circuits at 14.0V ^b										
H	4001	37.5	12.8	200	3.14	C-6	PAR 46	Fig. 3 ^c	2	Lugs
H	4002	37.5-50	12.8-12.8	200-320	3.14-4.20	C-6-C-6	PAR 46	Fig. 4 ^c	3	Lugs
H, X	4005	37.5-50	12.8-12.8	240-400	3.14-4.20	C-6-C-6	PAR 46	Fig. 4 ^c	3	Lugs
H, X	4006	37.5	12.8	240	3.14	C-6	PAR 46	Fig. 3 ^c	2	Lugs
S	4404	30	12.8	35	2.58	C-6	PAR 36	Fig. 2 ^d	2	Screws
S	4405	30	12.8	35	2.58	CC-6	PAR 36	Fig. 2 ^d	2	Screws
F	4412	35	12.8	100	2.93	C-6	PAR 46	Fig. 1 ^d	2	Screws
F	4415	35	12.8	100	2.93	C-6	PAR 36	Fig. 2 ^d	2	Screws
H	6012	50-40	12.8-12.8	200-320	4.20-3.36	C-6-C-6	PAR 56	Fig. 1 ^c	3	Lugs
H, X	6013	50-40	12.8-12.8	240-400	4.20-3.36	C-6-C-6	PAR 56	Fig. 1 ^c	3	Lugs

^a Letter designations are defined as follows: F-Fog; H-Sealed Beam Headlamp; S-Spot; X-Heavy Duty Service.

^b For convenience and simplification of life testing, all lamps designed for use on 6V circuits are life tested at 7V, and all lamps designed for use on 12V circuits are life tested at 14V. ^c See SAE J571.

general life at average service voltages is longer.

^d See SAE J760.