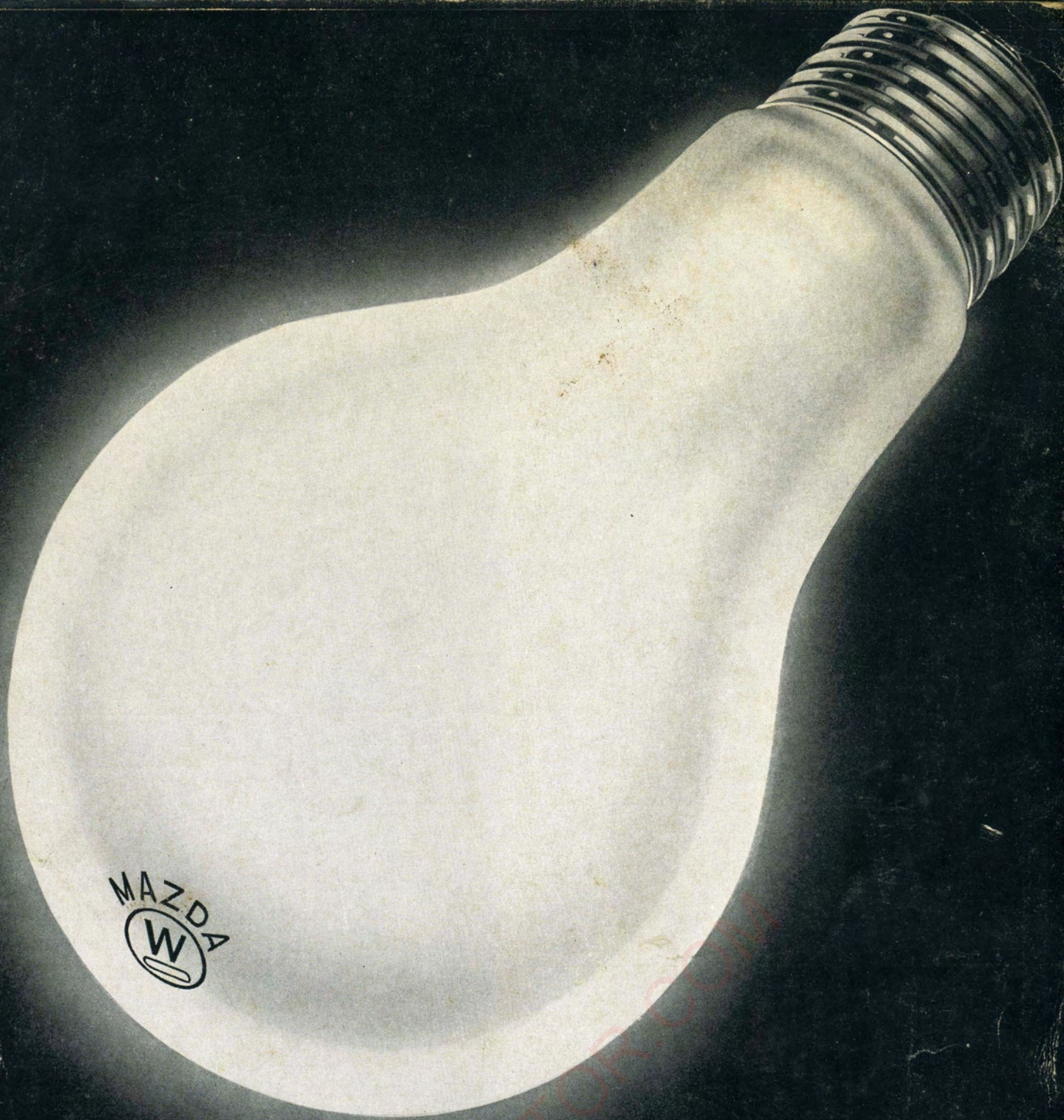


CATALOG OF STANDARD
WESTINGHOUSE MAZDA LAMPS
AND
TYPE “D” LAMPS
OCTOBER 1, 1937

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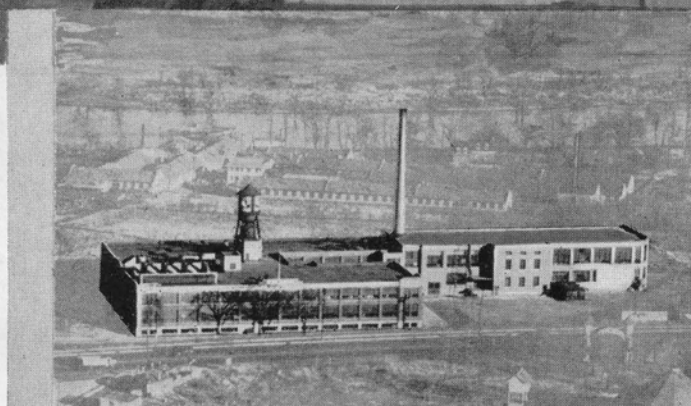


CATALOG OF STANDARD
Westinghouse MAZDA LAMPS
AND
TYPE "D" LAMPS

OCTOBER 1, 1937



The Westinghouse Lamp Division plant, research laboratories and engineering buildings located at Bloomfield, N. J.



The Westinghouse Lamp Division plant at Belleville, N. J.



The Westinghouse Lamp Division plant at Trenton, N. J.

■ Westinghouse MAZDA Lamps are manufactured according to precise, accurate standards in modern, up-to-date plants at Bloomfield, Belleville, and Trenton, New Jersey. These plants are equipped with the latest improved lamp-making machinery. Every step in manufacture, from raw material to finished lamp, is carefully checked and supervised by skilled lamp technicians. There are more than 480 tests and inspections through which each lamp must pass before it can bear the Westinghouse trade-mark.



**Westinghouse Makes No
Compromise with Quality**

WESTINGHOUSE

CATALOG OF STANDARD LARGE MAZDA LAMPS AND TYPE D LAMPS

OCTOBER 1, 1937

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WESTINGHOUSE LAMP DIVISION

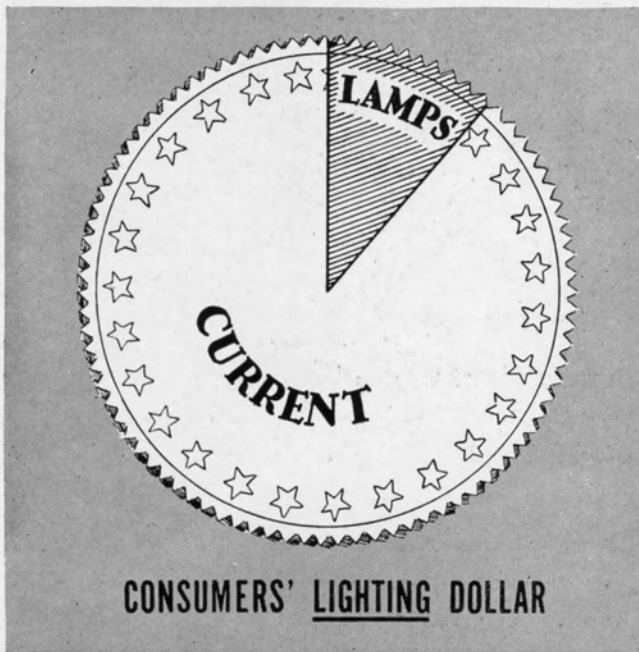
WESTINGHOUSE ELECTRIC & MANUFACTURING CO.

150 BROADWAY



NEW YORK, N. Y.

THE ECONOMIC ADVANTAGE OF USING LAMPS OF HIGH QUALITY



WHEN buying incandescent lamps don't be misled by the price ticket on the lamp. A penny saved by buying a cheaper lamp may mean dollars lost in the cost of light and...the cost of light is the real factor to consider.

Lamps are bought for the purpose of getting light. Current is bought so that those lamps can produce light. At least ten times as much is paid for the current as for the lamps. Yet this minor cost factor (the Lamp) determines whether or not the major cost factor (the Current) is being used to best advantage.

The efficiency of a lamp is determined by its ability to convert current into light. In *buying light*, the *efficiency of the lamp* is the *most important consideration*. Westinghouse Mazda lamps are truly economical. Through greater efficiency they lower the cost of light to the consumer.

THE VALUE OF CORRECT DESIGN AND PRECISION MANUFACTURE

Two lamps may contain the same materials and be of the same construction. They may look exactly alike but may vary greatly in light output for the current consumed, because of the influence of painstaking

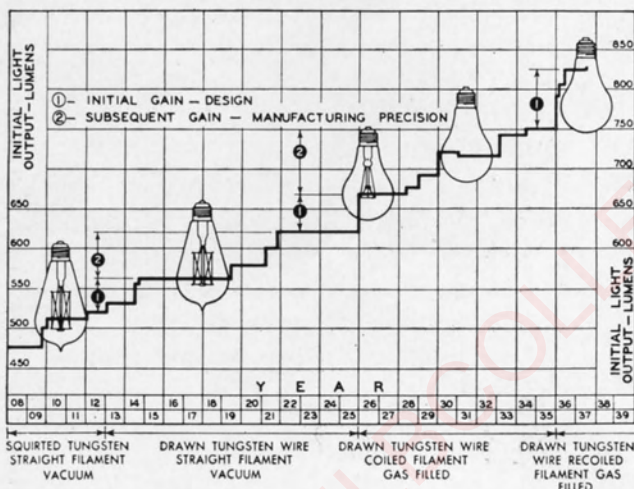
manufacturing precision on efficiency.

This chart shows the tremendous progress that has been made from the first commercial 60-watt tungsten lamp to the present-day high efficiency recoiled filament lamp.

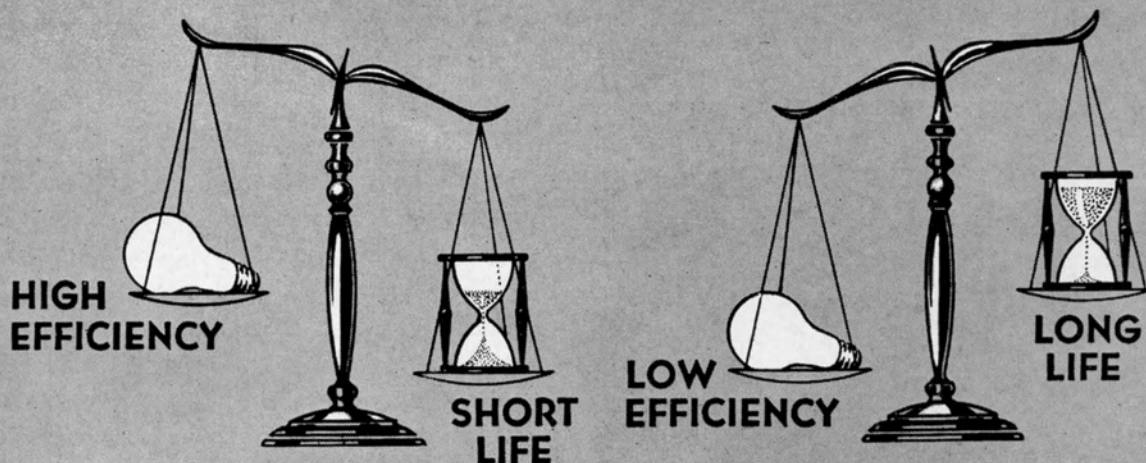
Part of this advancement has been due to invention, part to discoveries of new materials, but much of the improvement has come from better manufacturing technique and greater skill.

Westinghouse Mazda lamps are being continuously improved. *Not a single year goes by that does not show significant progress.* As a result of these improvements the 60-watt Mazda lamp of 1937 has a light output equivalent to an 87-watt lamp of 1917.

It is important that a purchaser make certain that the lamp he is buying embodies the very latest in design and is produced with the maximum of manufacturing skill and precision.



THE ECONOMICS OF LAMP LIFE



LIFE is not the most important factor in the cost of light. Any lamp manufacturer can increase the average life of an incandescent lamp. This can only be done, however, by decreasing the light produced or increasing the current consumed.

Short Life means More Light. Long Life means Less Light. The most economical lamp life is arrived at by taking into consideration all of the costs involved. These are primarily the cost of the lamp and the cost of the current. The designed lives of Westinghouse Mazda lamps are chosen to obtain minimum lighting costs when the factors of lamp replacement and overhead charges are also considered.

Engineers and economists have studied the various

types of lamps and service and have determined the most economical and satisfactory life for each. These lives in our standard line of lamps range from a fraction of a second for the photoflash lamp to 2,000 hours for traffic signal and street lighting lamps.

The effect of lamp life upon the cost of light is shown in the following example:

1000-HOUR Mazda lamp of 828 lumens . . 60 WATTS
 2000-HOUR lamp of Mazda lamp quality
 of 828 lumens 66 WATTS

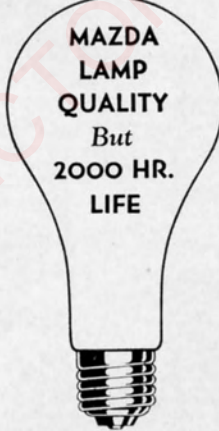
The extra 6 watts of electricity for 2000 hours life of the lamp would cost several times as much as the lamp itself.

60 Watt
MAZDA LAMP

1000 HR.
LIFE



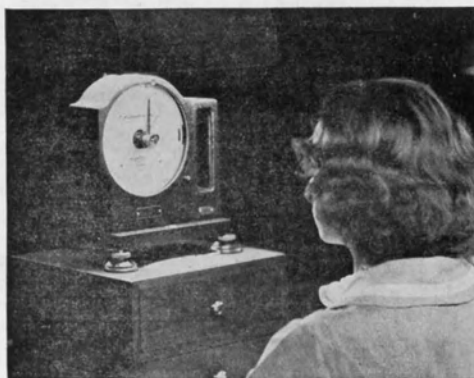
MAZDA
LAMP
QUALITY
But
2000 HR.
LIFE



Designed for 2000
hours. Will con-
sume 66 watts and
give 828 initial lu-
mens.

BULB COLLECTOR.COM

THERE ARE NO WEAK LINKS IN THE WESTINGHOUSE CHAIN OF QUALITY



Quality is built into an incandescent lamp by correct designing, manufacturing precision, and the highest grade materials.

The Westinghouse trademark on a MAZDA lamp is your guarantee of quality. It means that fifty years of lamp making experience, and the skill of thousands of engineers, research scientists, and mechanics have gone into its making. Look for this trademark when you buy Lamps.

When you buy Westinghouse Mazda Lamps you get

1. Uniform Performance at High Efficiency
2. Light Output Maintained Throughout Life
3. Lamps Free of Defects

UNIFORM PERFORMANCE AT HIGH EFFICIENCY

The most important factor in controlling uniformity of efficiency, watts and life of a lamp is its filament. To obtain the most consistent invariable ore Westinghouse carries a supply of tested and approved ore, sufficient to manufacture 1,500,000,000 Westinghouse Mazda Lamps—more than enough for the total lamp consumption of the entire United States for the next three years.

The drilling of diamond dies through which our finest filament wires are drawn, is checked to within $5/1,000,000$ ths of an inch.

The uniformity of the wire is checked continuously as drawn with instruments which will weigh it within ten one-billionths of a pound. This is equivalent to the weight of the ink in the dot at the end of this sentence.

Filament coils in Westinghouse Mazda Lamps are exactly spaced. Fine filaments are wound with over 2,000 turns per inch. These coil turns do not vary in separation more than two one-hundred thousandths.

Every individual coil is inspected on a Balopticon machine where it is magnified 100 times.

Several times every day samples from each machine are sent to the photometric and life test laboratories for test. This gives an accurate and immediate check on the life, light output and efficiency of the lamps produced by every machine.

LIGHT OUTPUT MAINTAINED THROUGHOUT LIFE

To maintain light output throughout the life of a lamp requires great care in manufacture and selection of raw materials. The effect of the crystal structure of filament wire on lamp performance under varying conditions makes it necessary to select the filament wire from a dozen different groups.

Vacuum gauges which measure gas pressure to within thirty-one billionths of an atmosphere are used to check exhaust machines.

One drop of moisture distributed within 100,000 lamps is sufficient to cause excessive blackening and thereby reduce the efficiency of all these lamps by 10 per cent. To guard against moisture and other impurities, filament wire is stored in an air-conditioned room and hermetically sealed gas lines are used to conduct the gas from storage tanks to the lamp making machines. In addition to careful handling of clean lamp bulbs, they are heated at exhaust by direct gas flame to drive off all impurities and moisture.

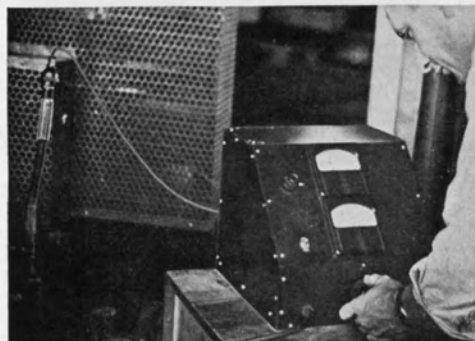
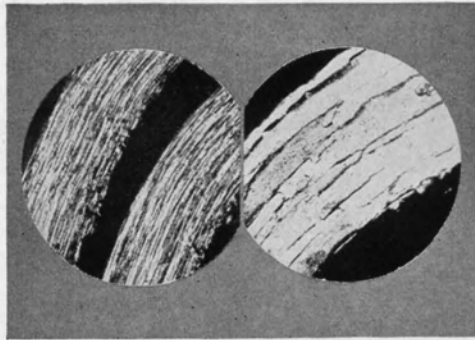
LAMPS FREE OF DEFECTS

On these super-human machines lamp parts of glass and metal are combined into a light source as perfect as modern science can produce. This machinery is the ultimate in precision and functions under the watchful guidance of highly trained operators, mechanics, and engineers. Over 99.9% of Westinghouse Mazda lamps shipped are free of defects that would seriously affect their performance. This is largely the result of the use of every known precaution in the creation of the parts that go to make the lamp. On this group of assembly machines, depends the final perfection that is demanded of Westinghouse Mazda lamps.

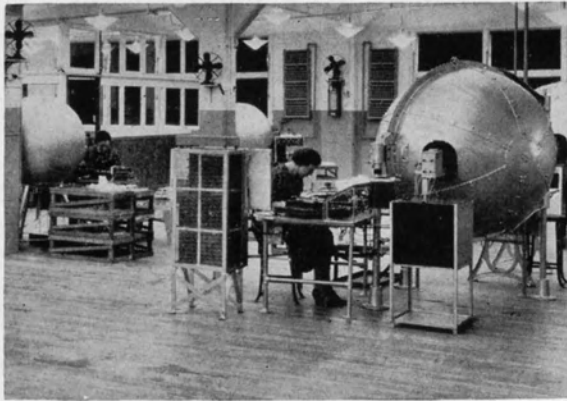
RESEARCH AND ENGINEERING

A large number of chemists, physicists and other technical experts in Westinghouse research and development laboratories are engaged in unceasing research to make better lamps and are also in close touch with the great experimental and technical laboratories throughout the world. These experts give to each factory making Westinghouse Mazda

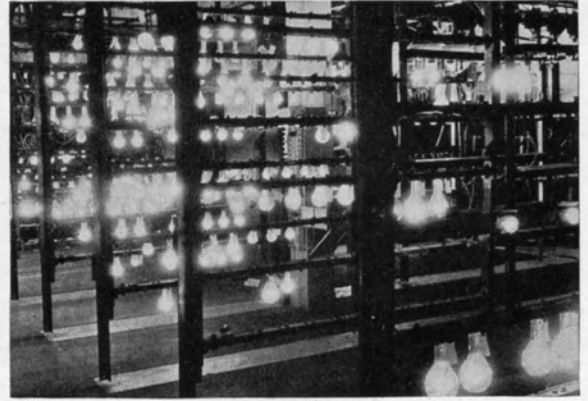
Lamps every bit of information from whatever source derived that will enable that factory to produce incandescent electric lamps of the very highest quality in order that they will produce light at low cost. The words "WESTINGHOUSE MAZDA" on an incandescent lamp means that it has received the benefits of this research.



WESTINGHOUSE CHECKS ITS QUALITY



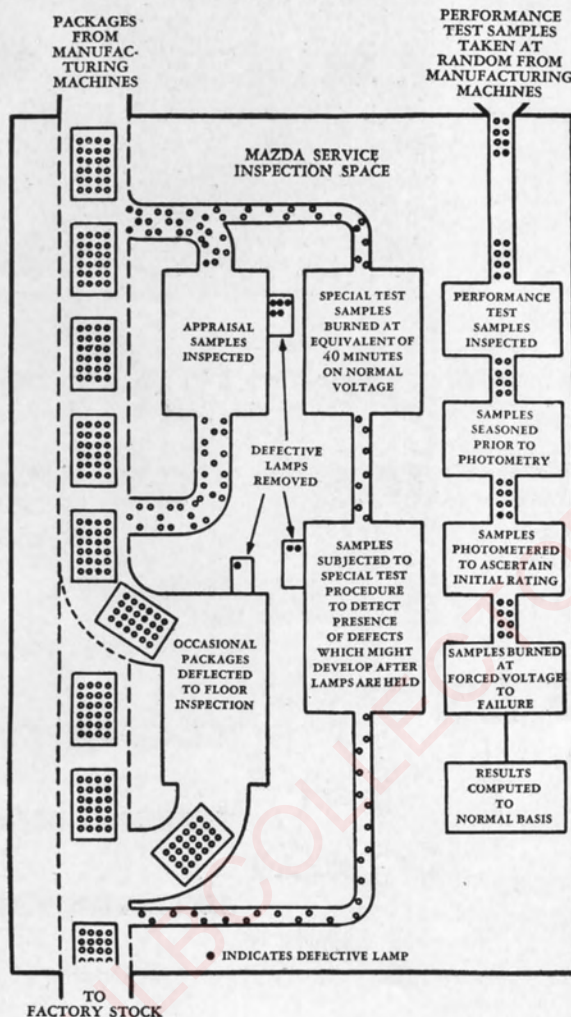
On these photocell photometers continuous checks are conducted to make certain that the light output, wattage, and efficiency of Westinghouse is correct.



In addition to the daily accelerated life tests at forced voltage which provide immediate checks on performance, normal tests are conducted in the life test laboratory.

MAZDA SERVICE INSPECTION RECHECKS QUALITY

MAZDA SERVICE INSPECTION PROCEDURE



To make certain that every Westinghouse Mazda lamp maintains the high standards of quality imposed by Mazda Service, the Electrical Testing Laboratories—foremost independent electrical testing organization in the country—has for years been employed to make continuous inspections and tests on all Mazda lamps. Inspectors for the Electrical Testing laboratories are located in each Westinghouse Mazda lamp factory and every package of Westinghouse Mazda lamps is subject to their sampling and inspection before it may be shipped.

These inspectors are absolutely independent of the factory management, and inspect millions of Westinghouse Mazda lamps each year for every possible flaw. They report their findings directly to the scientists who are responsible for the quality of Westinghouse Mazda lamps. This plan for checking and maintaining quality is unique in the lamp industry. It guarantees to the public that Westinghouse Mazda lamps are accurately rated, will not blacken prematurely, are uniformly reliable in their operation, and produce light at low cost.

LOOK FOR THESE QUALITIES IN A LAMP

LAMPS may look alike, but the simplicity of a lamp's exterior belies the precision and resource and skill that must go into its interior construction if it is to be a good lamp. The interior construction of Westinghouse MAZDA lamps is the result of research and skill and they combine all of the qualities that make lamps economical. Any good lamp and every Westinghouse MAZDA lamp must have these qualities:

High Efficiency When The Lamp Is First Placed In A Socket And During Its Whole Burning Life

Today the light output of a 60-watt MAZDA lamp, even at the end of its life, seldom falls below 90% of that of a new lamp.

Correct Average Life

MAZDA lamps are carefully designed for a life that has been determined to be best for each class of service.

Uniform Performance

MAZDA lamps are uniform in life, candlepower and watts.

Freedom From Defects

MAZDA lamps are 99.9% free from defects that will seriously affect their performance.

Accurate Rating

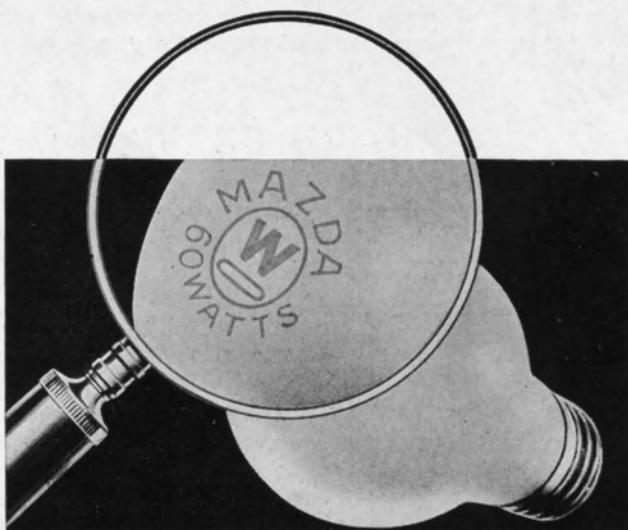
MAZDA lamps conform more closely to the wattage marked on their bulbs and to the accuracy of their efficiency ratings than required by Federal Specifications.

Strength

By correct design and careful selection of the materials that go into MAZDA lamps their strength is assured both when new and throughout life.

Your Guarantee

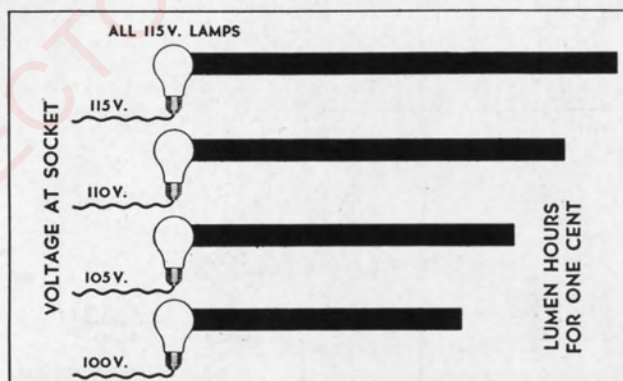
When you see this mark on a lamp you need no further guarantee of quality.

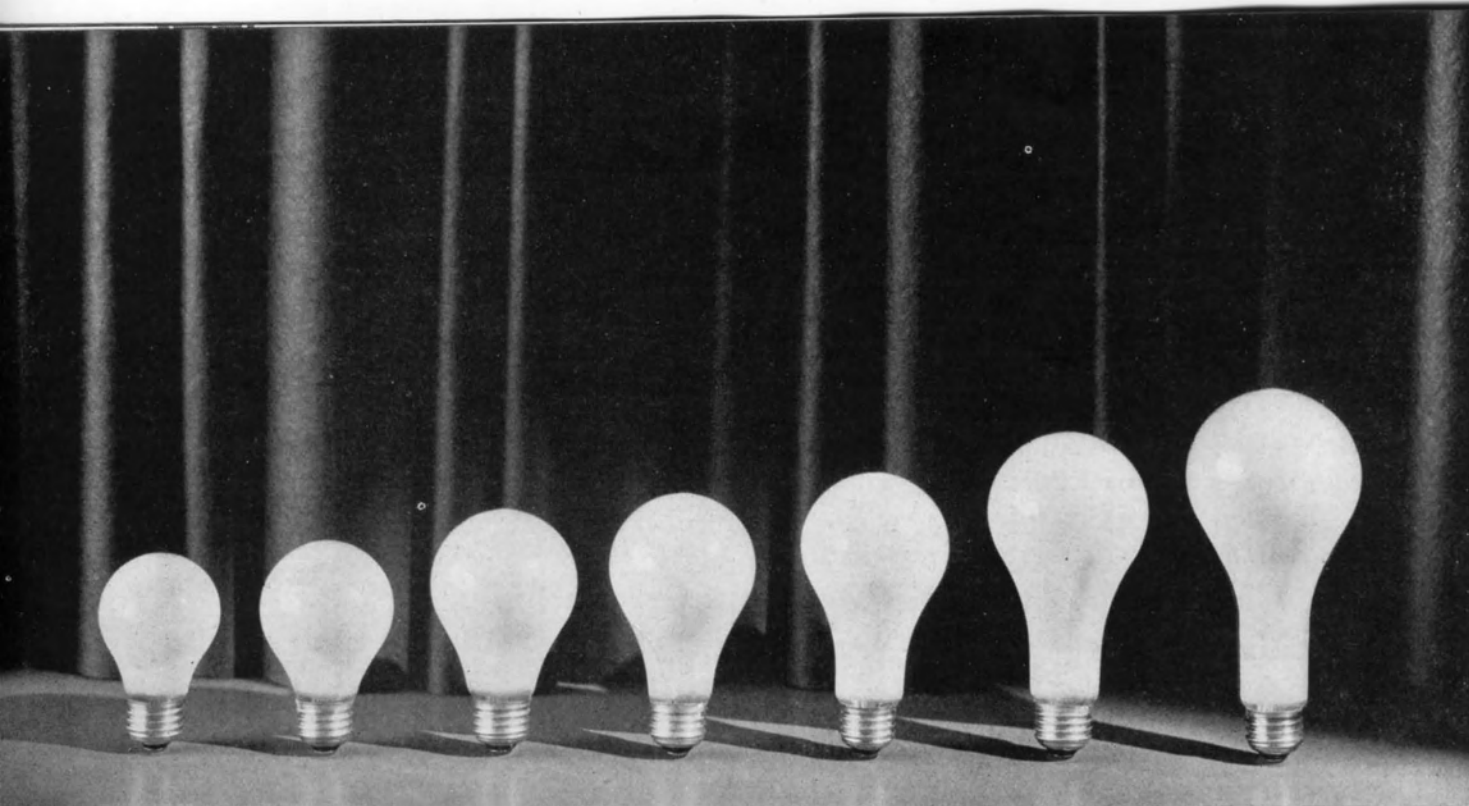


LAMPS BURNED AT PROPER VOLTAGE GIVE YOU ALL THE LIGHT YOU PAY FOR

WHEN you burn lamps under their rated voltage, you waste useful electrical energy. Undervoltage burning has the same effect as a reduction in the efficiency of a lamp. Years of patient research have been spent to raise the efficiency of MAZDA lamps to their present high levels, and any lamp user who knowingly burns lamps undervoltage sacrifices this gain in efficiency and raises his own cost of light.

Undervoltage burning makes you pay for light you do not get. Make certain you get all the light you pay for by using lamps of the proper voltage.





Watts 15 25 40 50 and 60 75 100 150

GENERAL LIGHTING SERVICE — 110, 115 and 120 Volts

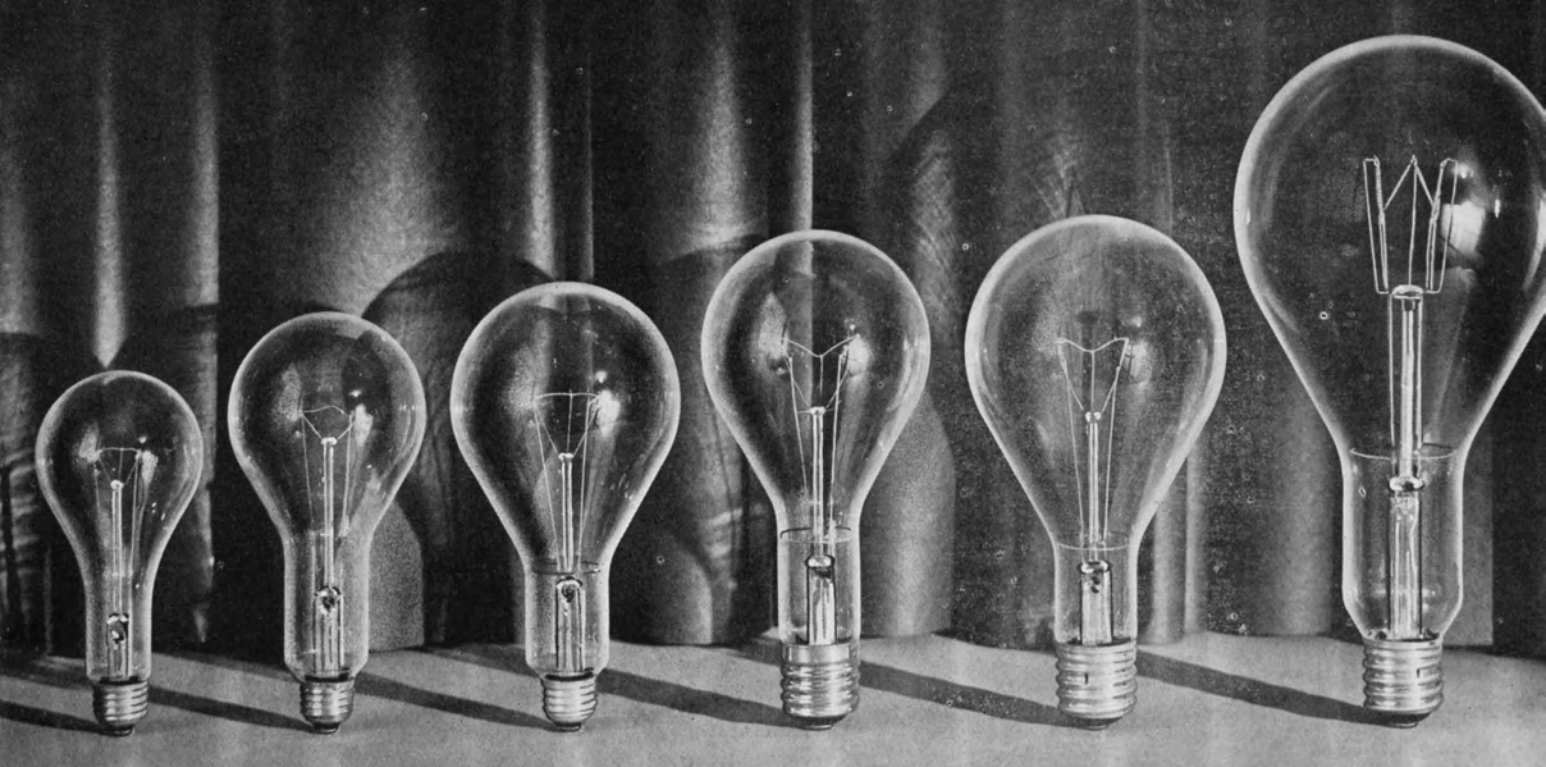
GENERAL LIGHTING SERVICE lamps fulfill 65 per cent of the lamp requirements for ordinary uses in homes, stores, offices, schools, factories and the like. These lamps will operate in any position of burning, but the light maintenance, particularly in lamps of higher wattage sizes, is best when lamps are burned vertically base up. The data on light (lumen) maintenance given in the technical summary apply to this burning position only.

INSIDE-FROSTED FINISH—The light absorbed by inside frosting is so negligible (the lumen output is rated the same as for clear lamps) that these lamps are recommended for most general lighting purposes to provide added diffusion and, in the case of indirect lighting equipment, to eliminate striations and harsh shadow effects.

CLEAR FINISH—Clear bulb lamps are satisfactory for use in adequately shielded reflectors or diffusing equipment which protect the eyes from the irritating effects and inefficiency which glare produces. They are used also in floodlighting and miscellaneous special applications requiring reasonably accurate control of light.

WHITE BOWL FINISH—The light output of white bowl lamps is approximately 3 per cent less than that of clear or inside-frosted lamps. They should be burned base up only and are recommended for use in open-type equipment such as the RLM Dome reflector to improve the quality of illumination by minimizing direct glare, reflected glare and deep shadows. These factors, as well as adequate amount of light, determine the effectiveness of the illumination.

Watts	Bulb	Approximate Lumens	Screw Base	Standard Package Quantity	List Price
					Inside Frosted
15	A-17	141	Medium	120	\$0.15
25	A-19	260	Medium	120	.15
40	A-19	444	Medium	120	.15
50	A-21	650	Medium	120	.15
60	A-21	828	Medium	120	.15
75	A-21	1073	Medium	60	.20
100	A-23	1560	Medium	60	.20
150	A-25	2580	Medium	60	.25



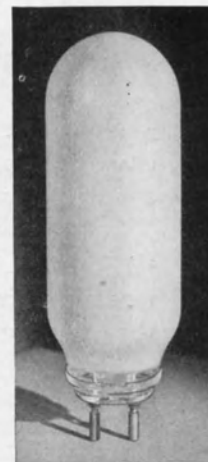
150 200 300
(Medium) 300
(Mogul) 500 750, 1000 and 1500

GENERAL LIGHTING SERVICE—110, 115 and 120 Volts

OUTDOOR SERVICE—Lamps of 40 watts and above are gas-filled and because of the bulb temperature should be protected from rain and snow when used out-of-doors. See page 12 for outdoor exposed applications.

VIBRATION AND ROUGH SERVICE—Where lamps are subjected to vibration and shocks, attention should be given to the use of vibration and shock-absorbing devices, or to a type of system or better location of lighting equipment to avoid these conditions. Where such conditions are inherent, lamps of special design for both vibration and rough service are available and are listed on page 17.

BIPOST BASE LAMPS—This type represents a radically new lamp for general lighting service. Made of hard glass in a small bulb, it is rugged and resistant to bulb failure resulting from contact with rain or snow. It permits effective light control by reflector equipment of smaller size. The interior construction incorporates a gauze screen which collects filament evaporation normally deposited on the inside of the bulb, thus giving exceptionally high maintenance of light output throughout life.

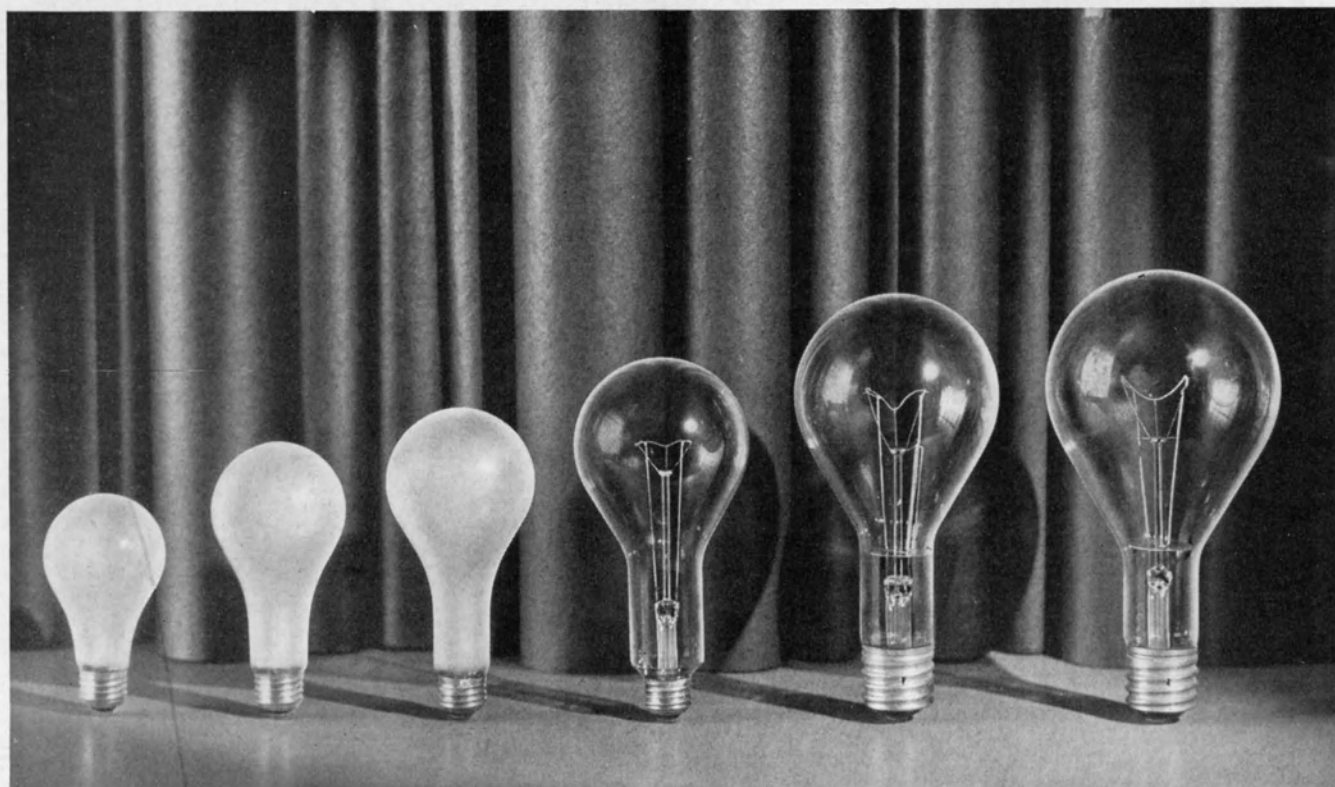


1000-watt Bipost

Watts	Bulb	Approximate Lumens	Screw Base	Standard Package Quantity	List Price		
					Clear	Inside Frosted	White Bowl
150	A-25	2580	Medium	60	\$0.25	.....	\$0.30
200	PS-30	3640	Medium	24	.35	\$0.35	.40
300	PS-35	5910	Medium	24	.60	.65	.65
300	PS-35	5760	Mogul	24	.75	.80	.80
500	PS-40	10050	Mogul	12	1.40	1.50	1.50
750	PS-52	14550	Mogul	6	3.75	.....	3.95
1000	T-24	19600	Medium Bipost	6	.....	3.75	.....
1000	PS-52	20700	Mogul	6	4.00	.....	4.20
1500	PS-52	32550	Mogul	6	5.75	.....	5.95

SPORTS LIGHTING SERVICE—For lighting baseball, football and softball fields and other similar large recreational areas employing 1000 and 1500-watt lamps, it is recommended that circuit voltage be adjusted to operate these standard lamps 10% overvoltage. While the life will be reduced to about 300 hours,

a gain of 35% light with only a 16% increase in wattage is obtained. This permits lower initial equipment investment and makes for high operating efficiency for sports lighting installations where the system is in use only 100 or 200 hours each season.



Watts 60

100

150

200

300

500

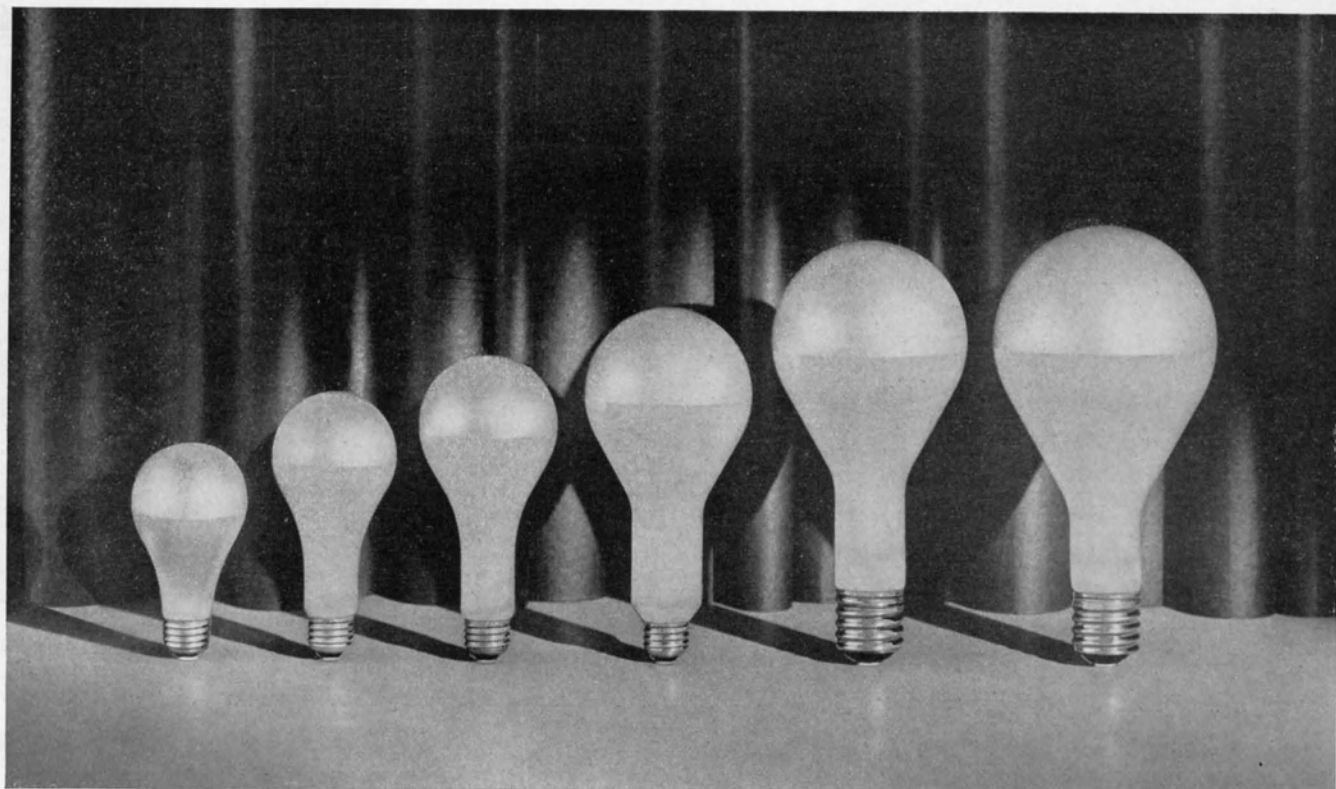
MAZDA DAYLIGHT LAMPS — 110, 115 and 120 Volts

■ MAZDA Daylight lamps are supplied with blue bulbs and emit a whiter light which is a partial step toward natural daylight. In many instances of color rendition their use gives sufficient color correction to be of considerable advantage over the warmer tones of unmodified light. For example, they are used in many industrial applications, particularly in local lighting units for sewing machines and for special assembly and inspection processes. Again, the light blends well with natural daylight; in fact, in many cases it is about the same color as the day-

light which one gets indoors, taking into account the prevalence of warm tones in window shades, walls and hangings. For this reason the use of daylight lamps in offices, stores and other commercial interiors will be found to correct an unsatisfactory mixture of ordinary artificial light and inadequate daylight.

The next larger size of lamp will be required to produce approximately the same illumination value as computed for a clear or inside-frosted lamp of a given size. MAZDA Daylight lamps are used in all common types of equipment.

Watts	Bulb	Approx. Lumens	Screw Base	Standard Package Quantity	List Price	
					Clear	Inside Frosted
60	A-21	500	Medium	120	.....	\$0.30
100	A-23	1010	Medium	60	.....	.35
150	A-25	1680	Medium	60	\$0.50	.55
200	PS-30	2270	Medium	24	.80	.85
300	PS-35	3740	Mogul	24	1.20	1.30
500	PS-40	6530	Mogul	12	2.15	2.30



Watts 60 100 150 200 300 500

SILVERED BOWL MAZDA LAMPS—110, 115 and 120 Volts

■ Silvered bowl lamps have a permanent coating of mirror silver on the bowl. This coating which is an integral part of the lamp, shields the brilliant filament and forms a highly efficient reflecting surface. This reflecting surface does not dull or tarnish throughout the life of the lamp.

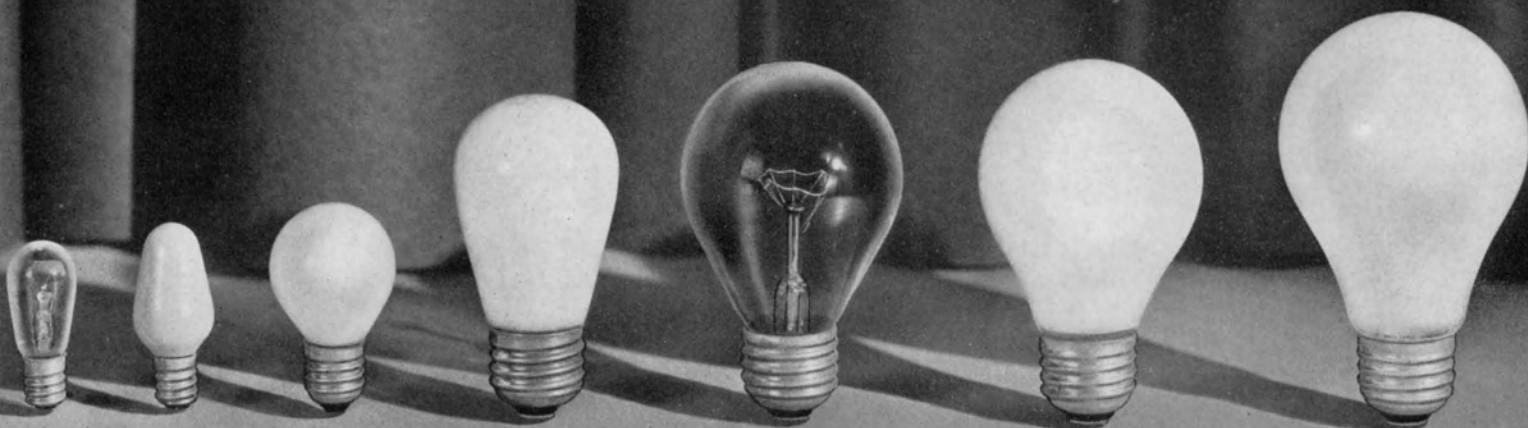
It is intended that silvered bowl lamps be used in a base up position, the silvering serving as a highly efficient indirect reflector. Silvered bowl lamps are applicable to all types of indirect equipment; also for direct lighting reflectors and shades to produce high quality illumination. These lamps are

standardized with inside-frosted bulbs because of the desirability of eliminating streaks, striations, and shadows of fixture supports.

Silvered bowl lamps of 150 watts and above should be used only in porcelain sockets and in fixtures so designed that the temperatures of the lamp and fixture do not exceed limits for satisfactory operation. Such precautionary measures should be applied to all high wattage lamps, but the heating effect is more pronounced with silvered bowl lamps because the silvering redirects the heat toward the base and socket assembly.

Watts	Bulb	Screw Base	Standard Package Quantity	List Price
				Inside-Frosted Silvered Bowl
60	A-21	Medium	120	\$0.45
100	A-23	Medium	60	.60
150	A-25	Medium	60	.70
200	PS-30	Medium	24	.95
300	PS-35	Mogul	24	1.45
500	PS-40	Mogul	12	2.25

The light output is approximately 7% less than the unprocessed lamp.



Watts	6	7	10	6 and 10	25 and 50	25	40
Finishes Clear	{ Clear White	Clear	Clear	Clear Daylight	Inside Frosted	Inside Frosted	
		Red	Inside Frosted		Red	Red	
		Blue	Red		Blue	Blue	
		Green	Blue		Green	Green	
		Yellow	Green		Yellow	Yellow	
		Amber-orange	Yellow		Amber-orange	Amber-orange	
		Flametint	Amber-orange		Flametint	Flametint	
		White	Old Rose		Old Rose	Ivory	
				Old Rose	Old Rose		

CLEAR, INSIDE COLORED, TINTED AND FROSTED MAZDA LAMPS—110, 115 and 120 Volts

—FOR SIGN AND DECORATIVE LIGHTING

■ These lamps are suitable for outdoor exposed lamp signs and for colored festoons, and similar decorative lighting. For enclosed lamp signs and luminous architectural displays where lamps are protected from rain and snow, the full range of general service lamps (pages 8 and 9) is applicable.

The 7-watt lamp was designed specifically to fit into small plug-in receptacles to be used as night lights in homes.

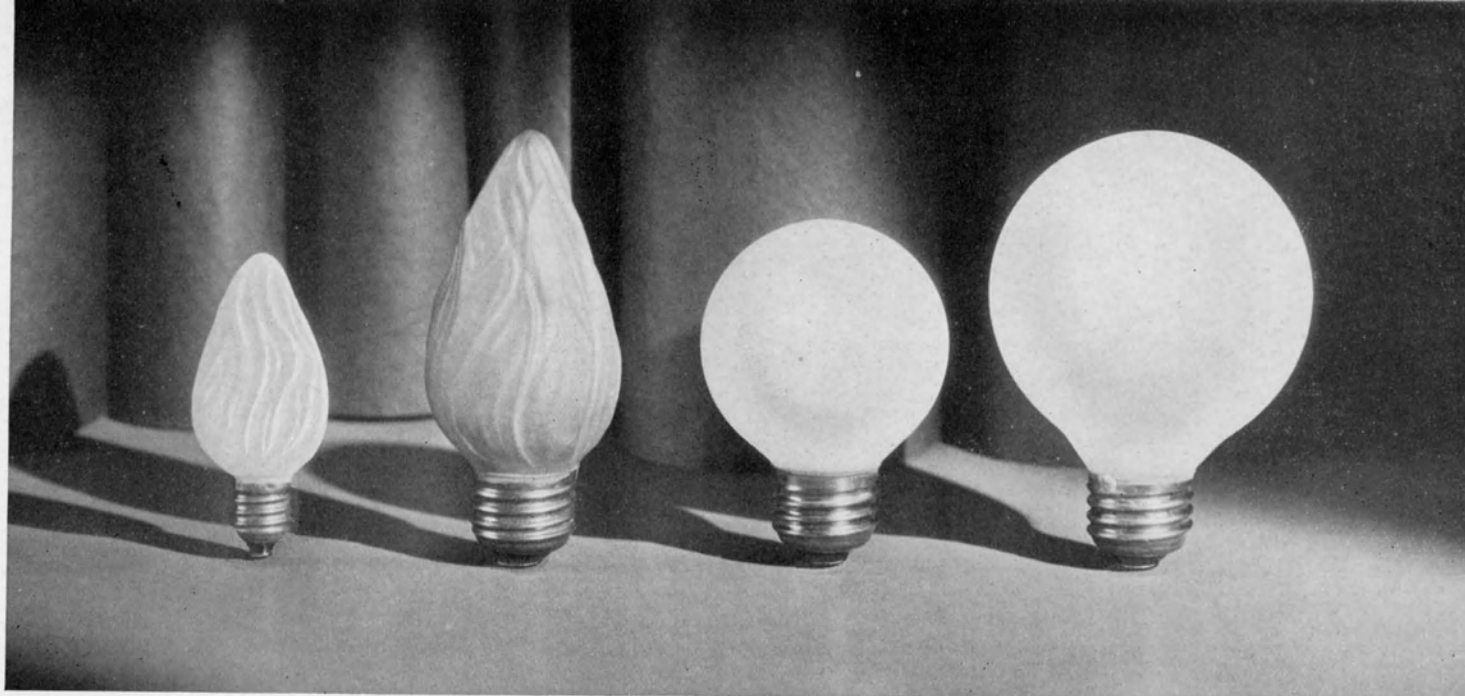
Inside colored lamps find their most logical use in exposed lamp signs and colorful displays where the lamps themselves are visible and form the pattern of the display. Where color effects of lighting are desired from concealed lamps as in color-circuits in coves, luminous panels, and the like, color may be incorporated in the translucent elements themselves or produced by natural colored or coated glass bulbs, or by the use of color accessories such as color hoods.

Watts	Bulb	Standard Bulb Finishes	Screw Base	Std. Pkg. Qty.	List Price†		
					Clear	Inside Frosted	Inside Colored
6	S-6	Clear	*Candelabra	120	\$0.15	.....	.....
6	S-14	Clear, Inside Frosted, Red, Blue, Green, Yellow, Amber-orange, and Old Rose	Medium	120	.15	\$0.15	\$0.20
7	C-7	Clear, White	*Candelabra	120	.10	.....	.10
10	S-11	Clear, Red, Blue, Green, Yellow, Amber-orange, Flametint, and White	Intermediate	120	.15	.....	.20
10	S-14	Clear, Inside Frosted, Red, Blue, Green, Yellow, Amber-orange, and Old Rose	Medium	120	.15	.15	.20
25	A-19	Inside Frosted, Red, Blue, Green, Yellow, Amber-orange, Flametint, Ivory, and Old Rose	Medium	120	.....	.15	.20
25	A-19	Clear Daylight	Medium	120	.30	.....	.....
40	A-21	Inside Frosted, Red, Blue, Green, Yellow, Amber-orange, Flametint, Ivory, and Old Rose	Medium	120	.....	.18	.23
50	A-19	Clear Daylight	Medium	120	.35	.....	.....

† These prices apply only to the manufacturer's standard inside coloring.

* Candelabra base lamps not recommended for outdoor service.

‡ Nominal watts. 110-125 volts (design volts 118).



Watts	15	25	25	25 and 40
Finishes	{ White Ivory Flametint	{ White Ivory Flametint	{ White Ivory Flametint	{ White Ivory Flametint

OUTSIDE COATED FLAME SHAPE AND ROUND BULB MAZDA LAMPS—110, 115 and 120 Volts

—FOR DECORATIVE LUMINAIRES

■ These lamps are adapted to many decorative and ornamental fixtures used in homes, clubs, lobbies, foyers and public buildings, where the bulb

shape is related to the artistic design of the luminaire. These lamps are not recommended for outdoor use.

Watts	Bulb	Standard Bulb Finishes	Screw Base	Standard Package Quantity	List Price†
15	F-10	White, Ivory, and Flametint	Candelabra	60	\$0.25
25	F-15	White, Ivory, and Flametint	Medium	120	.15
25	G-18½	White, Ivory, and Flametint	Medium	120	.30
25	G-25	White, Ivory, and Flametint	Medium	60	.35
40	G-25	White, Ivory, and Flametint	Medium	60	.35

† These prices apply only to the manufacturer's standard outside coating.

NATURAL COLORED LAMPS

The four lamps in natural colored clear glass bulbs listed below cover a large percentage of present

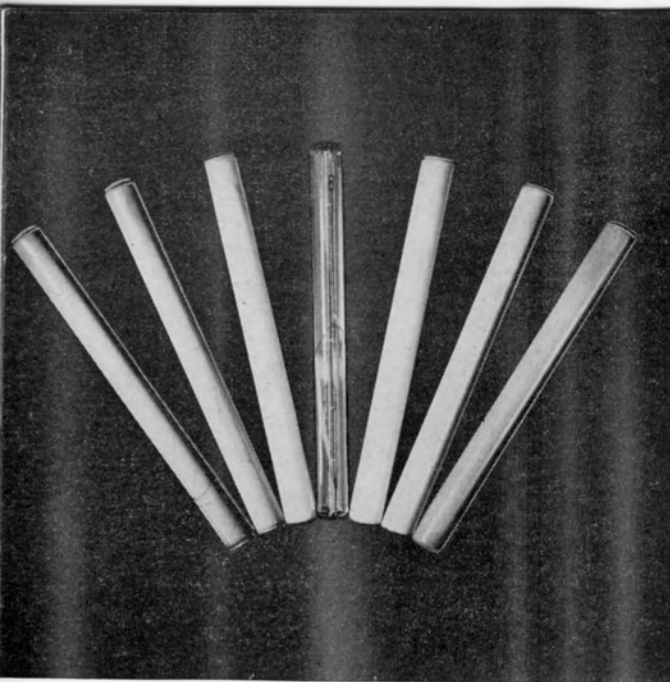
demands for natural colored lamps. The prices shown are for the manufacturer's standard colored glass only.

Watts	Bulb	Standard Colors Available	List Price	
			Amber, Blue, and Green	Ruby
10	S-14	*Ruby, *Amber, Green, and Blue†	\$0.40	\$0.50
25	A-19	*Ruby, *Amber, Green, and Blue†	.40	.50
40	A-21	*Ruby, *Amber, Green, and Blue†	.40	.50
§60	A-21	*Ruby, *Amber, Green, and Blue†	.45	.55

* Natural ruby and natural amber lamps are regularly furnished in the light shade. Dark ruby and dark amber lamps used in photographic work will be furnished, only when definitely specified, at the same price.

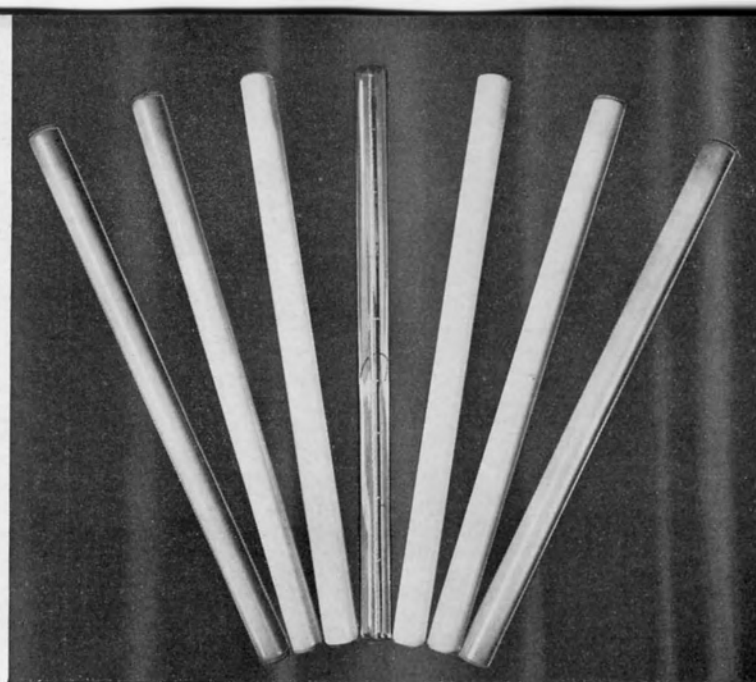
† Does not include daylight blue or photographic blue.

§ This lamp not to be burned in enclosing globe.



Watts 40

Finishes: Clear, Inside Frosted, White, Straw, Orange, Moonlight Blue, Emerald, Surprise Pink



30 and 60

MAZDA LUMILINE LAMPS—110, 115 and 120 Volts WITH DISC BASES

■ Instead of the conventional screw base and the usual method of mounting the filament, the Lumiline lamp has a contact cap at each end, with the filament disposed along the axis of the bulb for almost the entire length of the lamp.

Specially designed sockets or "lamp holders" of small dimensions make possible the use of lumiline lamps to form continuous lines of clear or colored light of low brightness. The lamps may be used either

exposed or in narrow trough reflectors. Their application is ideally suited to modern decorative concepts for built-in illumination or applied decoration where space limitation is a factor; for lighted displays, niches, small coves, signs, mirrors, paintings, luminous panels, and the like.

The outside white and colored finishes are not recommended for outdoor service when exposed to moisture and other detrimental weather conditions.

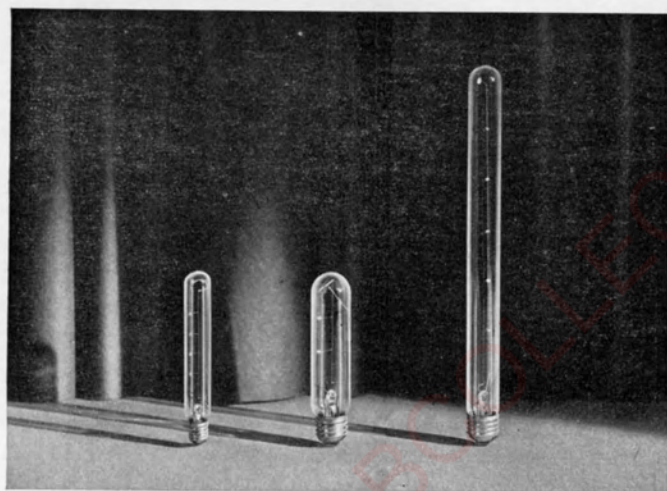
Watts	Standard Bulb Finishes	Average Over-all Length, Inches	Base	Standard Package Quantity	List Price	
					Clear	Inside Frosted, Outside White and Colored
30	T-8 Clear, Inside Frosted, White, Straw, Orange, Moonlight Blue, Emerald, and Surprise Pink	17 $\frac{3}{4}$	Disc	24	\$0.95	\$1.05
40		11 $\frac{3}{4}$	Disc	24	.85	.95
60		17 $\frac{3}{4}$	Disc	24	.95	1.05

TUBULAR BULB MAZDA LAMPS—110, 115 and 120 Volts

WITH CONVENTIONAL SCREW BASE

■ Low wattage tubular bulb lamps are available for use in showcase lighting, in shallow depth displays, and in small trough-type reflectors.

The growing demand for these lamps and other tubular lamps has been occasioned by the greater appreciation by designers and lighting users of lighted displays, luminous elements and new luminous architectural forms.



Watts 25 25 40

Watts	Bulb	Screw Base	Std. Pkg. Qty.	List Price
25	T-6 $\frac{1}{2}$ Clear	Intermediate	60	\$0.35
25	T-10 Clear	Medium	60	.25
40	T-8 Clear	Medium	24	.90

MAZDA THREE-LITE LAMPS

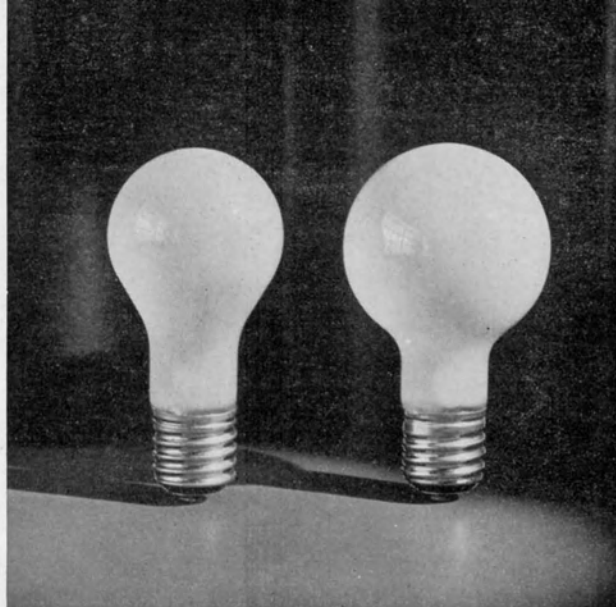
110, 115 and 120 Volts

■ MAZDA Three-Lite lamps, with two separate filaments in a single bulb, have introduced a new flexibility in lighting, since each filament of different wattage may be lighted separately or in combination with the other to produce three levels of illumination.

Thus with a single lamp, the user can adjust the illumination to suit the needs—the lower wattage for decorative and casual use, an intermediate step, and up to full brilliancy for full utility where seeing requirements dictate higher levels of illumination.

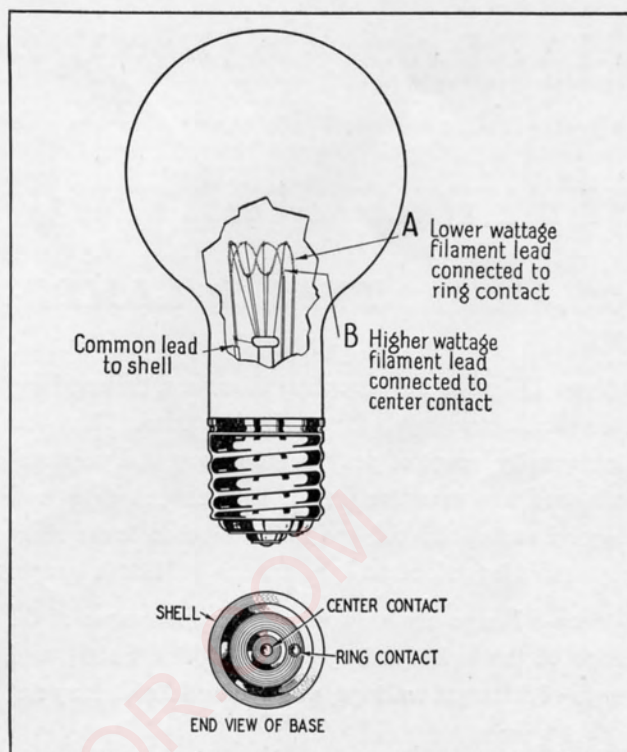
These lamps are particularly applicable to the newer type study and reading lamps and to indirect and semi-indirect floor lamps. The 100-200-300-watt size is designed for base-down burning and is adaptable to wall urns and any use where lamps are normally operated in base-down position. The 50-100-150-watt lamp is designed to burn in any position.

The lamps are inside frosted to assure complete diffusion and to avoid uneven light streaks and harsh lines of cutoff on ceiling and sidewalls when used in indirect portables and wall urns.

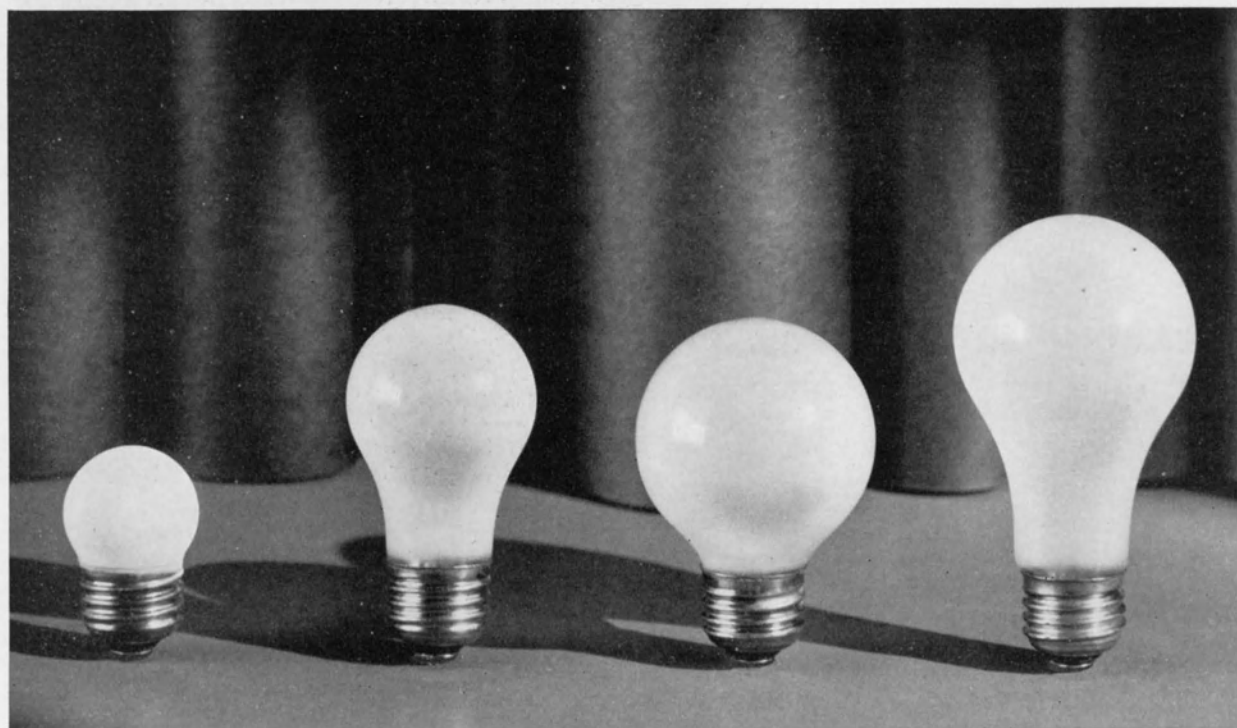


Watts 50-100-150

100-200-300



Watts	Bulb	Approximate Lumens	Base	Standard Package Quantity	List Price Inside Frosted
50-100-150	PS-25	50-Watt, 525 100-Watt, 1380 150-Watt, 1905	3-Contact Mogul	60	\$0.50
100-200-300	G-30	100-Watt, 1330 200-Watt, 3320 300-Watt, 4650	3-Contact Mogul	24	.65



Watts 7½

15

30

60

GENERAL LIGHTING SERVICE

TYPE D LAMPS—110, 115 and 120 Volts Only

■ Type D lamps are supplied to meet a demand for a ten cent lamp largely for use in the home. They are high quality lamps of proven efficiency and performance and are manufactured with extreme care and of good materials, but are not subjected to as rigid inspection for defects in appearance as MAZDA lamps.

These lamps are shipped only in packages of 60 lamps of the same wattage, voltage and finish, and lamps of different wattage, voltage and finish may not

be combined to make a standard package except that 30-watt, G-19 lamps of different colors (but not inside frosted) may be combined to make a standard package, provided the quantity of lamps of any one color is a multiple of six. They may not be combined with large MAZDA lamps to make up a standard package quantity.

The outside coated white and colored finishes will not withstand outdoor use.

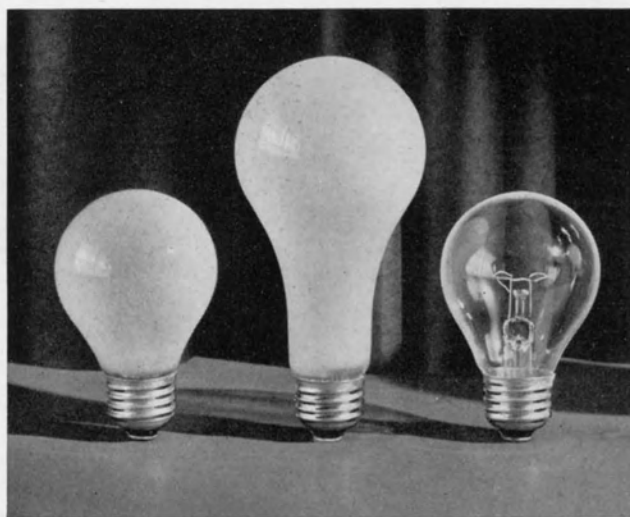
Watts	Bulb	Screw Base	Standard Package Quantity	List Price
7½	G-11 Outside Coated White or Red	Medium	60	\$0.10
15	A-15 Inside Frosted	Medium	60	.10
30	G-19 Inside Frosted or Outside Coated in Red, Blue, Green, Amber-orange, Rose, White, Ivory, and Flametint	Medium	60	.10
60	A-19 Inside Frosted	Medium	60	.10

VIBRATION AND ROUGH SERVICE—110, 115 and 120 Volts

■ These lamps are not recommended for general lighting service as they are more expensive and give less light than the corresponding general service lamps.

Rough Service—This type is for use where the lamp is subjected to severe shock and bumps such as with extension cords in garages and similar applications. It is not suitable for use under vibration conditions.

Vibration Service—This lamp is especially designed to withstand high-frequency vibration such as produced by high-speed machinery. It is not recommended for horizontal burning.



Watts 50 100 50
 Rough Service Rough Service Vibration Service

Watts	Bulb	Screw Base	Std. Pkg. Qty.	List Price
ROUGH SERVICE				
50	A-19 Inside Frosted	Medium	120	\$0.30
100	A-23 Inside Frosted	Medium	60	.45
VIBRATION SERVICE				
50	P-19 Clear	Medium	120	.25

COUNTRY HOME SERVICE—28-32 Volts

■ These lamps are designed for operation on battery-generator sets as used on farms and in other places where central station service is not available. The lamps are the same in appearance as the lamps for General Lighting service. Orders should specify "Country Home—28-32 volts" to distinguish them from trainlighting lamps. The prices apply only to lamps which are designed for an average voltage as determined by the manufacturer, suitable for operation on 28-32-volt circuits, and do not apply to individual voltages within this range.

Watts	Bulb Inside Frosted	Screw Base	Std. Pkg. Qty.	List Price
15	A-17	Medium	120	\$0.23
25	A-19	Medium	120	.23
50	A-21	Medium	120	.25
100	A-23	Medium	60	.38

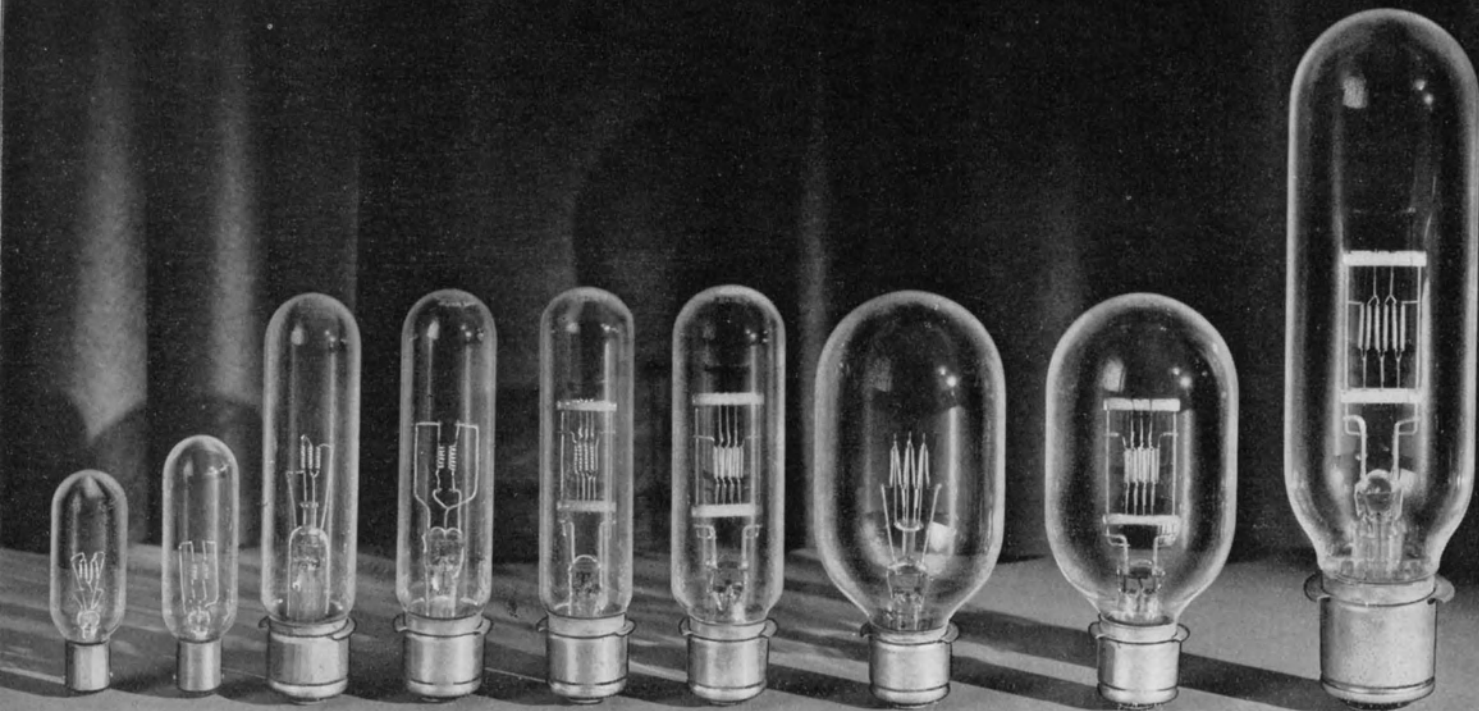
HIGH VOLTAGE SERVICE—220, 230, 240, 250 and 260 Volts

■ These lamps, which are less rugged and less efficient than 110-120-volt lamps, are made available for use in the few locations where only the higher voltage is available.

These lamps will operate in any position of burning, but the lumen maintenance, particularly in lamps of higher wattage sizes, is best when burned vertically base up. The data on lumen maintenance given in the technical summary apply to this burning position only.

Watts	Bulb	Approx. Lumens	Screw Base	Std. Pkg. Qty.	List Price		
					Clear	Inside Frosted	White Bowl
25	A-19	215	Medium	120	.....	\$0.26	.....
†50	A-21	475	Medium	120	.....	.26	.....
100	A-23	1230	Medium	60	.....	.38	.....
200	PS-30	2940	Medium	24	\$0.85	.90	\$0.90
300	PS-35	4740	Mogul	24	1.25	1.35	1.35
500	PS-40	8600	Mogul	12	2.15	2.30	.....
750	PS-52	13500	Mogul	6	4.25	.....	.....
1000	PS-52	19400	Mogul	6	4.75	.....	.....

† This lamp in 275 and 300 volts for mine lighting service can be obtained at a list price of 40 cents.



Watts 100 200 200 300 500 750 500 1000 1000

MOTION PICTURE AND STEREOPTICON PROJECTION SERVICE—100, 105, 110, 115 and 120 Volts

■ MAZDA projection lamps are characterized by extreme concentration of light source, made possible by a highly developed technique in the forming, treating, and mounting of filaments; by bulbs that withstand high temperatures, thus making possible very small bulb volume for a given wattage; and by accuracy in placement of the light source.

The lamps of 100-volt rating are of special interest. With only a small rheostat and an inexpensive voltmeter on the projector it is possible to adjust the voltage exactly. Thus satisfactory lamp performance is assured with full advantage of the high output of light from a lamp of comparatively short life rating.

Watts	Bulb	Base	Filament Form	Rated Average Laboratory Life, Hours	†Light Center Length, Inches	Standard Package Quantity	List Price Clear
100	T-8	S. C. Bay. Cand.	Monoplane	50	1 $\frac{3}{8}$	24	\$1.00
¶200	T-8	S. C. Bay. Cand.	Monoplane	25	1 $\frac{3}{8}$	24	1.50
*200	T-10	Medium Prefocus	Monoplane	50	2 $\frac{3}{16}$	24	2.20
¶300	T-10	Medium Prefocus	Monoplane	25	2 $\frac{3}{16}$	24	3.10
¶500	T-10	Medium Prefocus	Biplane	25	2 $\frac{3}{16}$	24	4.90
¶750	T-12	Medium Prefocus	Biplane	25	2 $\frac{3}{16}$	24	5.70
*500	T-20 (short)	Medium Prefocus	Monoplane	50	2 $\frac{3}{16}$	6	2.75
¶1000	T-20 (short)	Medium Prefocus	Biplane	25	2 $\frac{3}{16}$	6	6.55
†1000	T-20 (long)	Mogul Prefocus	Monoplane	50	3 $\frac{7}{16}$	6	6.30

These lamps are designed for operation in the vertical position base down but can be burned within 25 degrees of this position without materially affecting their performance.

¶ These lamps are designed for use with air blast cooling. They should be used only in equipment designed to give adequate cooling; usage otherwise may result in unsatisfactory lamp performance and damage to the equipment for which the lamp manufacturer cannot assume responsibility.

* Medium screw base can be supplied with a light center length of 3 inches at the same price.

† Mogul screw base can be supplied with a light center length of 4 $\frac{3}{4}$ inches at the same price.

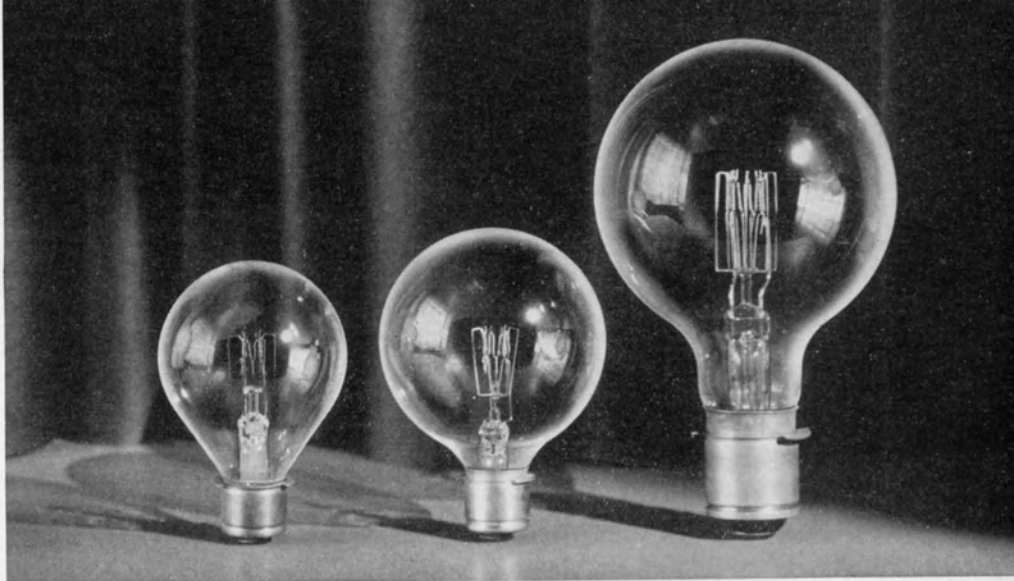
‡ Light center length for prefocus base is distance from center of light source to top of base fin; for bayonet base to top of base pins; for screw base to extreme end of base.

SPOTLIGHT SERVICE

110, 115 and 120 Volts

■ Spotlights with prefocus sockets and prefocus base lamps require no focusing adjustments for lamp or spherical mirror. This facilitates operation and assures better light control. A properly adjusted mirror adds up to 50 per cent to the light in the beam.

For narrow beams of high intensity, the lamps for projection service listed on page 18 and on page 20 for "modeling" service in studios are applicable.



Watts

100

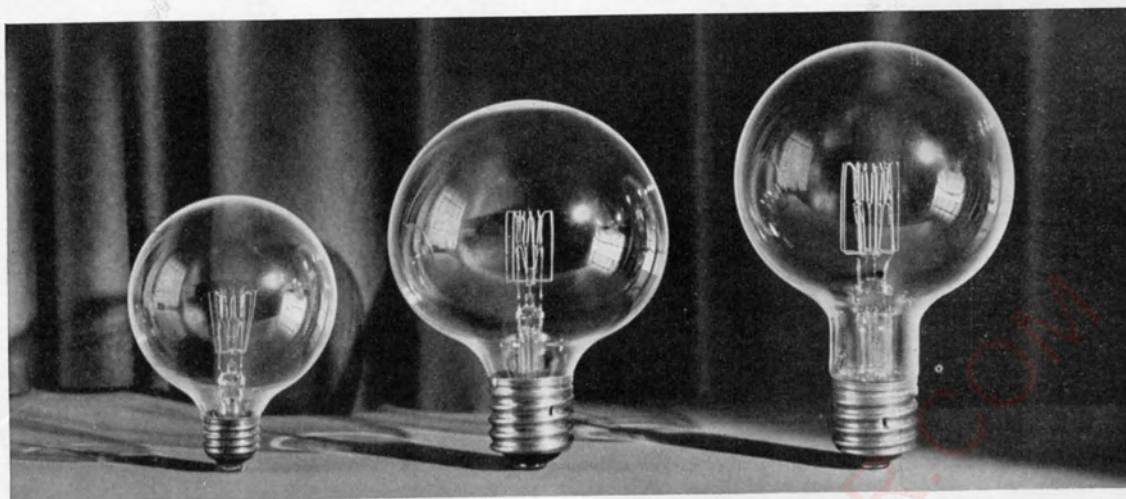
250 and 400

1000

Watts	Bulb	Base	Light Center Length, Inches	Std. Pkg. Qty.	List Price Clear
*100	P-25	Medium Prefocus	2 $\frac{3}{16}$	60	\$1.00
*250	G-30	Medium Prefocus	2 $\frac{3}{16}$	24	1.65
*400	G-30	Medium Prefocus	2 $\frac{3}{16}$	24	2.80
†1000	G-40	Mogul Prefocus	3 $\frac{1}{16}$	12	6.65

* Medium screw base lamps, with a light center length of 3 inches, can be supplied at 15 cents less than price shown.

† Mogul screw base lamp, with light center length of 4 $\frac{1}{4}$ or 5 $\frac{1}{4}$ inches, can be supplied at \$6.25. Orders should specify light center length.



Watts

250

500

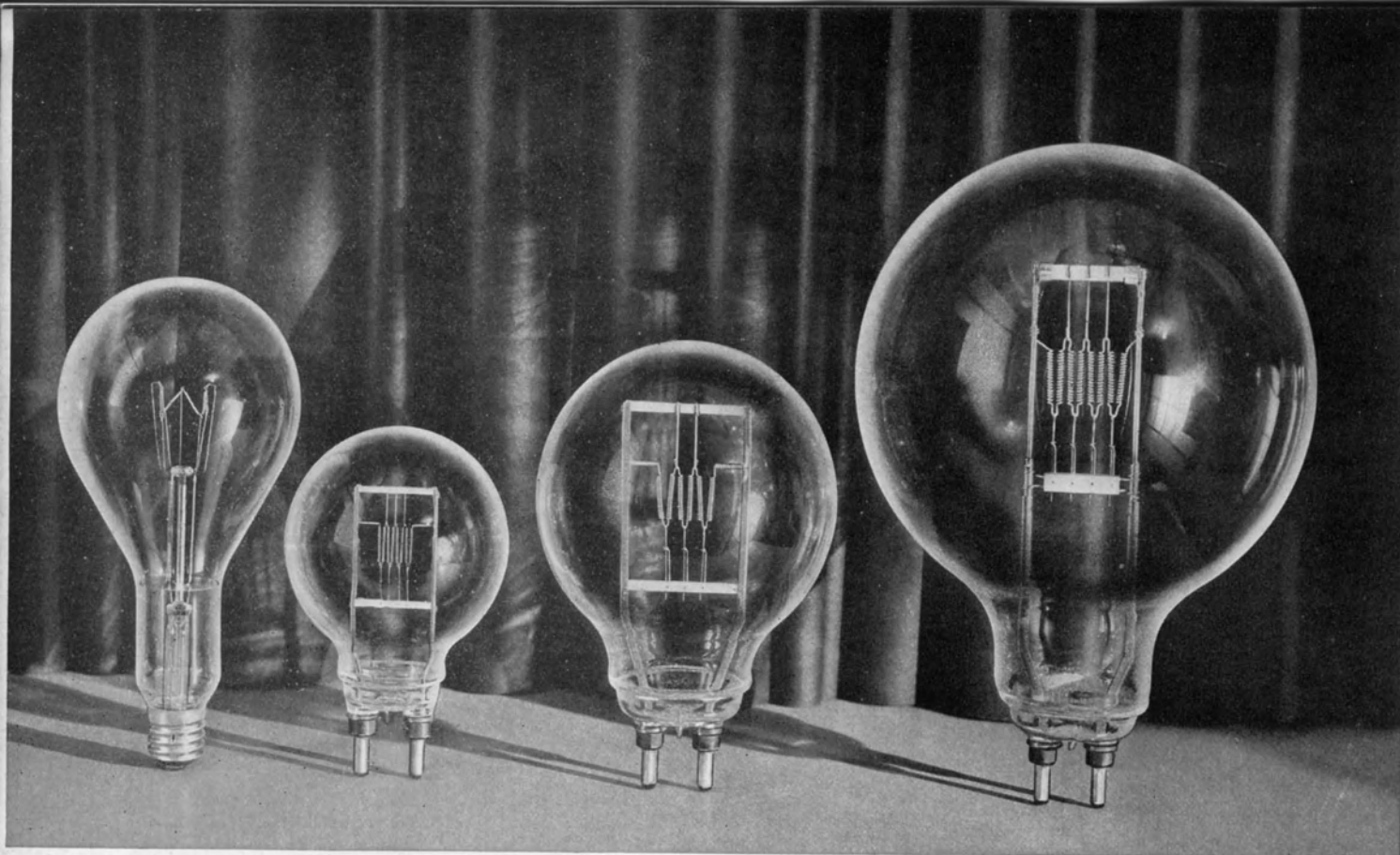
1000

FLOODLIGHTING SERVICE—110, 115 and 120 Volts

■ These lamps are made with the filament concentrated into a small space for use in floodlighting equipment designed to give a narrow beam of light which can be projected a relatively long distance. Where it is not necessary to have a closely controlled beam it is usually found more desirable to use the general service lamps listed on page 9 in equipment designed to accommodate them.

The 250-watt, G-30 bulb and the 500-watt, G-40 bulb lamps may be burned in any position except within 45° of vertical base up. The 1000-watt, G-40 bulb lamp may be burned in any position from vertical base down to horizontal.

Watts	Bulb	Screw Base	Light Center Length, Inches	Std. Pkg. Qty.	List Price Clear
250	G-30	Medium	3	24	\$1.50
500	G-40	Mogul	4 $\frac{1}{4}$	12	2.90
1000	G-40	Mogul	5 $\frac{1}{4}$	12	6.25



Watts 2000 2000 5000 10000

MOTION PICTURE PRODUCTION SERVICE

110, 115 and 120 Volts

■ The high wattage MAZDA lamps listed below meet the varied and exacting requirements of motion picture production, whether sound or silent, in black and white, or in color.

These lamps are rugged and silent in operation. Their light is definite and constant in color, bringing out the full possibilities of the various film emulsions.

The lamps designated for use with "modeling equipments" have concentrated light sources of high brightness to make possible beams of a high degree

of light concentration. They may be operated from vertically base-down to practically horizontal. The general lighting lamps are universal burning.

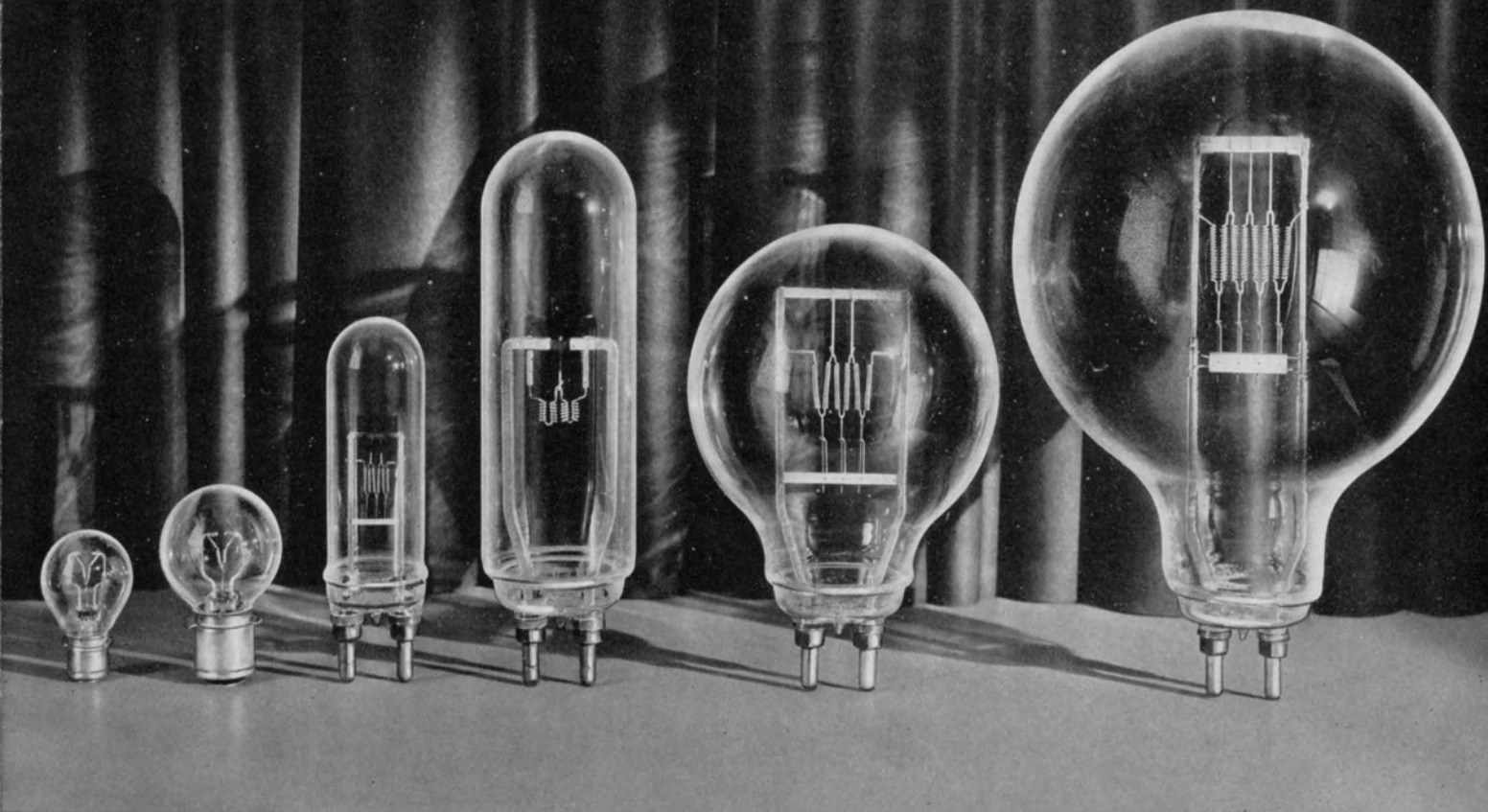
In the "Movieflood" lamp, the filament operates at a very high temperature, resulting in an exceptionally high output of light per watt and a still greater increase in photographic efficiency. Furthermore the light is of a color quality suited to the needs of color pictures. The lamps are equally satisfactory for black and white photography and are recommended wherever a minimum of lighting equipment is desired.

Application	Watts	Bulb	Light Center Length, Inches	Maximum Over-all Length, Inches	Base	Rated Average Laboratory Life, Hours	Standard Package Quantity	List Price Clear
*Modeling	2000	G-48	5	9 $\frac{3}{8}$	Mogul Bipost	100	6	\$ 13.00
*Modeling	5000	G-64	6 $\frac{1}{2}$	11 $\frac{7}{8}$	Mogul Bipost	75	1	35.00
*Modeling	10000	G-96	10	17 $\frac{3}{8}$	Mogul Bipost	75	1	85.00
Photographic (General Lighting)	1000	PS-52	9 $\frac{1}{2}$	13 $\frac{1}{8}$	Mogul Screw	250	6	4.00
Photographic (General Lighting)	1500	PS-52	9 $\frac{1}{2}$	13 $\frac{1}{8}$	Mogul Screw	250	6	5.75
†Movieflood (Color Photography)	2000	PS-52	9 $\frac{1}{2}$	13 $\frac{1}{8}$	Mogul Screw	†	6	5.25

When the 5000-watt lamp is operated at about ten per cent above its rated voltage, the light is of the same super-photographic efficiency as that from the "Movieflood" and of the same favorable quality for color photography.

* Burning position—within 45 degrees of vertically base down.

† Voltage range for operation is 105-120 volts. Rated average laboratory life at 115 volts is 15 hours.



100 and 240

420

1000

3000

5000

10000

AVIATION SERVICE

■ The development of MAZDA lamps for aviation service has made possible night mail and transport flying. The complete line of MAZDA aviation lamps is now available for this service.

The bipost and the prefocus bases provide the high degree of accuracy in positioning of light sources with relation to the optical elements which is so necessary to the effective functioning of the several classes of aviation lighting equipment.

Airport code beacons take the 500-watt PS-40 bulb general service lamp fitted with mogul prefocus base, while the airway code beacons use the 200-watt PS-30 bulb general service lamp with mogul prefocus base.

For airport boundary lights, 6.6-ampere series lamps are widely used. The 50-watt and 100-watt general service lamps are employed in obstruction lights.

Watts	Volts	Bulb	Light Center Length, Inches	Base	Burning Position	Rated Average Laboratory Life, Hours	Standard Package Quantity	List Price Clear
AIRCRAFT LANDING LAMPS								
100	12	A-19	1¾	Medium Prefocus	Any position except within 45 degrees of vertically base up	100	12	\$ 2.15
240	12	A-19	1¾	Medium Prefocus		100	12	5.25
420	12	G-25	1⅞	§Mogul Prefocus		100	12	6.00
AIRPORT FLOODLIGHT LAMPS								
1500	32	T-24	4	Mogul Bipost	Base Down	100	6	15.00
3000	32	T-32	5¾	Mogul Bipost	Base Down	100	4	25.00
5000	110, 115, 120	G-64	6½	Mogul Bipost	Base Down	75	1	35.00
10000	110, 115, 120	G-96	10	Mogul Bipost	Base Down	75	1	85.00
AIRWAY AND AIRPORT BEACON LAMPS								
1000	110, 115, 120	T-20	4	†Mogul Bipost	Base Down	500	6	6.50
*500	110, 115, 120	T-20	3⅞	Mogul Prefocus	Base Down	800	6	3.90
**1000	30	T-20	4	Mogul Bipost	Base Down	500	6	7.00

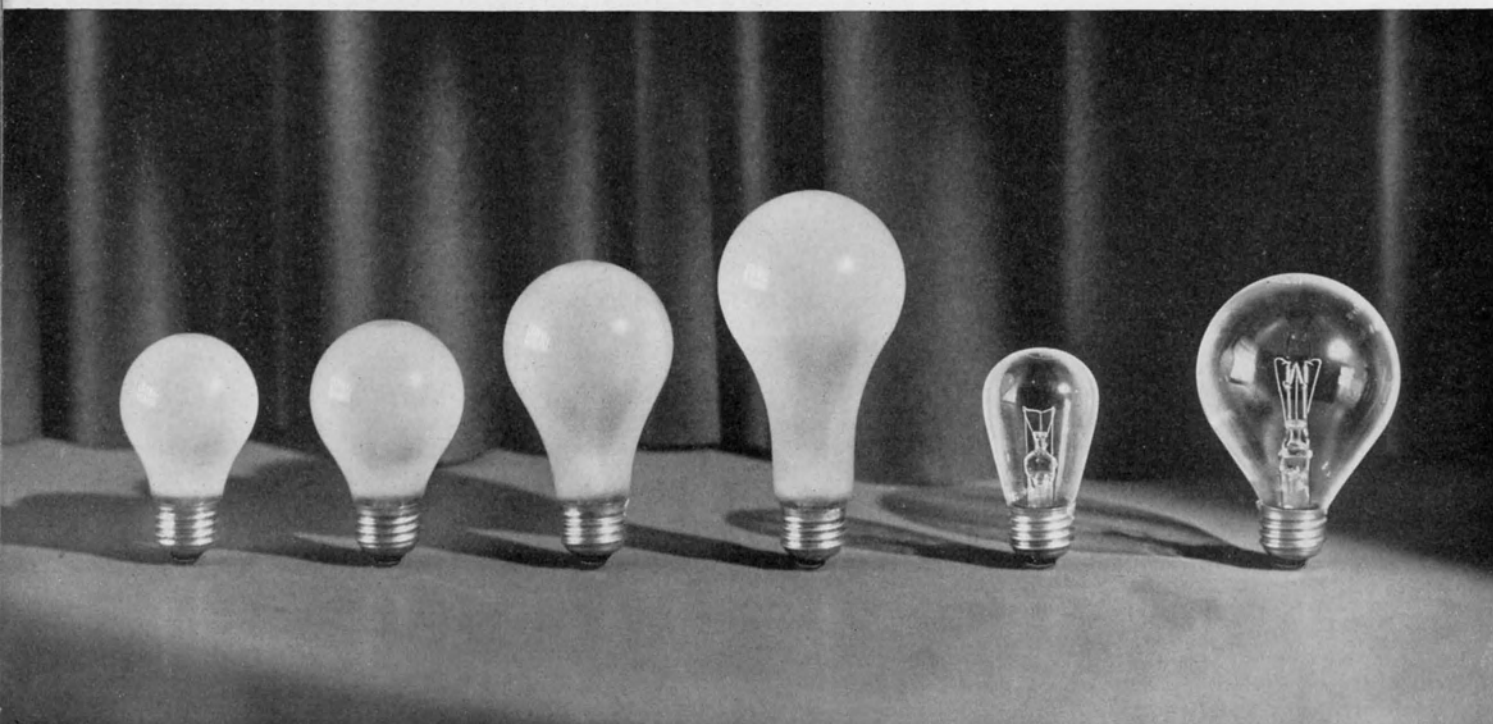
§ Mogul screw at \$6.00

* This lamp is standard in airway "on-course" lights.

** Used mostly in airport beacons.

† Mogul screw at \$6.50

TRAIN AND LOCOMOTIVE LIGHTING SERVICE



Watts 15

25

50

100

15

100 and 250

TRAINLIGHTING—To insure satisfactory lamp performance and economical operation, voltage regulating devices should be adjusted to maintain rated lamp voltage at the socket. The 30 and 60-volt lamps are recommended as being best adapted to average voltage conditions encountered in trainlighting service.

Watts	Bulb	Screw Base	Std. Pkg. Qty.	List Price
TRAIN—30, 32, 60 AND 64 VOLTS				
Inside Frosted				
15	A-17	Medium	120	\$0.23
25	A-19	Medium	120	.23
50	A-21	Medium	120	.25
100	A-23	Medium	60	.38
LOCOMOTIVE CAB—34 VOLTS				
15	S-14 Clear	Medium	120	.22
LOCOMOTIVE HEADLIGHT—32 VOLTS				
100	P-25 Clear	Medium	60	1.00
250	P-25 Clear	Medium	60	1.50

LOCOMOTIVE HEADLIGHTING—When operated at their rated voltage in suitable headlight equipment protecting them from excessive vibration, these lamps will furnish satisfactory service. Care must be exercised to prevent water from striking the bulb while hot.

The 250-watt lamp, designed especially for road locomotives, employs a construction of dual supports for the filament to withstand vibration encountered at high speeds. The 100-watt lamp is recommended for switching locomotives.

LOCOMOTIVE CAB LIGHTING—The locomotive cab lamp has been designed to insure ruggedness rather than efficient light production. It should be used for all locomotive lighting purposes except headlighting.

STREET RAILWAY SERVICE (525 to 650 Volts)

Headlighting

Headlight lamps are for operation in series with 4 lamps of corresponding wattage and voltage used elsewhere in the car.

105, 110, 115, 120, 125 and 130 Volts

Watts	Bulb	Screw Base	Light Center Length, Inches	Std. Pkg. Qty.	List Price
36	A-19 Clear	Medium	2 $\frac{3}{16}$	120	\$0.60
56	P-25 Clear	Medium	2 $\frac{1}{16}$	60	.85
94	P-25 Clear	Medium	2 $\frac{1}{16}$	60	1.10

Car Lighting

5-IN-SERIES LAMPS—These vacuum lamps operate 5-in-series on the trolley voltage and are used for general illumination, destination signs, etc. Individual lamp voltage to the nearest 5-volt step is $\frac{1}{5}$ of the average trolley voltage applied to the lamp circuit during the period in which the lamps are in use.

The 36 and 56-watt lamps provide more satisfactory performance when operated in the base-up vertical position.

30-VOLT CUTOUT LAMPS—These lamps are gas-filled and are more efficient initially and throughout life than the 5-in-series lamps. The number of lamps required per circuit is determined by dividing the trolley circuit voltage by 30. Each lamp is equipped with an automatic short-circuiting element which cuts the lamp out of the circuit and prevents arcing when the lamp burns out.

5-In-Series—105, 110, 115, 120, 125 and 130 Volts

Watts	Bulb	Screw Base	Std. Pkg. Qty.	List Price
23	S-17 Clear	Medium	120	\$0.25
36	A-21 Inside Frosted	Medium	120	.17
56	A-21 Inside Frosted	Medium	120	.24

CUTOUT LAMPS—30 VOLTS

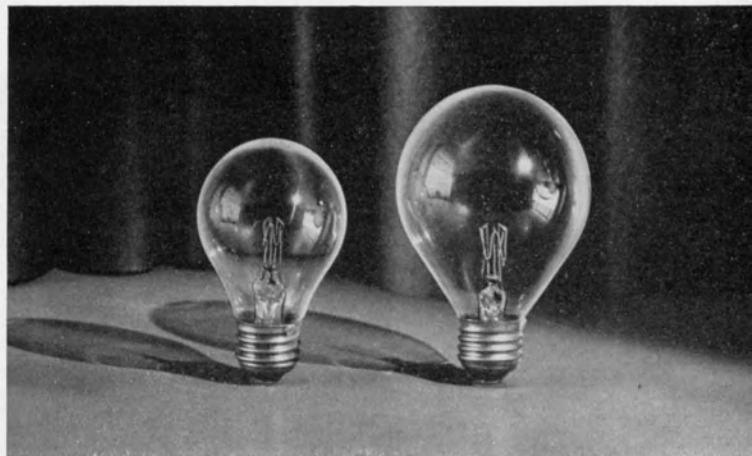
Amps.	Bulb	Screw Base	Std. Pkg. Qty.	List Price
1.0	A-19 Inside Frosted	Medium	120	.30
1.6	A-21 Inside Frosted	Medium	120	.35

Shop and Yard Lighting

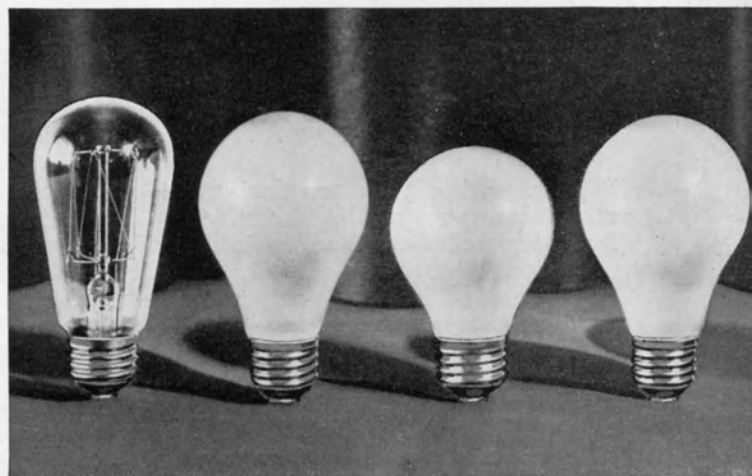
ARC RESISTING—These higher wattage lamps, designed to operate 5-in-series, are gas-filled and more efficient than vacuum lamps, and are recommended for illumination of shops and yards. The 101-watt lamp is also used for car lighting in totally-enclosing fixtures. Each lamp contains material in the stem which tends to prevent arcing when filament burnout occurs.

Arc Resisting—105, 110, 115, 120, 125 and 130 Volts

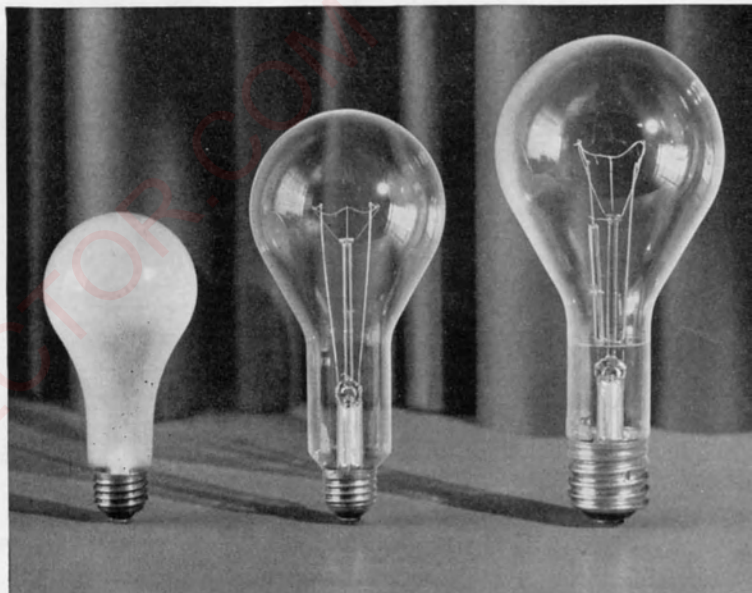
Watts	Bulb	Screw Base	Std. Pkg. Qty.	List Price
101	A-23 Inside Frosted	Medium	60	\$0.50
201	PS-30 Clear	Medium	24	.95
301	PS-35 Clear	Mogul	24	1.55



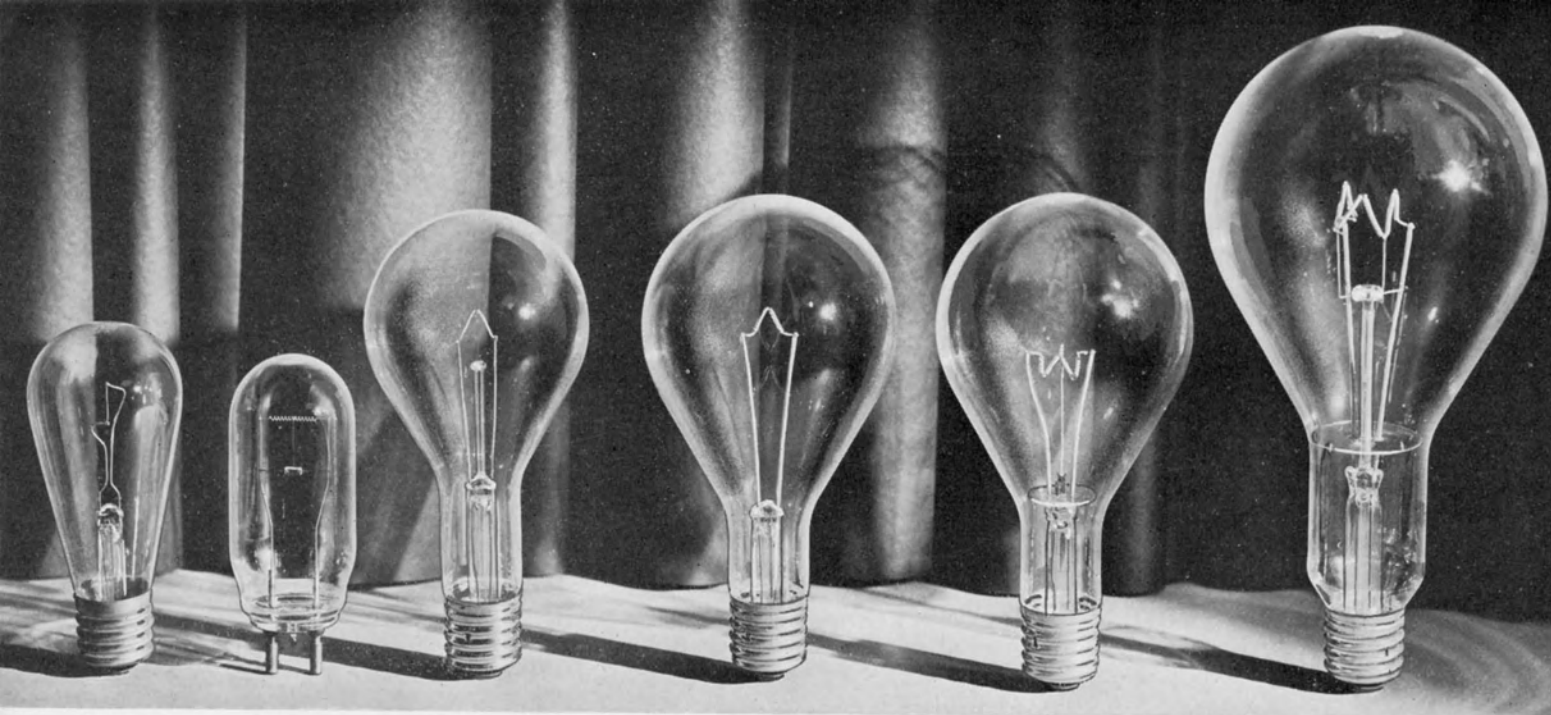
Watts 36 56 and 94



Watts 23 36 and 56 Amps. 1.0 1.6



Watts 101 201 301



Lumens 1000

4000

2500 and 4000

6000

10000 and 15000

25000

STREET SERIES LIGHTING SERVICE

■ Street series lamps are designed to meet special requirements of street lighting service. Filaments are formed to produce a favorable light distribution. With operation at constant current, bulb blackening is compensated for by a slow increase in wattage and filament temperature, hence the light output is maintained throughout life at a high percentage of initial value.

The performance of street series lamps is affected sharply by current variations. The current in street series circuits should therefore be adjusted as closely as possible to rated value. Because of the severity of street series service, the average service life of series lamps even under good operating conditions is of the order of 25 per cent less than the average laboratory life.

Street series lamps are rated in lumens. All street lighting contracts should refer to series lamps in terms of their lumen ratings.

The new bipost base lamp with bar-type filament

and hard glass bulb represents advantages of small size and precise positioning for accurate and effective control of light by suitable highway lighting reflectors.

Amps.	Lumens	Average Volts	Bulb	Light Center Length, Inches	Std. Pkg. Qty.	List Price Clear
6.6	1000	9.5	S-24 $\frac{1}{2}$	5 $\frac{3}{8}$	60	\$0.45
6.6	2500	22.0	PS-35	7	24	.90
6.6	4000	32.8	PS-35	7	24	1.05
6.6	4000	35.7	T-20	†4	24	1.40
6.6	6000	48.6	PS-40	7	12	1.45
15	4000	13.7	PS-35	*7	24	1.10
20	6000	14.9	PS-40	*7	12	1.50
20	10000	25.0	PS-40	*7	12	1.85
20	15000	37.3	PS-40	*7	12	2.55
20	25000	60.7	PS-52	9 $\frac{1}{2}$	6	4.80

The above lamps are fitted with mogul screw base, with the exception of the new 4000-lumen, medium bipost base lamp.

The 15- and 20-ampere lamps are designed for base up burning position. Lamps ordered for base down burning position may be supplied at the same price. The 25000-lumen lamp is not recommended for base down burning.

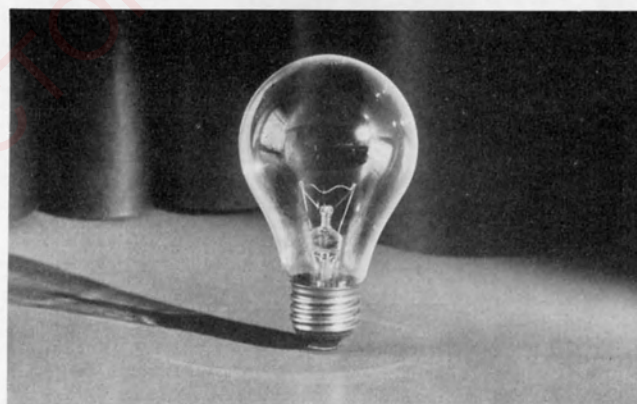
* Base down lamp—6 $\frac{1}{4}$ " light center length.

† Base up.

TRAFFIC SIGNAL SERVICE—110, 115 and 120 Volts

■ This especially designed 60-watt clear bulb traffic signal lamp is the recognized standard for traffic signal service. It has a clear bulb, a short light center length and produces sufficient light to make possible a signal indication of requisite brightness. In the interest of public safety it is strongly recommended that no lamp of lower wattage be employed.

Watts	Volts	Bulb	Screw Base	Std. Pkg. Qty.	List Price
60	110, 115, 120	A-21 Clear	Medium	120	\$0.30



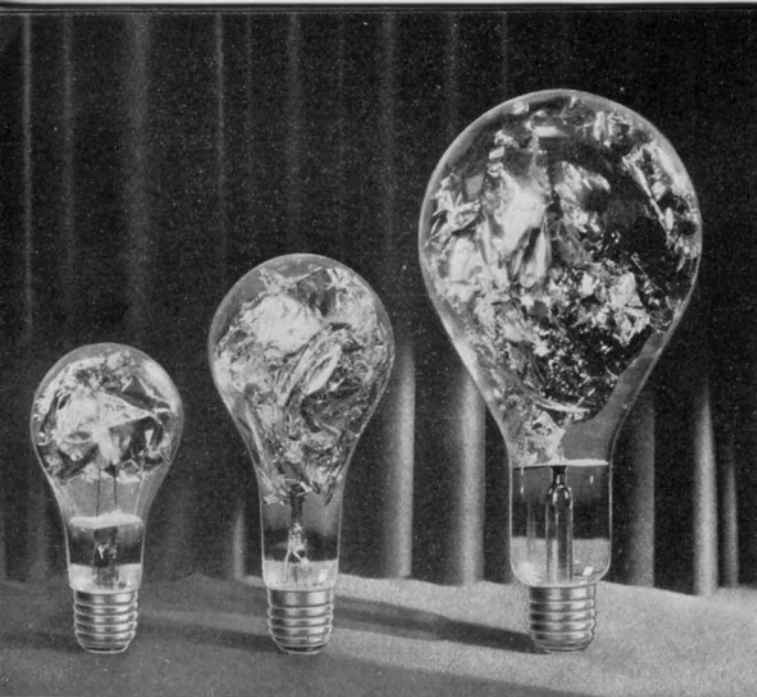
REFERENCE
LISTING
OF

OTHER LAMP SERVICES

The following pages are included for general information and reference only and are not a part of the standard large lamp schedules which precede.

The lamps shown are not sold under the terms and conditions applying to large MAZDA lamps and Type D lamps.

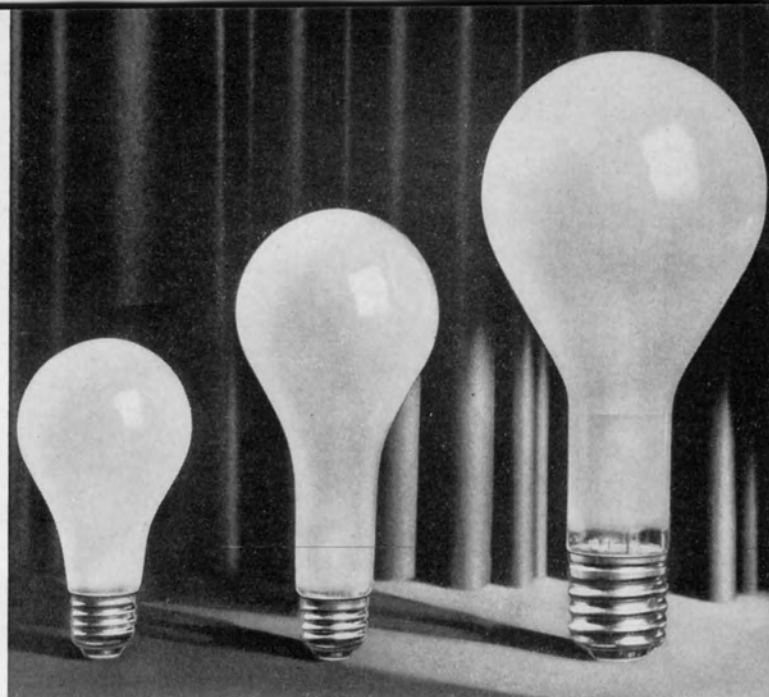
BULBCOLLECTOR.COM



Photoflash No. 10

No. 20

No. 75



Photoflood No. 1

No. 2

No. 4

MAZDA PHOTO LAMPS

■ Photoflash lamps make available an enormous volume of highly actinic light in the form of a flash with a duration of about 1/50th second. They are especially applicable for action pictures, which require extremely short exposures, and under conditions where no power supply is available or the installation of a sufficient number of Photoflood lamps would not be convenient. The lamps may be flashed with two or more cells of flashlight or dry battery or on standard lighting circuits.

The No. 10 Photoflash lamp is designed particularly for amateur service, the No. 20 for general and news photography, and the No. 75 for color and large-area work. At the very peak of its flash the light intensity from a No. 75 Photoflash lamp is equivalent to that from more than five hundred general service lamps of the 1000-watt size.

It is recommended that a reflector always be used

with MAZDA Photo lamps to utilize light which would otherwise be wasted. A reflector screens the operator and increases the illumination on the subject by three to five times.

Photoflood lamps, for use on standard lighting circuits, produce a large amount of light of high photographic efficiency. The color quality is constant in value and is perfectly suited to the newer panchromatic films and plates. This makes possible home movies and portraits, and greatly facilitates the operations of commercial photographers in their studio and out-of-studio work.

Photographically the light from the Photoflood lamp No. 1 is about equivalent to that obtained from a 750-watt general service lamp. No. 2 is the equivalent of a 1000-watt lamp, while the No. 4 is at least two and one-half times as effective as the 1000-watt general lighting lamp.

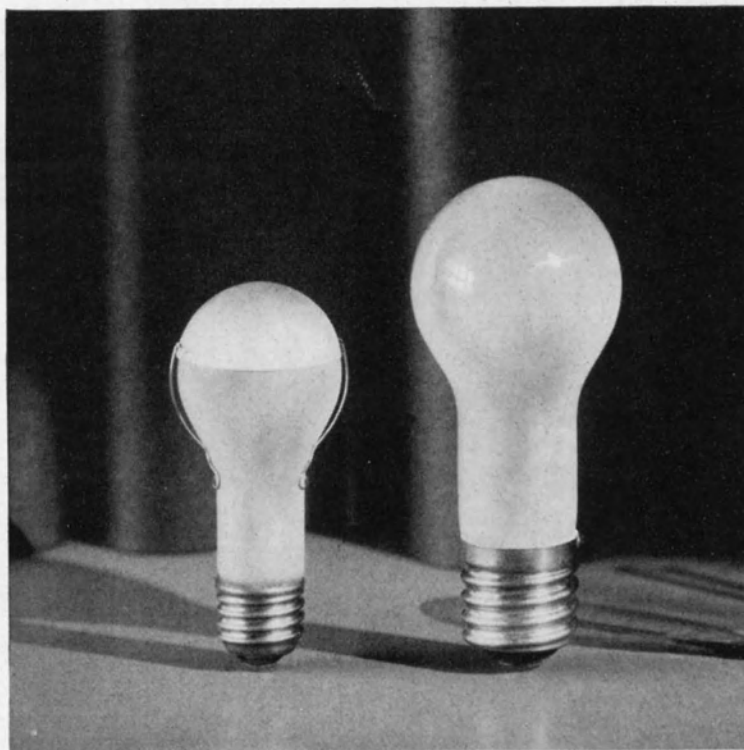
No.	Voltage Range for Operation	Lumens	Bulb	Diameter Bulb, Inches	Maximum Over-all Length, Inches	Rated Life at 115 Volts, Hours	Standard Package Quantity	List Price
MAZDA PHOTOFLASH LAMPS—CLEAR								
10	3 to 125	*22500	A-19	2 $\frac{3}{8}$	4 $\frac{7}{8}$	..	60	\$0.15
20	3 to 125	*45000	A-23	2 $\frac{7}{8}$	6 $\frac{1}{8}$	..	60	.25
75	3 to 125	*180000	PS-35	4 $\frac{3}{8}$	8 $\frac{5}{16}$	..	24	.75
MAZDA PHOTOFLOOD LAMPS—INSIDE FROSTED								
1	105-120	8650	A-21	2 $\frac{5}{8}$	4 $\frac{13}{16}$	2	60	.25
2	105-120	17000	A-25	3 $\frac{1}{8}$	6 $\frac{13}{16}$	6	24	.50
4	105-120	33500	PS-35	4 $\frac{3}{8}$	9 $\frac{7}{16}$	10	24	2.00
MAZDA PHOTOGRAPHIC ENLARGER LAMP—OUTSIDE WHITE COATED								
11	105-120	7950	A-21	2 $\frac{5}{8}$	4 $\frac{15}{16}$	2	60	.35

The above lamps are fitted with medium screw base except Photoflood No. 4, which has mogul screw base.

Use not more than five Photoflood lamps No. 1 on the usual lighting circuit. Circuits for Photoflood lamp No. 4 should be fused for 10 amperes for each No. 4 lamp employed.

* Lumen Seconds

MAZDA SUNLIGHT LAMPS



Type

S-2

S-1

■ Type S-1 and Type S-2 MAZDA lamps are designed for use where a lamp emitting a combination of ultraviolet radiation and visible light is desired.

They are employed in portable and ceiling-type sunlamps for home and solarium use and in dual purpose lighting units for offices and similar locations; also, in various types of farm units for irradiating animals and poultry.

These lamps will not operate on ordinary house lighting circuits except when used in special equipment properly designed to produce the correct starting and operating voltages.

Each type requires a different transformer specially

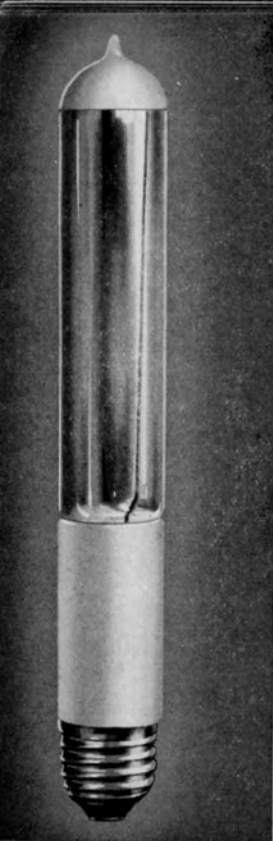
designed for the lamp and operating temperatures should be held within certain specified limits by proper construction of the socket and reflector assembly.

The bulbs of these lamps are of special glass which transmits biologically active ultraviolet but absorbs most of the radiation of wavelengths shorter than those in sunlight.

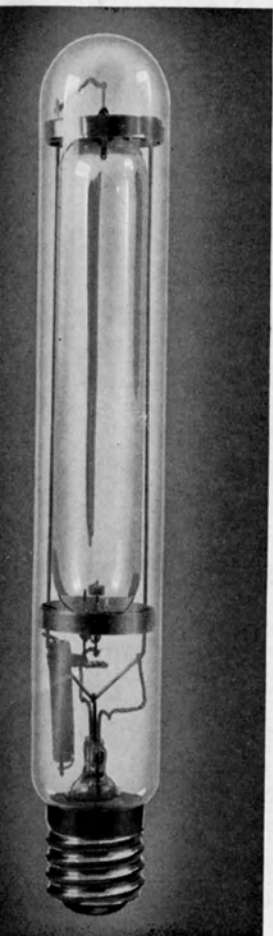
Though they have been accepted by the Council of Physical Therapy of the American Medical Association, the manufacturer makes no claims as to the effectiveness of ultraviolet radiation for the maintenance of health and particularly for the cure of disease; the latter being entirely the province of the medical profession.

Approx. Watts	Approx. Volts	Approximate Time* to Produce Mild Erythema (Sunburn) on Untanned Skin with Lamps Operating in Typical Applicator Type Equipments 30° Position—30-inch Distance	Bulb	Max. Over-all Length, Inches	Screw Base	Rated Life, Hours	Standard Package Quantity	List Price
TYPE S-1 MAZDA LAMP								
400	14.5	7 minutes	PS-22 Inside Frosted	6 $\frac{7}{16}$	Mogul	400	6	\$5.75
TYPE S-2 MAZDA LAMP								
130	15	45 minutes	A-17 Inside Frosted With Metal Cap	4 $\frac{7}{8}$	Special	300	12	3.75

* Considerably longer exposures are necessary to produce vivid reddening.



250 Watts



400 Watts

MERCURY (Type H) LAMPS

For use on 110-120 or 220-250 volt circuits with special equipment properly designed to produce the correct starting and operating voltage for the lamp.

■ Mercury lamps have been recently introduced in two wattage sizes. These lamps differ radically in principle from incandescent MAZDA lamps both in their operation and in the color quality of light produced, but are applicable to a wide range of industrial and commercial lighting applications.

These new lamps represent departures from former gaseous conductor and mercury vapor sources in that they are provided with conventional screw bases and are adaptable to common types of reflecting equipment.

The principle of operation is that of a mercury vapor arc or flow of current between the two main electrodes located at the upper and lower parts of the bulb. The operating characteristics of these new light sources are such that each lamp requires a special transformer or regulating device for starting and operation. Several minutes is required for mercury lamps to come up to full brilliance.

The 400-Watt (Type H-1) Lamp

The 400-watt Type H-1 mercury lamp consists of an interior arc tube enclosed within an outer tubular bulb. The lamp is supplied either for base up or base down operation and must be burned within 10 degrees of vertical. Orders should specify burning position.

The 250-Watt (Type H-2) Lamp

This lower wattage mercury lamp, though operating on the same principle, differs somewhat in construction from the 400-watt size. Only a single bulb enclosing the arc stream is used and the lower vapor pressure permits universal burning. It should be used in equipment which protects the lamp from air currents or drafts.

	250 Watts*	400 Watts*
List Price	\$7.50	\$12.50
†Standard Package Quantity	12	6
Bulb	T-9	T-16
Base	Medium Screw	Mogul Screw
Maximum Over-all Length	8 inches	13 inches
Maximum Diameter	1 1/8 inches	2 inches
*Lumens	7500	16000
Initial Lumens per Watt	30	40
Lumens per Watt at 70% Life	25	33
Average Life	2000 hours	2000 hours
Frequency	60 cycles	60 cycles
Light Center Length	5 inches	7 3/4 inches
Length of Light Source	4 1/8 inches	6 inches
Burning Position	Any	Base up†
Finish	Clear	Clear

* These are design values. Electrical rating will change slightly with different line voltages.

† A standard package shall consist of lamps of the same specifications.

‡ Lamps also available for base down burning.

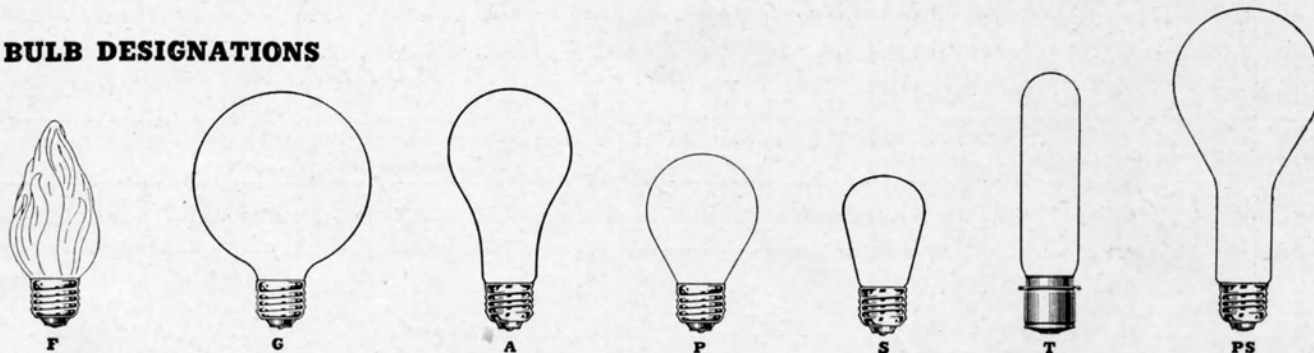
SUMMARY OF PRICES AND TECHNICAL DATA

Large MAZDA Lamps and Type D Lamps

The drawings below illustrate the various bulbs, base and filament designations referred to in this Catalog. The letter in the bulb designation indicates its shape and the figure its approximate diameter in eighths of an inch.

Over-all length is measured from top of bulb to bottom of base. Light center length is measured from the center of the filament to bottom of screw bases; top of base pins or fins of bayonet or prefocused bases; shoulder of post of mogul bipost bases and bottom of bulb (base end) for medium bipost bases.

BULB DESIGNATIONS

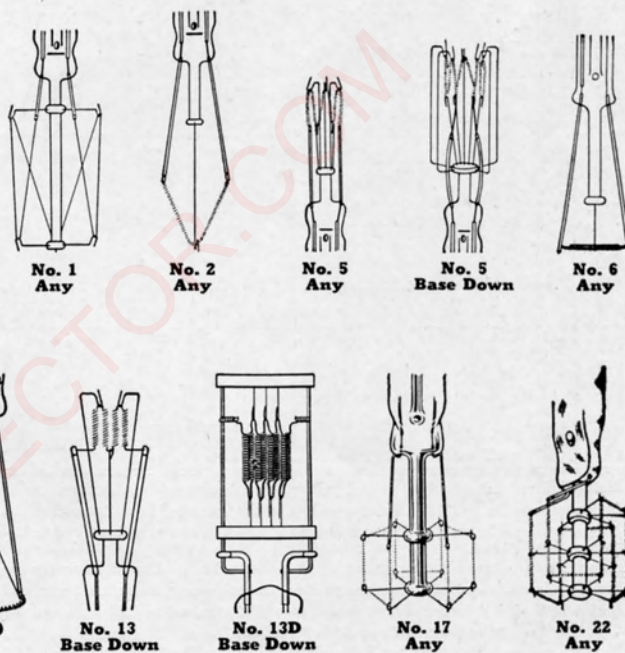


BASE DESIGNATIONS



FILAMENT FORMS

The letter "S" preceding the number denotes a "straight" while "C" denotes the "coiled" filament. The filament form and method of support determines the burning position. These illustrations show some of the commonly used filament forms and the specific burning position of each.



Watts	Bulb	List Price	Std. Pkg. Qty.	Mazda B or Mazda C Lamp	Rated Initial Lums.	Rated Initial Lums. per Watt	Lums. per Watt at 70% of Rated Life	Rated Aver. Lab. Life (Hrs.)	Base	Max. Over-all Length, Inches	Aver. Light Center Length, Inches	Fil. Const.	Position of Burning
MAZDA LAMPS FOR 110, 115 and 120-Volt Circuits													
6	S-6 clear.....	\$0.15	120	B	39	6.6	.....	1500	Cand.	1 $\frac{7}{8}$	...	C-7A	Any
6	S-14 clear.....	.15	120	B	38	6.4	.....	1500	Med.	3 $\frac{1}{2}$	2 $\frac{1}{2}$	C-9	Any
6	S-14 I. F.....	.15	120	B	38	6.3	.....	1500	Med.	3 $\frac{1}{2}$	2 $\frac{1}{2}$	C-9	Any
6	S-14 colored†.....	.20	120	B	.....	.....	.....	1500	Med.	3 $\frac{1}{2}$	...	C-9	Any
7	C-7 clear.....	.10	120	B	*50	7.1	.....	2000	Cand.	2 $\frac{1}{8}$	...	C-7A	Any
7	C-7 white.....	.10	120	B	.....	.....	.....	2000	Cand.	2 $\frac{1}{8}$	...	C-7A	Any
10	S-11 clear.....	.15	120	B	82	8.2	.....	1500	Inter.	2 $\frac{5}{16}$	1 $\frac{5}{8}$	C-7A	Any
10	S-11§.....	.20	120	B	.....	.....	.....	1500	Inter.	2 $\frac{5}{16}$	1 $\frac{5}{8}$	C-7A	Any
10	S-14 clear.....	.15	120	B	80	a 8.0	a 7.3	1500	Med.	3 $\frac{1}{2}$	2 $\frac{1}{2}$	C-9	Any
10	S-14 I. F.....	.15	120	B	79	a 7.9	a 7.2	1500	Med.	3 $\frac{1}{2}$	2 $\frac{1}{2}$	C-9	Any
10	S-14 colored†.....	.20	120	B	.....	.....	.....	1500	Med.	3 $\frac{1}{2}$	...	C-9	Any
10	S-14 nat. col.□.....	.40	120	B	.....	.....	.....	1500	Med.	3 $\frac{1}{2}$	...	C-9	Any
10	S-14 nat. col.*.....	.50	120	B	.....	.....	.....	1500	Med.	3 $\frac{1}{2}$	...	C-9	Any
15	A-17 I. F.....	.15	120	B	141	a 9.4	a 8.3	1000	Med.	3 $\frac{5}{8}$	2 $\frac{3}{8}$	C-9	Any
15	F-10 F. T., white, ivory	.25	60	B	.....	.....	.....	750	Cand.	3 $\frac{1}{16}$	...	C-7A	Any
25	A-19 I. F.....	.15	120	B	260	a 10.4	a 8.9	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-7A	Any
25	A-19 colored†.....	.20	120	B	.....	.....	.....	1000	Med.	3 $\frac{13}{16}$	...	C-7A	Any
25	A-19 nat. col.□.....	.40	120	B	.....	.....	.....	1000	Med.	3 $\frac{13}{16}$	...	C-7A	Any
25	A-19 nat. col.*.....	.50	120	B	.....	.....	.....	1000	Med.	3 $\frac{13}{16}$	...	C-7A	Any
25	A-19 day. clear.....	.30	120	B	.....	.....	.....	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-7A	Any
25	F-15 F. T., white, ivory	.15	120	B	.....	.....	.....	750	Med.	4 $\frac{1}{2}$	...	C-7A	Any
25	G-18 $\frac{1}{2}$ F. T., wh., ivory	.30	120	B	.....	.....	.....	750	Med.	3 $\frac{9}{16}$	...	C-7A	Any
25	G-25 F. T., white, ivory	.35	60	B	.....	.....	.....	750	Med.	4 $\frac{7}{16}$	...	C-7A	Any
25	T-6 $\frac{1}{2}$ clear.....	.35	60	B	237	9.5	.....	1000	Inter.	5 $\frac{1}{2}$	...	C-8	Any
25	T-10 clear.....	.25	60	B	250	a 10.0	a 8.2	1000	Med.	5 $\frac{5}{8}$	...	C-8	Any
30	T-8 clear Lumiline.....	.95	24	B	243	8.1	.....	1500	Disc	n17 $\frac{3}{4}$	...	C-8	Any
30	T-8 col. (▲) Lumiline..	1.05	24	B	.....	.....	.....	1500	Disc	n17 $\frac{3}{4}$	...	C-8	Any
40	A-19 I. F.....	.15	120	C	444	b 11.1	b 9.9	1000	Med.	4 $\frac{1}{4}$	2 $\frac{7}{8}$	C-9	x Any
40	A-21 I. F.....	.18	120	B	428	10.7	.....	1000	Med.	4 $\frac{1}{16}$	2 $\frac{7}{8}$	C-7A	Any
40	A-21 colored†.....	.23	120	B	.....	.....	.....	1000	Med.	4 $\frac{1}{16}$	...	C-7A	Any
40	A-21 nat. col.□.....	.40	120	B	.....	.....	.....	1000	Med.	4 $\frac{1}{16}$	...	C-7A	Any
40	A-21 nat. col.*.....	.50	120	B	.....	.....	.....	1000	Med.	4 $\frac{1}{16}$	...	C-7A	Any
40	G-25 F. T., white, ivory	.35	60	B	.....	.....	.....	750	Med.	4 $\frac{7}{16}$	...	C-7A	Any
40	T-8 clear.....	.90	24	B	400	10.0	8.4	1000	Med.	11 $\frac{7}{8}$	...	C-8	Any
40	T-8 clear Lumiline.....	.85	24	B	344	8.6	.....	1500	Disc	n11 $\frac{3}{4}$	...	C-8	Any
40	T-8 col. (▲) Lumiline..	.95	24	B	.....	.....	.....	1500	Disc	n11 $\frac{3}{4}$	...	C-8	Any
50	A-21 I. F.....	.15	120	C	650	b 13.0	b 12.1	1000	Med.	4 $\frac{13}{16}$	3 $\frac{3}{8}$	CC-6	x Any
50	A-19 I. F. Rough Serv..	.30	120	B	455	a 9.1	a 7.5	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-22	Any
50	A-19 day. clear.....	.35	120	B	.....	.....	.....	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-7A	Any
50	P-19 cl. Vibration.....	.25	120	B	555	a 11.1	a 8.4	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-9	Any but Horiz.
50 100 150	PS-25 I. F. Three Light	.50	60	C	{ 525 1380 1905 }	{ 10.5 13.8 12.7 }	.....	1000	Three Contact Mogul	6 $\frac{11}{16}$	5	2 C-9	Any
60	A-21 I. F.....	.15	120	C	828	b 13.8	b 13.0	1000	Med.	4 $\frac{13}{16}$	3 $\frac{3}{8}$	CC-6	x Any
60	A-21 day. I. F.....	.30	120	C	*500	.....	.....	1000	Med.	4 $\frac{13}{16}$	3 $\frac{3}{8}$	C-9	x Any
60	A-21 I. F. Silv. Bowl..	.45	120	C	.....	.....	.....	1000	Med.	4 $\frac{13}{16}$	3 $\frac{3}{8}$	CC-6	Base up
60	A-21 nat. col.□.....	.45	120	C	.....	.....	.....	1000	Med.	4 $\frac{13}{16}$	...	C-9	Any
60	A-21 nat. col.*.....	.55	120	C	.....	.....	.....	1000	Med.	4 $\frac{13}{16}$	...	C-9	Any

† Inside colored in red, blue, green, yellow, amber-orange and old rose.

§ Inside colored in red, blue, green, yellow, amber-orange, flament and white.

□ Natural colored in amber, blue and green. Amber regularly furnished in light shade. Dark shade amber (used in photographic work) can be furnished at same price. Blue shade does not include daylight blue or photographic blue.

* Natural colored ruby regularly furnished in light shade. Dark shade ruby (used in photographic work) can be furnished at same price.

† Inside colored in red, blue, green, yellow, amber-orange, flament, ivory and old rose.

(▲) Inside frosted or outside colored white, straw, orange, moonlight blue, emerald and surprise pink.

* This lamp not to be burned in enclosing globe.

a Lumens per watt listed are for 115-volt lamps only. For 110-volt lamps add 0.05 l.p.w.; for 120-volt lamps subtract 0.05 l.p.w.

b Lumens per watt listed are for 115-volt lamps only. For 110-volt lamps add 0.15 l.p.w.; for 120-volt lamps subtract 0.15 l.p.w.

x Will operate in any position, but lumen maintenance is best when burned vertically base up and lumens per watt values at 70% of rated life apply to this burning position only.

* Approximate value.

† Nominal Watts. 110-125 volts (design volts 118).

† Outside coated lamps not recommended for outdoor use.

n Average over-all length.

Watts	Bulb	List Price	Std. Pkg. Qty.	Mazda B or Mazda C Lamp	Rated Initial Lums.	Rated Initial Lums. per Watt	Lums. per Watt at 70% of Rated Life	Rated Aver. Lab. Life (Hrs.)	Base	Max. Over-all Length, Inches	Aver. Light Center Length, Inches	Fil. Const.	Position of Burning
MAZDA LAMPS FOR 110, 115 and 120-Volt Circuits—Continued													
60 60 ♦ 60	A-21 cl. Traf. Signal . . . T-8 clear Lumiline . . . T-8 col. (▲) Lumiline . . .	\$0.30 .95 1.05	120 24 24	C B B	654 528	10.9 8.8 .....	..... ..... .....	2000 1500 1500	Med. Disc Disc	4 ⁷ / ₁₆ n 17 ³ / ₄ n 17 ³ / ₄	2 ⁷ / ₁₆	C-9 C-8 C-8	Base down or Horiz. Any Any
75	A-21 I. F.	.20	60	C	1073	b 14.3	b 12.6	750	Med.	5 ⁵ / ₁₆	3 ⁷ / ₈	C-9	x Any
100 100 100	A-23 I. F. A-23 day. I. F. A-23 I. F. Silv. Bowl . . .	.20 .35 .60	60 60 60	C C C	1560 *1010	b 15.6	b 13.7	750 750 1000	Med. Med. Med.	6 ¹ / ₁₆ 6 ¹ / ₁₆ 6 ¹ / ₁₆	4 ³ / ₈ 4 ³ / ₈ 4 ³ / ₈	C-9 C-9 C-9	x Any x Any Base up
100	A-23 I. F. Rough Serv.	.45	60	C	1150	b 11.5	b 10.1	1000	Med.	6 ¹ / ₁₆	4 ³ / ₈	C-17	Any
100 200 300	G-30 I. F. Indirect Three-Lite	.65	24	C	1330 3320 4650	13.3 16.6 15.5	.....	1000	Three Contact Mogul	6 ³ / ₄	3 ³ / ₄	2 C-7A	Base down
150 150 150	A-25 I. F. A-25 clear A-25 W. B.	.25 .25 .30	60 60 60	C C C	2580 2580 *2500	b 17.2 b 17.2	 b 15.2	750 750 750	Med. Med. Med.	6 ¹³ / ₁₆ 6 ¹³ / ₁₆ 6 ¹³ / ₁₆	5 ¹ / ₄ 5 ¹ / ₄ 5 ¹ / ₄	C-9 C-9 C-9	x Any x Any Base up
150 150 ♦ 150	A-25 day. clear A-25 day. I. F. A-25 I. F. Silv. Bowl . . .	.50 .55 .70	60 60 60	C C C	*1680 *1680 .....	..... ..... .....	..... ..... .....	750 750 1000	Med. Med. Med.	6 ¹³ / ₁₆ 6 ¹³ / ₁₆ 6 ¹³ / ₁₆	5 ¹ / ₄ 5 ¹ / ₄ 5 ¹ / ₄	C-9 C-9 C-9	x Any x Any Base up
200 200 200	PS-30 clear PS-30 I. F. PS-30 W. B.	.35 .35 .40	24 24 24	C C C	3640 3640 *3530	b 18.2 b 18.2	b 15.6	750 750 750	Med. Med. Med.	8 ¹ / ₈ 8 ¹ / ₈ 8 ¹ / ₈	6 6 6	C-9 C-9 C-9	x Any x Any Base up
200 200 ♦ 200	PS-30 day. clear PS-30 day. I. F. PS-30 I. F. Silv. Bowl . . .	.80 .85 .95	24 24 24	C C C	*2270 *2270 .....	..... ..... .....	..... ..... .....	1000 1000 1000	Med. Med. Med.	8 ¹ / ₈ 8 ¹ / ₈ 8 ¹ / ₈	6 6 6	C-9 C-9 C-9	x Any x Any Base up
300 300 300	PS-35 clear PS-35 I. F. PS-35 W. B.	.60 .65 .65	24 24 24	C C C	5910 5910 *5730	b 19.7 b 19.7	b 16.3	750 750 750	Med. Med. Med.	8 ³ / ₄ 8 ³ / ₄ 8 ³ / ₄	6 6 6	C-9 C-9 C-9	x Any x Any Base up
300 300 300	PS-35 clear PS-35 I. F. PS-35 W. B.	.75 .80 .80	24 24 24	C C C	5760 5760 *5590	b 19.2 b 19.2	b 16.0	1000 1000 1000	Mog. Mog. Mog.	9 ⁷ / ₁₆ 9 ⁷ / ₁₆ 9 ⁷ / ₁₆	7 7 7	C-7A C-7A C-7A	x Any x Any Base up
300 300 ♦ 300	PS-35 day. clear PS-35 day. I. F. PS-35 I. F. Silv. Bowl . . .	1.20 1.30 1.45	24 24 24	C C C	*3740 *3740 .....	..... ..... .....	..... ..... .....	1000 1000 1000	Mog. Mog. Mog.	9 ⁷ / ₁₆ 9 ⁷ / ₁₆ 9 ⁷ / ₁₆	7 7 7	C-7A C-7A C-7A	x Any x Any Base up
500 500 500	PS-40 clear PS-40 I. F. PS-40 W. B.	1.40 1.50 1.50	12 12 12	C C C	10050 10050 *9750	b 20.1 b 20.1	b 16.5	1000 1000 1000	Mog. Mog. Mog.	9 ¹³ / ₁₆ 9 ¹³ / ₁₆ 9 ¹³ / ₁₆	7 7 7	C-7A C-7A C-7A	x Any x Any Base up
500 500 ♦ 500	PS-40 day. clear PS-40 day. I. F. PS-40 I. F. Silv. Bowl . . .	2.15 2.30 2.25	12 12 12	C C C	*6530 *6530 .....	..... ..... .....	..... ..... .....	1000 1000 1000	Mog. Mog. Mog.	9 ¹³ / ₁₆ 9 ¹³ / ₁₆ 9 ¹³ / ₁₆	7 7 7	C-7A C-7A C-7A	x Any x Any Base up
750 750	PS-52 clear PS-52 W. B.	3.75 3.95	6 6	C C	14550 *14100	19.4	17.5	1000 1000	Mog. Mog.	13 ¹ / ₈ 13 ¹ / ₈	9 ¹ / ₂ 9 ¹ / ₂	C-7A C-7A	x Any Base up
1000 1000 1000	T-24 I. F. PS-52 clear PS-52 W. B.	3.75 4.00 4.20	6 6 6	C C C	19600 20700 *20080	19.6 20.7	18.0 17.3	1000 1000 1000	Md. Bip. Mog. Mog.	9 ¹ / ₈ 13 ¹ / ₈ 13 ¹ / ₈	k 5 ¹ / ₂ 9 ¹ / ₂ 9 ¹ / ₂	C-13 C-7A C-7A	Base up x Any Base up
1500 1500	PS-52 clear PS-52 W. B.	5.75 5.95	6 6	C C	32550 *31570	21.7	15.3	1000 1000	Mog. Mog.	13 ¹ / ₈ 13 ¹ / ₈	9 ¹ / ₂ 9 ¹ / ₂	C-7A C-7A	x Any Base up
TYPE D LAMPS—110, 115 and 120 Volts Only													
♦ 7 ¹ / ₂ 15	G-11 outside wh. & red A-15 I. F.	.10 .10	60 60	Vac. Vac.	 148	 a 9.9	..... .....	1400 750	Med. Med.	2 ¹ / ₄ 3 ¹ / ₂	..... ...	C-7A C-9	Any Any
♦ 30 60	G-19 (o) A-19 I. F.	.10 .10	60 60	Vac. Gas F.	342 I.F. 828	a 11.4 I.F. b 13.8	..... ..... .....	500 500	Med. Med.	3 ⁹ / ₁₆ 4 ³ / ₈	..... ...	C-9 C-9	Any Any

(▲) Inside frosted or outside colored white, straw, orange, moonlight blue, emerald and surprise pink.

▲ Silvered bowl lamps should be used only in porcelain sockets and in fixtures so designed that the temperatures of the lamp and fixture do not exceed limits for satisfactory operation.

o Inside frosted or outside colored in red, blue, green, amber-orange, rose, white, ivory and flametint.

a Lumens per watt listed are for 115-volt lamps only. For 110-volt lamps add 0.05 l.p.w.; for 120-volt lamps subtract 0.05 l.p.w.

b Lumens per watt listed are for 115-volt lamps only. For 110-volt lamps add 0.15 l.p.w.; for 120-volt lamps subtract 0.15 l.p.w.

k The light center length of this lamp is the distance from the center of the light source to the plane of the bottom of the bulb (exclusive of tip).

x Will operate in any position, but lumen maintenance is best when burned vertically base up and lumens per watt values at 70% of rated life apply to this burning position only.

* Approximate value.

♦ Outside coated lamps not recommended for outdoor use.

n Average over-all length.

Watts	Volts	Bulb	List Price	Std. Pkg. Qty.	Mazda B or Mazda C Lamp	Rated Initial Lums.	Rated Initial Lums. per Watt	Lum. per Watt at 70% of Rated Life	Rated Aver. Lab. Life (Hrs.)	Base	Max. Over-all Length, Inches	Aver. Light Center Length, Inches	Fil. Const.	Position of Burning
MAZDA LAMPS FOR HIGH VOLTAGE SERVICE—220, 230, 240, 250 and 260 Volts														
25	230	A-19 I. F.....	\$0.26	120	B	215	c 8.6	c 8.0	1000	Med.	3 $\frac{1}{8}$	2 $\frac{1}{2}$	C-17	Any
50	230	A-21 I. F.....	.26	120	B	475	c 9.5	c 8.2	1000	Med.	4 $\frac{7}{16}$	2 $\frac{7}{8}$	C-17	Any
50	275	A-21 I. F. Mine.....	.40	120	B	435	8.7	....	1000	Med.	4 $\frac{7}{16}$	2 $\frac{7}{8}$	C-17	Any
50	300	A-21 I. F. Mine.....	.40	120	B	435	8.7	....	1000	Med.	4 $\frac{7}{16}$	2 $\frac{7}{8}$	C-17	Any
100	230	A-23 I. F.....	.38	60	C	1230	d 12.3	d 11.5	1000	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
200	230	PS-30 clear.....	.85	24	C	2940	d 14.7	d 13.4	1000	Med.	8 $\frac{1}{8}$	6	C-9	x Any
200	230	PS-30 I. F.....	.90	24	C	2940	d 14.7	....	1000	Med.	8 $\frac{1}{8}$	6	C-9	x Any
200	230	PS-30 W. B.....	.90	24	C	*2850	....	....	1000	Med.	8 $\frac{1}{8}$	6	C-9	Base up
300	230	PS-35 clear.....	1.25	24	C	4740	d 15.8	d 14.0	1000	Mog.	9 $\frac{7}{16}$	7	C-7A	x Any
300	230	PS-35 I. F.....	1.35	24	C	4740	d 15.8	....	1000	Mog.	9 $\frac{7}{16}$	7	C-7A	x Any
300	230	PS-35 W. B.....	1.35	24	C	*4600	....	....	1000	Mog.	9 $\frac{7}{16}$	7	C-7A	Base up
500	230	PS-40 clear.....	2.15	12	C	8600	d 17.2	d 15.2	1000	Mog.	9 $\frac{13}{16}$	7	C-7A	x Any
500	230	PS-40 I. F.....	2.30	12	C	8600	d 17.2	....	1000	Mog.	9 $\frac{13}{16}$	7	C-7A	x Any
750	230	PS-52 clear.....	4.25	6	C	13500	d 18.0	d 15.8	1000	Mog.	13 $\frac{1}{8}$	9 $\frac{1}{2}$	C-7A	x Any
1000	230	PS-52 clear.....	4.75	6	C	19400	d 19.4	d 16.2	1000	Mog.	13 $\frac{1}{8}$	9 $\frac{1}{2}$	C-7A	x Any
MAZDA LAMPS FOR COUNTRY HOME SERVICE—28-32 Volts														
15	28-32	A-17 I. F.....	.23	120	C	165	11.0	....	1000	Med.	3 $\frac{5}{8}$	2 $\frac{3}{8}$	C-9	x Any
25	28-32	A-19 I. F.....	.23	120	C	330	13.2	....	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-9	x Any
50	28-32	A-21 I. F.....	.25	120	C	785	15.7	....	1000	Med.	4 $\frac{15}{16}$	3 $\frac{3}{8}$	C-9	x Any
100	28-32	A-23 I. F.....	.38	60	C	1750	17.5	....	1000	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
MAZDA LAMPS FOR TRAIN AND LOCOMOTIVE SERVICE														
15	30	A-17 I. F.....	.23	120	C	165	11.0	10.0	1000	Med.	3 $\frac{5}{8}$	2 $\frac{3}{8}$	C-9	x Any
15	32	A-17 I. F.....	.23	120	C	176	11.0	10.0	1000	Med.	3 $\frac{5}{8}$	2 $\frac{3}{8}$	C-9	x Any
15	34	S-14 clear Cab.....	.22	120	B	141	9.4	....	1000	Med.	3 $\frac{1}{2}$	2 $\frac{1}{2}$	C-9	Any
15	60	A-17 I. F.....	.23	120	B	150	10.0	....	1000	Med.	3 $\frac{5}{8}$	2 $\frac{3}{8}$	C-9	Any
15	64	A-17 I. F.....	.23	120	B	160	10.0	....	1000	Med.	3 $\frac{5}{8}$	2 $\frac{3}{8}$	C-9	Any
25	30	A-19 I. F.....	.23	120	C	330	13.2	12.1	1000	Med.	3 $\frac{13}{16}$	2 $\frac{1}{2}$	C-9	x Any
25	32	A-19 I. F.....	.23	120	C	352	13.2	12.1	1000	Med.	3 $\frac{15}{16}$	2 $\frac{1}{2}$	C-9	x Any
25	60	A-19 I. F.....	.23	120	C	273	10.9	....	1000	Med.	3 $\frac{15}{16}$	2 $\frac{1}{2}$	C-9	x Any
25	64	A-19 I. F.....	.23	120	C	291	10.9	....	1000	Med.	3 $\frac{15}{16}$	2 $\frac{1}{2}$	C-9	x Any
50	30	A-21 I. F.....	.25	120	C	785	15.7	14.3	1000	Med.	4 $\frac{15}{16}$	3 $\frac{3}{8}$	C-9	x Any
50	32	A-21 I. F.....	.25	120	C	837	15.7	14.3	1000	Med.	4 $\frac{15}{16}$	3 $\frac{3}{8}$	C-9	x Any
50	60	A-21 I. F.....	.25	120	C	685	13.7	....	1000	Med.	4 $\frac{15}{16}$	3 $\frac{3}{8}$	C-9	x Any
50	64	A-21 I. F.....	.25	120	C	730	13.7	....	1000	Med.	4 $\frac{15}{16}$	3 $\frac{3}{8}$	C-9	x Any
100	30	A-23 I. F.....	.38	60	C	1750	17.5	16.4	1000	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
100	32	A-23 I. F.....	.38	60	C	1865	17.5	16.4	1000	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
100	32	P-25 clear Headlt.....	1.00	60	C	1520	15.2	....	500	Med.	4 $\frac{3}{4}$	3	C-5	z
100	60	A-23 I. F.....	.38	60	C	1570	15.7	....	1000	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
100	64	A-23 I. F.....	.38	60	C	1675	15.7	....	1000	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
250	32	P-25 clear Headlt.....	1.50	60	C	4300	17.2	....	500	Med.	4 $\frac{3}{4}$	3	C-5A	z

c Lumens per watt listed are for 220 and 230-volt lamps only. For 240, 250 and 260-volt lamps subtract 0.10 l.p.w.

d Lumens per watt listed are for 220 and 230-volt lamps only. For 240, 250 and 260-volt lamps subtract 0.30 l.p.w.

x Will operate in any position, but lumen maintenance is best when burned vertically base up and lumens per watt values at 70% of rated life apply to this burning position only.

z Can be burned in any position except within 45 degrees of vertically base up.

* Approximate value.

Watts	Volts	Bulb	List Price	Std. Pkg. Qty.	Mazda B or Mazda C Lamp	Rated Initial Lums.	Rated Initial Lums. per Watt	Rated Aver. Lab. Life (Hrs.)	Amperes	Base	Max. Over-all Length, Inches	Aver. Light Center Length, Inches	Fil. Const.	Position of Burning
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MAZDA LAMPS FOR STREET RAILWAY SERVICE

Amperes														
1.0	30	A-19 I. F.....	\$0.30	120	C	357	11.9	2000		Med.	3 $\frac{1}{16}$	2 $\frac{1}{2}$	C-9	x Any
1.6	30	A-21 I. F.....	.35	120	C	648	13.5	2000	.....	Med.	4 $\frac{7}{16}$	2 $\frac{7}{8}$	C-9	x Any
Watts														
23	105	S-17 clear.....	.25	120	B	1214	8.7	2000	0.214	Med.	4 $\frac{5}{8}$	...	S-1	Any
36	110	A-19 clear Headlt. . .	.60	120	B	1354	9.0	1000	0.342	Med.	3 $\frac{1}{16}$	2 $\frac{3}{8}$	C-5	Any
36	110	A-21 I. F.....	.17	120	B	1374	9.5	2000	0.342	Med.	4 $\frac{7}{16}$	2 $\frac{7}{8}$	C-9	††Any
56	115	A-21 I. F.....	.24	120	B	1621	10.4	2000	0.519	Med.	4 $\frac{7}{16}$	2 $\frac{7}{8}$	C-9	††Any
56	115	P-25 clear Headlt. . .	.85	60	B	1555	9.3	1000	0.519	Med.	4 $\frac{3}{4}$	2 $\frac{1}{16}$	C-5	Any
94	120	P-25 clear Headlt. . .	1.10	60	B	1933	9.4	1000	0.863	Med.	4 $\frac{3}{4}$	2 $\frac{1}{16}$	C-5	Any
101	125	A-23 I. F.....	.50	60	C	1100	11.0	1500	.....	Med.	6 $\frac{1}{16}$	4 $\frac{3}{8}$	C-9	x Any
201	130	PS-30 clear.....	.95	24	C	2920	14.6	1000	.....	Med.	8 $\frac{1}{8}$	6	C-9	x Any
301		PS-35 clear.....	1.55	24	C	4860	16.2	1000	.....	Mog.	9 $\frac{7}{16}$	7	C-7A	x Any

MAZDA LAMPS FOR AVIATION SERVICE

100	12	A-19 clear.....	2.15	12	C	2000	20.0	100	.....	Md. Pf.	4 $\frac{1}{8}$	h 1 $\frac{3}{4}$	C-2	z
240	12	A-19 clear.....	5.25	12	C	5760	24.0	100	.....	Md. Pf.	4 $\frac{1}{8}$	h 1 $\frac{3}{4}$	C-2	z
420	12	G-25 clear.....	6.00	12	C	10500	25.0	100	.....	Mg. Pf.	5 $\frac{5}{16}$	h 1 $\frac{11}{16}$	C-2	z
420	12	G-25 clear.....	6.00	12	C	10500	25.0	100	.....	Mog.	4 $\frac{7}{8}$	3	C-2	z
500	{110, 115, 120}	T-20 clear.....	3.90	6	C	8800	17.6	800	.....	Mg. Pf.	9 $\frac{1}{2}$	h 3 $\frac{7}{16}$	C-13B	Base down
1000	30	T-20 clear.....	7.00	6	C	26000	26.0	500	.....	Mg. Bip.	9 $\frac{1}{2}$	e 4	C-13	Base down
1000	{110, 115, 120}	T-20 clear.....	6.50	6	C	20500	20.5	500	.....	Mg. Bip.	9 $\frac{1}{2}$	e 4	C-13	Base down
1000	{110, 115, 120}	T-20 clear.....	6.50	6	C	20500	20.5	500	.....	Mog.	9 $\frac{1}{16}$	4 $\frac{3}{4}$	C-13	Base down
1500	32	T-24 clear.....	15.00	6	C	42000	28.0	100	.....	Mg. Bip.	10 $\frac{1}{2}$	e 4	C-13B	Base down
3000	32	T-32 clear.....	25.00	4	C	84000	28.0	100	.....	Mg. Bip.	14	e 5 $\frac{3}{4}$	C-13B	Base down
5000	{110, 115, 120}	G-64 clear.....	35.00	1	C	162500	32.5	75	.....	Mg. Bip.	11 $\frac{7}{8}$	e 6 $\frac{1}{2}$	C-13	Base down
10000	{110, 115, 120}	G-96 clear.....	85.00	1	C	325000	32.5	75	.....	Mg. Bip.	17 $\frac{3}{8}$	e10	C-13	Base down

MAZDA LAMPS FOR MOTION PICTURE PRODUCTION SERVICE—110, 115 and 120 Volts

Watts	Bulb	List Price	Std. Pkg. Qty.	Mazda B or Mazda C Lamp	Rated Initial Lums.	Rated Initial Lums. per Watt	Rated Aver. Lab. Life (Hrs.)	Base	Max. Over-all Length, Inches	Aver. Light Center Length, Inches	Fil. Const.	Position of Burning
*1000	PS-52 clear.....	\$ 4.00	6	C	24000	24.0	250	Mog.	13 $\frac{1}{8}$	9 $\frac{1}{2}$	C-7A	x Any
*1500	PS-52 clear.....	5.75	6	C	38000	25.3	250	Mog.	13 $\frac{1}{8}$	9 $\frac{1}{2}$	C-7A	x Any
†2000	PS-52 clear.....	5.25	6	C	65000	...	† 15	Mog.	13 $\frac{1}{8}$	9 $\frac{1}{2}$	C-7A	x Any
‡2000	G-48 clear.....	13.00	6	C	56000	28.0	100	Mg. Bip.	9 $\frac{3}{8}$	e 5	C-13	Base down
‡5000	G-64 clear.....	35.00	1	C	162500	32.5	75	Mg. Bip.	11 $\frac{7}{8}$	e 6 $\frac{1}{2}$	C-13	Base down
‡10000	G-96 clear.....	85.00	1	C	325000	32.5	75	Mg. Bip.	17 $\frac{3}{8}$	e10	C-13	Base down

* Photographic (General Lighting). † Movieflood (Color Photography) 105-120 volts. ‡ Modeling. ‡ Life at 115 volts.

¶ Nominal watts. The actual watts are determined by multiplying the volts by the amperes (the amperes are the same for all voltages).

†† This lamp, if burned horizontally, will not give as good service as when burned in a vertical position.

e The light center length of this lamp is exclusive of base prongs; base prong being the small diameter part of metal post.

f The lumens given cover only lamps of 115 volts. The lumens for other lamps are in proportion to the volts.

h The light center length of this lamp is the distance from center of light source to top of base fin.

x Will operate in any position, but lumen maintenance is best when burned vertically base up and lumens per watt values at 70% of rated life apply to this burning position only.

z Can be burned in any position except within 45 degrees of vertically base up

Watts	Bulb	List Price	Std. Pkg. Qty.	Mazda B or Mazda C Lamp	Rated Initial Lums.	Rated Initial Lums. per Watt	Rated Aver. Lab. Life (Hrs.)	Base	Max. Over-all Length, Inches	Aver. Light Center Length, Inches	Light Source Dimensions in mm		Fil. Const.	Position of Burning
											Width	Height		
MAZDA LAMPS FOR PROJECTION & STEREOPTICON SERVICE 100, 105, 110, 115 and 120 Volts														
100	T-8 clear	\$ 1.00	24	C	1870	18.7	50	S. C. Bay.	3 1/8	g 1 3/8	†5.5	†4.8	CC-13	Base down or can be burned within 25 degrees of vertically base down without materially affecting its performance
y 200	T-8 clear	1.50	24	C	4700	23.5	25	S. C. Bay.	3 5/8	g 1 3/8	†6.2	†6.6	2 CC-8	
200	T-10 clear	2.20	24	C	4080	20.4	50	Md. Pf.	5 3/4	h 2 3/16	†7.9	†6.9	CC-13	
200	T-10 clear	2.20	24	C	4080	20.4	50	Med.	5 1/2	3	†7.9	†6.9	CC-13	
y 300	T-10 clear	3.10	24	C	7200	24.0	25	Md. Pf.	5 3/4	h 2 3/16	†7.0	†9.4	2 CC-8	
y 500	T-10 clear	4.90	24	C	12250	24.5	25	Md. Pf.	5 3/4	h 2 3/16	†8.4	†8.6	C-13D	
500	T-20 clear	2.75	6	C	12750	25.5	50	Md. Pf.	5 3/4	h 2 3/16	†14.1	†10.7	C-13	
500	T-20 clear	2.75	6	C	12750	25.5	50	Med.	5 1/2	3	†14.1	†10.7	C-13	
y 750	T-12 clear	5.70	24	C	19500	26.0	25	Md. Pf.	5 3/4	h 2 3/16	†10.1	†9.6	C-13D	
1000	T-20 clear	6.30	6	C	27000	27.0	50	Mg. Pf.	9 1/2	h 3 7/16	†15.4	†15.6	C-13	
1000	T-20 clear	6.30	6	C	27000	27.0	50	Mog.	9 1/16	4 3/4	†15.4	†15.6	C-13	
y 1000	T-20 clear	6.55	6	C	27600	27.6	25	Md. Pf.	5 3/4	h 2 3/16	†11.6	†11.6	C-13D	

† Approximate average for 115 volts. Dimensions for other standard voltages will be supplied on request.

MAZDA LAMPS FOR SPOTLIGHT AND FLOODLIGHT SERVICE—110, 115 and 120 Volts

100	P-25 clear Spot...	1.00	60	C	1360	13.6	200	Md. Pf.	5	h 2 3/16	8	7	C-5	Any except within 45 degrees of vertically base up
100	P-25 clear Spot...	.85	60	C	1360	13.6	200	Med.	4 3/4	3	8	7	C-5	
250	G-30 clear Spot...	1.65	24	C	4425	17.7	200	Md. Pf.	5 3/8	h 2 3/16	10	8	C-5	
250	G-30 clear Spot...	1.50	24	C	4425	17.7	200	Med.	5 1/8	3	10	8	C-5	
250	G-30 clear Flood..	1.50	24	C	3700	14.8	800	Med.	5 1/8	3	12	9	C-5	
400	G-30 clear Spot...	2.80	24	C	8000	20.0	200	Md. Pf.	5 3/8	h 2 3/16	11	.9	C-5	
400	G-30 clear Spot...	2.65	24	C	8000	20.0	200	Med.	5 1/8	3	11	9	C-5	
500	G-40 clear Flood..	2.90	12	C	8650	17.3	800	Mog.	7 1/16	4 1/4	13	10	C-5	
1000	G-40 clear Spot...	6.65	12	C	22000	22.0	200	Mg. Pf.	8 7/16	h 3 13/16	14	13	C-5	
1000	G-40 clear Spot...	6.25	12	C	22000	22.0	200	Mog.	7 1/16	4 1/4	14	13	C-5	
1000	G-40 clear Spot...	6.25	12	C	22000	22.0	200	Mog.	8	5 1/4	14	13	C-5	Any position from vertical base down to horizontal
1000	G-40 clear Flood..	6.25	12	C	19000	19.0	800	Mog.	8	5 1/4	16	15	C-5	

MAZDA LAMPS FOR STREET SERIES SERVICE

All street series lamps are gas-filled and have clear bulbs. All standard street series lamps have an average rated laboratory life of 2000 hours; because of the severity of street lighting service, the average service life of street series lamps even under good operating conditions, is of the order of 25% less than the average laboratory life.

Amperes	Rated Initial Lumens	Bulb	List Price	Std. Pkg. Qty.	Aver. Volts	Aver. Watts	Rated Initial Lumens per Watt	% Lumens at 70% of Rated Life	Filament Const.	Base	Max. Over-all Length, Inches	Position of Burning and Average Light Center Length, Inches
6.6	1000	S-24 1/2.....	\$0.45	60	9.5	62.5	16.0	100	C-8	Mog.	7 1/8	x Any, 5 3/8
6.6	2500	PS-35.....	.90	24	22.0	145.3	17.2	100	C-2	Mog.	9 7/16	x Any, 7
6.6	4000	PS-35.....	1.05	24	32.8	216.2	18.5	98	C-2	Mog.	9 7/16	x Any, 7
6.6	4000	T-20.....	1.40	24	35.7	235.3	17.0	100	CC-6	Md. Bip.	6 1/2	k Base up, 4
15	4000	PS-35.....	1.10	24	13.7	205.0	19.5	95	C-2	Mog.	9 7/16	Base up, 7
												Base down, 6 1/4
6.6	6000	PS-40.....	1.45	12	48.6	320.9	18.7	95	C-2	Mog.	9 13/16	x Any, 7
20	6000	PS-40.....	1.50	12	14.9	298.5	20.1	94	C-2	Mog.	9 13/16	Base up, 7
												Base down, 6 1/4
20	10000	PS-40.....	1.85	12	25.0	500.0	20.0	91	C-7	Mog.	9 13/16	Base up, 7
												Base down, 6 1/4
20	15000	PS-40.....	2.55	12	37.3	746.3	20.1	85	C-7	Mog.	9 13/16	Base up, 7
20	25000	PS-52.....	4.80	6	60.7	1213.6	20.6	80	C-7	Mog.	13 1/8	Base down, 6 1/4
												Base up, 9 1/2

g The light center length of this lamp is the distance from center of light source to top of base pins.

h The light center length of this lamp is the distance from center of light source to top of base pin.

k The light center length of this lamp is the distance from the center of the light source to the plane of the bottom of the bulb (exclusive of tip).

x Will operate in any position, but lumen maintenance is best when burned vertically base up and the per cent lumens at 70% of rated life apply to this burning position only.

y This lamp should be used only in equipment that provides adequate forced cooling.

DISCOUNT SCHEDULE LARGE LAMP PURCHASERS

Standard Package Discounts

A. Large MAZDA Lamps. Standard package discounts may be allowed on the purchase of any quantity of any large MAZDA lamps for delivery at one time to one place, provided such purchase includes at least one (1) standard package quantity defined as follows:

(1) A standard package quantity is that "Standard Package Quantity" designated for each lamp in the manufacturer's price schedules, and the lamps in such a standard package quantity may be only of one voltage and finish.

(2) An assortment of different large MAZDA lamps which have the same designated "Standard Package Quantity", provided the total quantity of lamps in the assortment is equal to the designated "Standard Package Quantity", and lamps in such a standard package quantity may be of different voltages and finishes of bulb.

B. Type D Lamps. Standard package discounts on Type D lamps may be allowed only on any purchase of an exact "Standard Package Quantity" (or multiple thereof) as designated for each lamp in the manufacturer's price schedules, and the lamps in such a standard package quantity may be only of one voltage and finish of bulb.

An assortment of Type D lamps to determine a standard package quantity may be made only of the 30-watt G-19 bulb lamps of different colors (but not inside frosted) provided the quantity of lamps of any one color is a multiple of six and the total quantity of the assortment is 60.

C. Under no circumstances may Type D lamps and large MAZDA lamps be combined for the purpose of allowing standard package discounts.

TO PURCHASERS WITHOUT CONTRACT

Any purchase of less than \$5.00 list value	0%
Any purchase of \$5.00 list value but less than standard package quantities for delivery at one time to one place	15%
Any purchase of at least one standard package quantity as provided above for delivery at one time to one place	20%

TO PURCHASERS UNDER FORMS E AND CE CONTRACT

Basis of Form E or CE Contract	Standard Package Discount as provided above	Broken Package Discount	Minimum Net Purchases Under Each Basis to Reach Next Higher Basis
Less than \$ 150	20%	15%	\$ 153.85
150	22%	17%	256.58
250	24%	19%	513.52
500	26%	21%	1,027.78
1,000	28%	23%	2,571.43
2,500	30%	25%	5,147.06
5,000	32%	27%	10,149.25
10,000	33%	28%	20,303.03
20,000	34%	29%	30,461.54
30,000	35%	30%	50,781.25
50,000	36%	31%	101,587.30
100,000	37%	32%	152,419.35
150,000	38%	33%	228,688.53
225,000	39%	34%	305,000.00
300,000	40%	35%	.....

Provision is made for contracts on less than the \$150 basis in order that purchasers not at the time eligible to at least the \$150 basis, may obtain the greatest discounts justified by their total purchases within a year, in case purchases amount to \$150 or more.

HOW TO ORDER LAMPS

All orders should give the following information:

Quantity—Number of lamps desired. Purchasers will avoid delays and get best discount by ordering standard package quantities.

Size of Lamps—Specify wattage of multiple lamps and lumens of street series lamps.

Voltage—For multiple lamps.

Amperes—For series lamps.

Bulb—For example: A-19, G-25, T-8, P-19, PS-30, etc. The letter in the bulb designation indicates its shape and the figure its approximate diameter in eighths of an inch. Thus a PS-30 bulb is pear shaped and is approximately $\frac{3}{8}$ or $3\frac{3}{4}$ inches in diameter. G indicates a round (globular), and T a tubular bulb. The letter "A" indicates the standard line bulb shape with inside frost, unless otherwise noted.

Finish of Bulb—Clear, inside frosted, white bowl, daylight, white, etc.

Base—Medium screw, mogul screw, candelabra screw, etc.

Service—For example: Projection, Floodlight, Locomotive Headlight, etc.

EXTRA CHARGES FOR SPECIAL FEATURES

WHITE, ALL FROSTED AND WHITE BOWL LAMPS OF MANUFACTURER'S STANDARD SPRAY COATINGS

List Price of Clear or Inside Frosted Lamps	List Additional Charge for White, All Frosted or White Bowl	List Price of Clear or Inside Frosted Lamps	List Additional Charge for White, All Frosted or White Bowl
Less than \$1.00	\$0.05	\$4.00 to \$4.99	\$0.25
\$1.00 to 1.99	.10	5.00 to 5.99	.30
2.00 to 2.99	.15	6.00 to 6.99	.35
3.00 to 3.99	.20	7.00 to 7.99	.40

Special Lamps—Any MAZDA lamp requiring a change in construction from the standard, that is, in voltage, bulb shape or finish, basing or special etching will take a special price, which may be obtained upon application. All orders for special lamps except special etching may be filled either short or in excess, within the limits of 10 per cent, except that on orders for 10 lamps or less there will not be any shortage or excess. Orders for MAZDA lamps with special etching may be filled either short or in excess by 5 per cent; except that on orders for less than 40 lamps the shortage or excess may equal but not exceed two lamps.

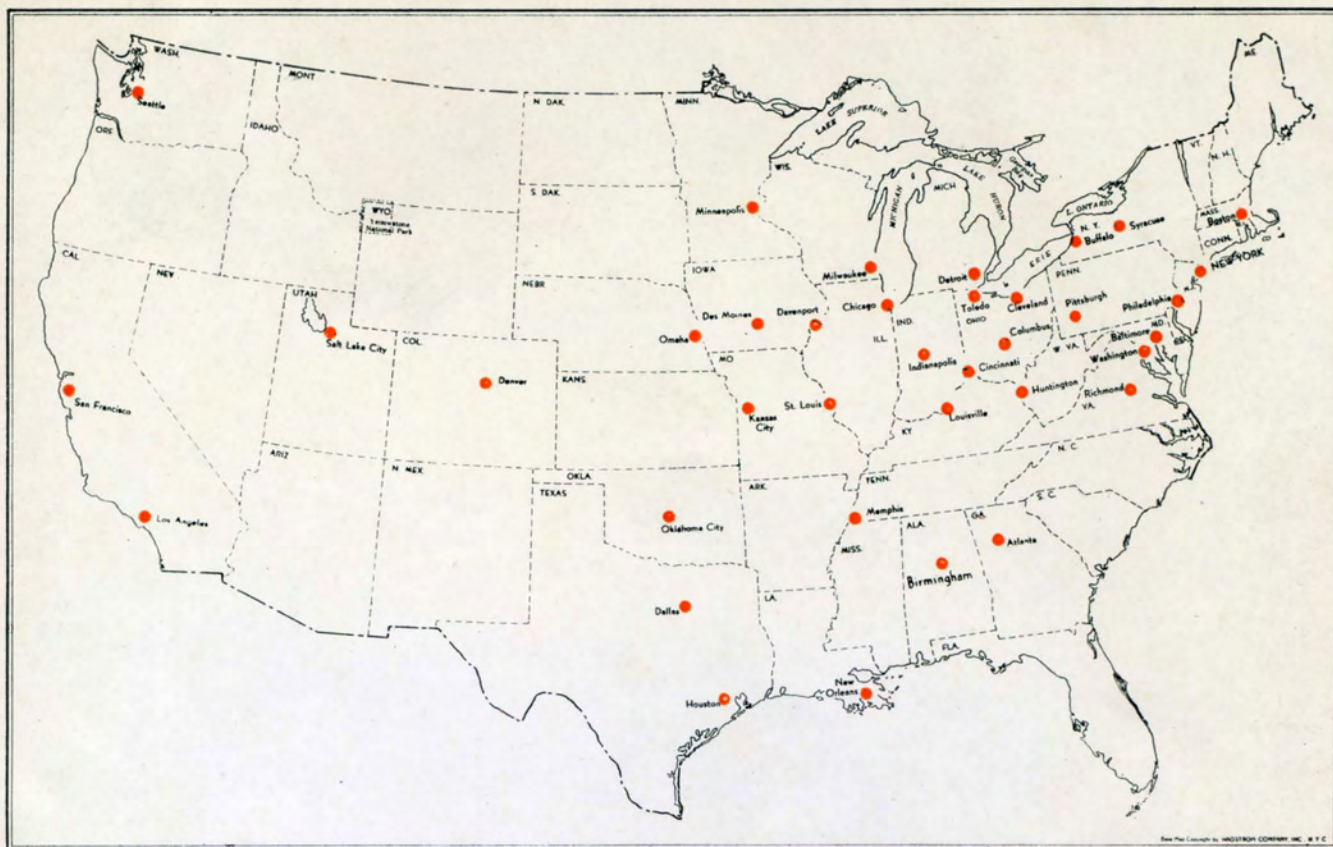
TRANSPORTATION ALLOWANCES AND CHARGES TO PURCHASERS

All lamps listed in price schedules will be sold and billed to purchasers f. o. b. point of shipment, with transportation (excluding cartage) allowed on shipments consisting of not less than one standard package, to all points in domestic territory.

Domestic territory shall be considered to be the United States, its territories and dependencies, including Alaska, the Hawaiian Islands, the Panama Canal Zone, Porto Rico, and the Virgin Islands, but not the Philippines, which with the rest of the world shall be regarded as foreign territory.

Should any purchaser desire its lamps shipped "Charges Collect," such purchaser, in deducting transportation charges from invoices covering lamps so shipped, will not be allowed to deduct cartage.

Claims for loss or damage in transportation must be filed with carriers within nine months after date of delivery or in case of non-delivery within nine months after a reasonable time for delivery has elapsed. Claims for concealed damage will be accepted by carriers only when such damage has been reported to them within fifteen days after delivery. Purchasers desiring the assistance of the manufacturer in filing such claims must report them to the manufacturer within a reasonable time so as to enable the manufacturer to comply with the common carrier's requirements.



WESTINGHOUSE LAMP DIVISION

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY

FACTORIES: Belleville, N. J. Bloomfield, N. J. Trenton, N. J.

EXECUTIVE OFFICES: 150 Broadway, N. Y.

DISTRICT SALES OFFICES:

NORTHEASTERN DISTRICT

NEW YORK CITY—150 Broadway

PHILADELPHIA, PA.	Westinghouse Building 30th and Walnut Streets
BOSTON, MASS.	10 High Street
BALTIMORE, MD.	Westinghouse Building
SYRACUSE, N. Y.	State Tower Building
BUFFALO, N. Y.	814 Ellicott Square Building
WASHINGTON, D. C.	321 Washington Building

EASTERN CENTRAL DISTRICT

PITTSBURGH, PA.—306 Fourth Ave.

CINCINNATI, OHIO	Westinghouse Building 3rd and Elm Street
CLEVELAND, OHIO	Westinghouse Building Edgewater Park
COLUMBUS, OHIO	Ohio State Savings Building
DETROIT, MICHIGAN	Westinghouse Building 5757 Trumbull Avenue
HUNTINGTON, W. VA.	1029 7th Avenue
JACKSON, MICHIGAN	Consumers Power Building
LOUISVILLE, KY.	1618 Heyburn Building
TOLEDO, OHIO	Second National Bank Building

SOUTHERN DISTRICT

ATLANTA, GA.—Westinghouse Building, 426 Marietta Street

BIRMINGHAM, ALA.	Avenue A at 20th Street
NEW ORLEANS, LA.	333 St. Charles Street
RICHMOND, VA.	301 South 5th Street

MIDDLEWESTERN DISTRICT

CHICAGO, ILL.—20 North Wacker Drive

DAVENPORT, IOWA	United Light & Power Building
INDIANAPOLIS, IND.	137 South Pennsylvania Street
MILWAUKEE, WISC.	534-546 North Broadway
MINNEAPOLIS, MINN.	2303 Kennedy Street, N. E.
OMAHA, NEBR.	Electric Building 17th and Harney Street

SOUTHWESTERN DISTRICT

ST. LOUIS, MO.—411 North Seventh Street

DALLAS, TEXAS	1006 Insurance Building
DENVER, COLORADO	Gas and Electric Building
HOUSTON, TEXAS	611 Petroleum Building
KANSAS CITY, MO.	Fairfax Building 101 West 11th St.
MEMPHIS, TENN.	825 Exchange Building
OKLAHOMA CITY, OKLA.	10 East California Street

PACIFIC COAST DISTRICT

SAN FRANCISCO, CALIF.—1 Montgomery Street

EMERYVILLE, CALIF.	Westinghouse Building
LOS ANGELES, CALIF.	420 South San Pedro Street
SALT LAKE CITY, UTAH	414 McCormick Building
SEATTLE, WASH.	603 Stewart Street