GENERAL ELECTRIC

SUNLIGHT
MAZDA S LAMPS

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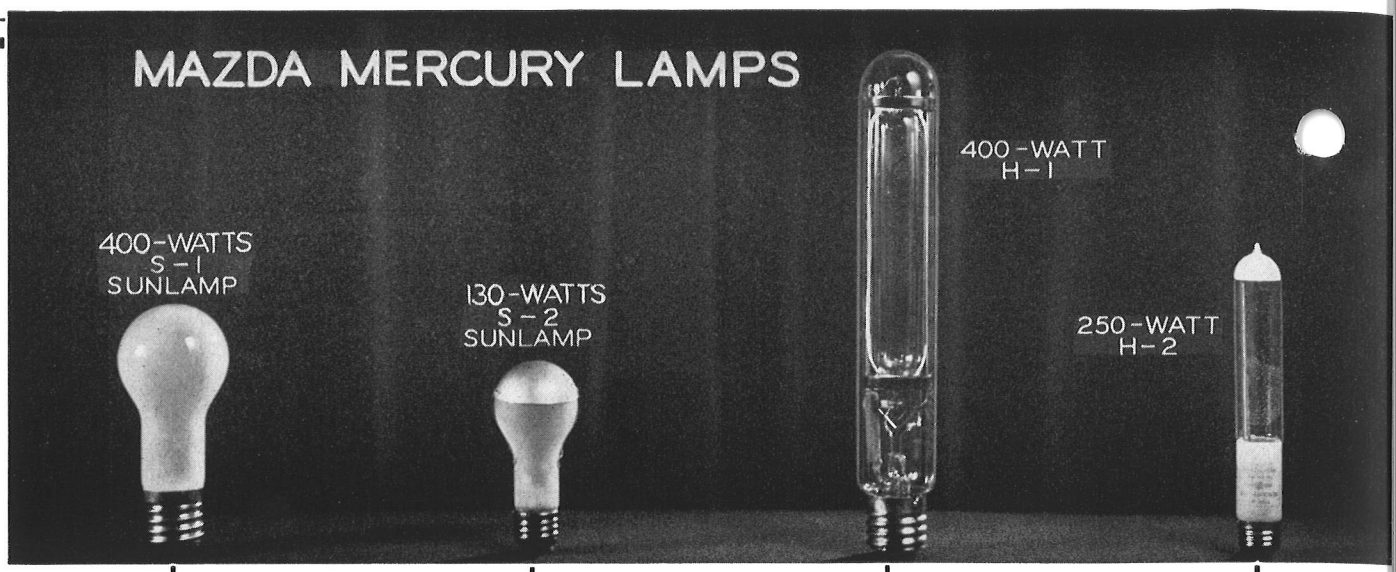
MERCURY
MAZDA H LAMPS

PRICES AND
ESSENTIAL TECHNICAL DATA

SEPTEMBER 1, 1939

Subject to Change Without Notice

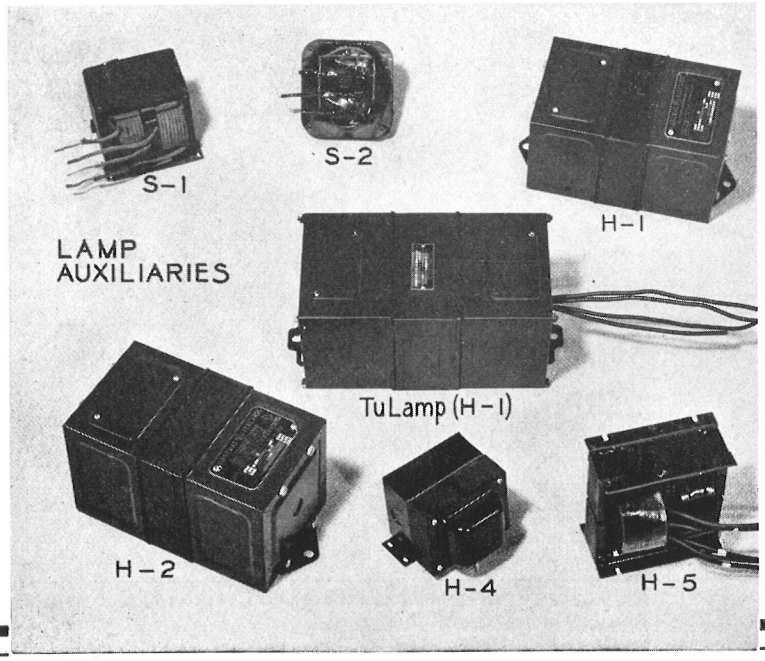
LAMP DEPARTMENT
GENERAL ELECTRIC COMPANY
NELA PARK, CLEVELAND, OHIO



LAMPS

Illustrated above are the present standard types of lamps employing mercury vapor. The S-1, S-2 and S-4 are distinctly artificial sunlight sources for ultraviolet health radiation. The Type H-1 and H-2 lamps are essentially sources of illumination. Other sizes and forms of Type H lamps are not only efficient sources for the production of visible light but are adapted to the production of ultraviolet radiation for sunlamp and fluorescent effects. The Type H-6 must be water cooled and is adaptable to photochemical and projection applications. All Type H lamps having the same numeral designation can be used on the same transformer. The prefix letters A, B, C, etc., designate modifications in construction for different burning positions, type of base, or bulb characteristics.

All mercury vapor lamps require auxiliary equipment for providing suitable starting and operating voltages. All of the above lamps have heat-resisting glass bulbs.

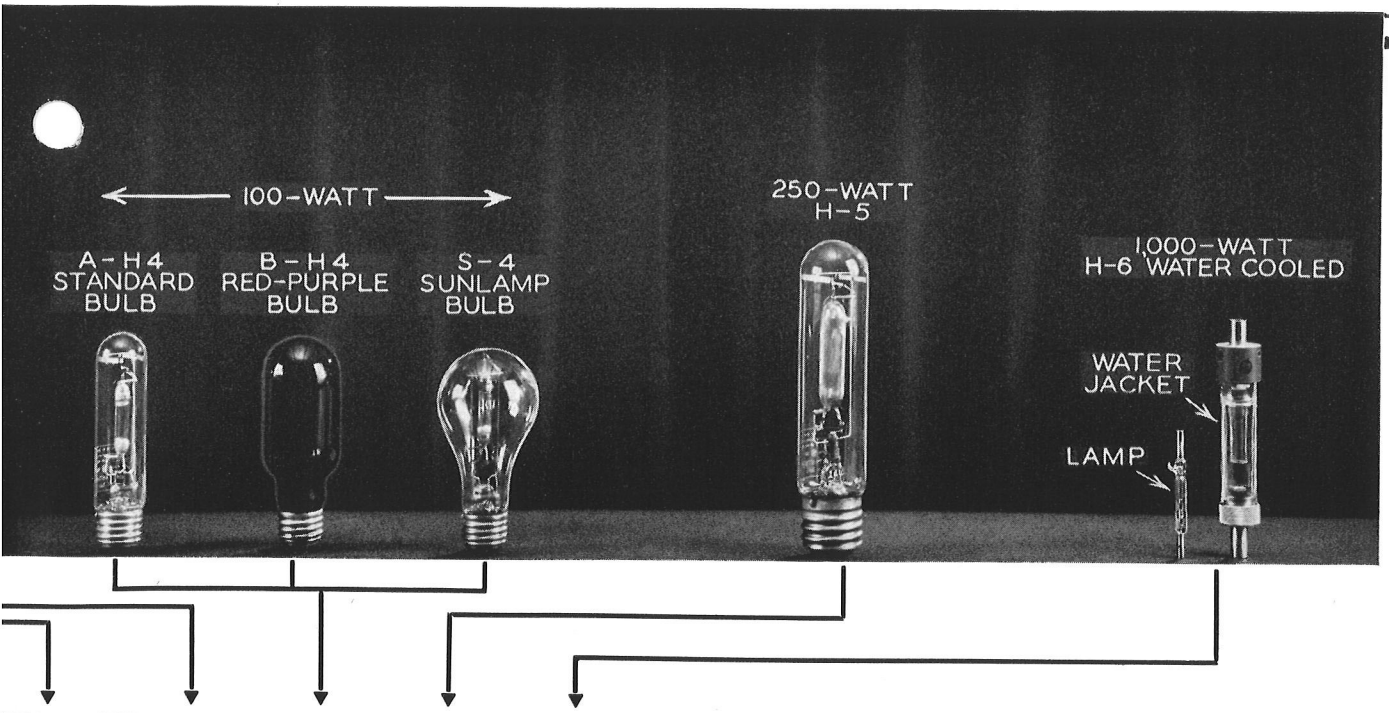


Designation	S-1	S-2
Service	Sunlight	Sunlight
Lamp Watts (Rated)	400	130
Watts, with Auxiliary (Approx.)	500	175
Lumens (At 100 Hours)	7200 a	1600
Lumens per Watt, Lamp (Approx.)	18	12.3
Lumens per Watt, Over-all (Approx.)	14.4	9.1
Rated Av. Lab. Life, Hours	400	300
Lamp Starting Volts (Approx.)	30	30
Lamp Operating Volts (Approx.)	14.5	15
Lamp Starting Amperes (Approx.)	9.5	2
Lamp Operating Amps. (Approx.)	27.5	8.5
Transformer Primary Voltage	115	115
Power Factor (Approx.)	50%	50%
Starting Time to Full Output (Approx.)	5 min.	8 min.
Restarting Time (Approx.)	0	0
Burning Position	0–90° c Base-up	0–90° (Base-up
Bulb	PS-22	A-17
Finish	I. F.	I. F.
Base	Mogul	Ad-medium
Maximum Over-all Length, Inches	$6\frac{7}{16}$	$4\frac{7}{8}$
Light Center Length, Inches	5	$3\frac{3}{4}$
Pressure, Atmospheric (Approx.)	.9	.9
Number of Electrodes	2	2
List Price	$5.75	$3.75
Standard Package Quantity	6	12

* A-H1 is base-up burning; B-H1 base-down.

† B-H4 has T-16 red-purple bulb for fluorescence, maximum over-all length $5\frac{1}{2}$ inches. List Price $11.00. C-H4 has PAR-38 bulb and admedium skirted screw base. Maximum over-all length $5\frac{3}{4}$ inches. List Price $12.00. S-4 for Sunlamps has same electrical characteristics as A-H4 but uses an A-21 ultraviolet-transmitting bulb. List Price $9.50.

‡ A-H5 lamps have mogul screw bases. B-H5 lamps with admedium screw bases are also available. List Price $11.00.



H-1*	H-2	H-4†	H-5‡	H-6
General	General	General	General	Proj. and Photo.
400	250	100	250	1000
450	300	120	280	1200
16000	7500	3500	10000	65000 a
	30	35	40	65
	25	29.2	35.8	54.1
2000	2000	1000	1000	50
150	132	190	190	1225
143	70	130	140	840
5	5	1.3	2.9	2.5
3.0	3.9	0.9	2.2	1.4
115, 230	115, 230	115, 230	115, 230	115, 230
5 or 90% b	45 or 85% b	50%	50%	60%
7 min.	7 min.	3 min.	4 min.	2 sec.
7 min.	4 min.	3 min.	4 min.	2 sec.
Vertical d	Any	Any	Any	Horiz.
T-16 Clear Mogul	T-9 Clear Medium	T-10 Clear Ad-medium	T-14 Clear Mogul	T-2 Clear $\frac{3}{16}$" Brass Sleeve
13	8	$5\frac{5}{8}$	8	$3\frac{3}{16}$
$7\frac{3}{4}$	5	$3\frac{7}{16}$	5	..
1	$\frac{1}{2}$	8	4	80
3	3	3	3	2
$12.50	$8.50	$9.50	$10.75	$9.00
6	12	6	6	6

a. S-1, S-2 and A-H6 lumens are initial. The total ultraviolet output of the S-1 unit is 68,000 E-vitons; of the S-2 unit, 8,000; and of the S-4 unit, 68,000.

b. The higher power factor is obtained with auxiliaries incorporating integral correction.

c. Maximum ultraviolet output at vertical base-up.

d. Lamps may be operated in a horizontal position only in connection with specially designed magnetic deflecting coils.

AUXILIARIES

Auxiliary equipments for mercury-vapor lamps consist essentially of the proper size and type of transformer to provide the required electrical characteristics. Individual transformers for most of the Type H lamps are obtainable for both 115- and 230-volt operation and often for either 60 or 50 cycles. Transformers are available in core and coil units, enclosed units and weatherproof units, depending on the service intended. S-1, S-2 and S-4 transformers are mounted in Sunlamp equipments and are usually furnished only as core and coil units.

In the lower left-hand corner several of the mercury-vapor lamp transformers are shown. The H-1 and H-2 units shown are enclosed normal power factor units; high power factor transformers are also available for these two lamps. The TuLamp transformer with power factor corrected to greater than 90 per cent is designed to operate two 400-watt Type H-1 lamps, thereby reducing transformer and wiring costs.

The lower right panel shows the auxiliary equipment for operating the Type H-6 lamp. This includes not only the transformer but also the devices for automatically regulating the water flow used for cooling.