PFA Coated, Shatter-Resistant Incandescent Lamps

Incande	escent L	.amps							
Nominal Lamp Watts	Bulb	Base	UPC/ Catalog Order#	Ordering Description	Std. Pkg. Qty.	Comments	Avg. Life (Hours)	Volts	M.O.L. (Inches)
30	R-20	Med. Brass	01910S	30R20/FL	12	REFLECTOR FLOOD	2,000	130	315/16
40	A-15	Medium	01111S	40A15/IF	120	APPLIANCE/FROST	1.000	130	31/2
	A-15	Medium	01116S	40A15/IF	12	APPLIANCE/FROST	1,000	130	31/2
50	R-20	Medium	01727S	50R20/FL	12	REFLECTOR FLOOD	2,000	130	315/16
60	A-19	Medium	01220	60A19/IF/IS	48	INDUSTRIAL SERVICE/FROST	3,500	130	47/16
	A-19	Medium	01218	60A19/IF/IS	12	INDUSTRIAL SERVICE/FROST	3,500	130	47/16
		· · · · · ·	9,987	120	47/16				
	F-15	Medium	01813S	60F15/CL	24	FLAME SHAPE/CLEAR	1,500	120	41/2
65	BR-30	Medium	01222	65BR30/FL	12	REFLECTOR FLOOD	2,000	130	5 ³ / ₈
75	A-19	Medium	01231S	75A19/IF	48	FROST	750	130	4 ⁷ / ₁₆
	A-19	Medium	01219S	75A19/IF	12	FROST	750	130	47/16
			Above lamp operating at 120 volts (66 watts) >>						47/16
100	A-19	Medium	01224	100A19/IF	48	FROST	750	130	47/16
	A-21	Medium	01310	100A21/IF/RS/VS	60	ROUGH SERVICE/VIBRATION SERVICE/FROST	1,000	130	5 ⁵ / ₁₆
	A-21	Medium	01312	100A21/IF/RS/VS	6	ROUGH SERVICE/VIBRATION SERVICE/FROST	1,000	130	55/16
	Above lamp operating at 120 volts (94 watts) >>							120	55/16
	PAR-38	Medium	01616	100PAR38/FL	12	PAR FLOOD	1,500	130	5 ⁵ / ₁₆
120	BR-40	Medium	01726S	120BR40/FL	24	REFLECTOR FLOOD	2,000	130	61/2
125	BR-40	Medium	01729	125BR40/1	6	CLEAR HEAT LAMP	##	120	71/4
150	A-21	Medium	01316	150A21/35/IF/RS	60	ROUGH SERVICE/FROST	2,100	130	55/16
					Above lan	np operating at 120 volts (141 watts) >>	5,950	120	55/16
	PAR-38	Medium	01611S	150PAR38/FL	12	PAR FLOOD	750	130	55/16
						np operating at 120 volts (132 watts) >>	2,000	120	55/16
200	PS-30	Medium	01511S	200PS30/RS	60	ROUGH SERVICE/FROST	1,000	130	81/16
						np operating at 120 volts (177 watts) >>	2,830	120	81/16
250	BR-40	Medium	01725I	250BR40/1	12	CLEAR HEAT LAMP	##	120	61/2
	R-40	Medium	01713I	250R40/RED	12	RED HEAT LAMP	##	120	67/8
300	PS-30	Medium	01512	300PS30/IF	60	FROST	750	130	81/16
		, , ,		+		np operating at 120 volts (265 watts) >>	2,120	120	81/16
	PS-35	Mogul	01513	300PS35/IF	12	FROST	1,000	130	93/8
					Above lan	np operating at 120 volts (265 watts) >>	2,854	120	93/8

PFA Coated, Shatter-Resistant Halogen Lamps

Halogen PAR Lamps

Nominal Lamp Watts	Bulb	Base	UPC/ Catalog Order#	Ordering Description	Std. Pkg. Qty.	Comments	Avg. Life (Hours)	Volts	M.O.L. (Inches)
60	PAR-38	Med. Skt.	01620S	60PAR/CAP/IR	15	HALOGEN INFRARED PAR FLOOD	3,000	130	55/16
80	PAR-38	Med. Skt.	01621S	80PAR/CAP/IR	12	HALOGEN INFRARED PAR FLOOD	3,000	120	55/16
90	PAR-38	Med. Skt.	01622S	90PAR/CAP/SPL	15	HALOGEN PAR FLOOD	2,500	130	5 ⁵ / ₁₆
100	PAR-38	Med. Skt.	01623S	100PAR/CAP/IR	12	HALOGEN INFRARED PAR FLOOD	3,000	120	55/16
120	PAR-38	Med. Skt.	01624S	120PAR/CAP/SPL	15	HALOGEN PAR FLOOD	3,000	130	55/16
250	PAR-38	Med. Skt.	01625S	250PAR/CAP/SPL	6	HALOGEN PAR FLOOD	4,500	120	5 ⁵ / ₁₆

\$ – Energy-Saving Product

ALTO® - Reduced Mercury Lamps

- Average laboratory life in excess of 5,000 hours. In-service life depends upon service conditions.

- **NOTE** Energy-Saving lamps are not intended for use in ambient temperatures below 60°F, in drafty locations, on low power factor ballasts, reduced current and light output ballasts, dimming ballasts, or on inventor powered emergency lighting systems.
- **NOTE** The incandescent lamps shown above are stock items. We can provide other PFA coated incandescents, however, there is a minimum order required. Please contact your local distributor, sales rep or the factory for minimum requirements and prices.

EPACT INFORMATION - Certain 130 volt lamps listed above indicate that they can be operated at 120 volt for greater energy savings and longer life. Please note that at 120 volt operation, the life increases and the lumen output decreases.

Heat lamps are not guaranteed by the lamp manufacturer.



Incandescent Lamps

oated with clear and tough PFA, Shat-R-Shield incandescent lamps offer outstanding performance and reliability. PFA is resistant to chemical contamination, degradation, and keeps its integrity and clarity over the life of the bulb. Our coating forms a protective envelope which is designed to protect your employees, worksites and products from broken glass. Our lamps resist breakage from the thermal shock of rain or snow, hot and cold liquids, and even hot weld splatters. Our lamps are also easy to clean, because food and grease will not stick to the smooth PFA coating.

Shat-R-Shield PFA coated incandescent lamps will withstand bulb-wall temperatures of up to 500°F, but continuous burning in ambient temperatures in excess of 150°F could result in some loss of protective coating. Shat-R-Shield lamps are inspected for coating thickness, integrity and lighting performance.

INDUSTRIAL SERVICE LAMPS

Similar to standard inside frost lamps, industrial service lamps are specifically designed for industrial applications where normal shock and vibration are constantly present.

VIBRATION SERVICE & ROUGH SERVICE LAMPS

Designed with added strength to the filament to provide long lasting service in areas where high frequencies, shocks or rough handling are normal. Rough service lamps have more supports than vibration service lamps.

INFRARED HEAT LAMPS

Our PFA coated heat lamps can withstand temperatures up to 500°F. Offered in red or clear types,

HALOGEN PAR LAMPS

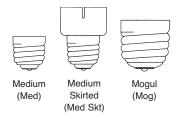
The addition of halogen PAR lamps to Shat-R-Shield's incandescent product line offers customers more flexibility in their lighting design. Shat-R-Shield halogen PAR lamps are coated with PFA for maximum heat resistance and durability.

HALOGEN PAR LAMPS, ALL INCANDESCENTS, HEAT LAMPS (200 WATT and UP)

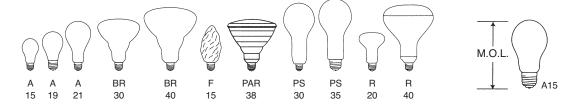
Will operate in any burning position, but fixed-socket usage other than base up, or continuous burning in any position in ambient temperatures above 150°F (66°C), may result in some loss of protective coating.

shat-R-shield Incandescents Safety-Coated Lamps for Your Applications

Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes - Letters indicate the bulb shape while numbers indicate the diameter of the bulb in eighths of an inch.)



Shat-R-Shield Incandescent Lamp Warranty

The plastic coating on a Shat-R-Shield incandescent lamp is guaranteed not to crack, peel or turn yellow and will withstand bulb wall temperatures up to 500° F subject to the following conditions:

- The lamps should not be in enclosed fixtures or fixtures that do not allow heat dissipation.
- Lamps must be installed and operating in ambient temperatures below 150° F.
- The coating is designed to minimize glass shattering in the event a lamp is dropped or accidentally broken.
- Under certain conditions, glass fragments may escape the coating.

Glossary of Terms

Average Life (Hours)

Under specified test conditions with lamps turned off and on no more often than once every three burning hours. Lamp life is appreciably longer if lamps are started less frequently.

Color Temperature (CT)

The overall color appearance of the light itself. Lamps range from 2100-7500 Kelvin. Lower color temperature (3000K) represents "warm" light, higher (4100K) represents "cool" light.

Color Rendering Index (CRI)

Color rendering is the ability of a light source to produce color in objects. The CRI is expressed on a scale from 0-100, where 100 is best in producing more natural color in objects.

Initial Lumens

Lumen value at 100 hours of burn time.

Instant Start

A circuit used to start specially-designed fluorescent lamps without the aid of a starter. This circuit is used today in slimline and cold cathode lamps.

Light

The energy that allows us to see. Professionally, light can be expressed in four terms: 1) Intensity (candela), 2) Flux (lumen), 3) Luminance (candela/sq. ft.) and 4) Exitance (lumen/sq. ft.).

Lumen

The unit of measure for the light energy which flows in air. The total light output from electric sources is expressed in lumens.

Lumen Maintenance

The decrease of the lumen output of a light source over time.

Mean Lumens

Mean lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life.

Nominal Length

A measurement of fluorescent lamp length based on the length of the lamp plus the proper allowance for standard lamp holders.

Preheat

A circuit used in fluorescent lamps where in the electrodes are heated or warmed to a glow stage by an auxilliary switch or starter before the lamps are lighted. This system was used on the original fluorescent lamps and is still in use today.

Rapid Start

A circuit designed to start lamps by continuously heating or preheating the electrodes. This circuit is a modern version of the trigger start system and requires lamps designed for this circuit. Except for slimline lamps, all modern fixtures using 40-watt and higher lamps are equipped with rapid start ballasts.

Rated Average Life

The operating life (hours) at which 50% of the lamps are still operating. Where a (+) is used in stating the life, survival rate is 67% at the stated time.

Watt

Unit used to measure power consumption of lamp.

Footnotes

- (1) The pins of these lamps are short circuited inside the end caps and lamp will not operate on preheat or rapid start ballast circuits.
- (2) Designed for service other than illumination.
- (3) Energy-saving lamps are only recommended for use on high power factor lead, indoor ballasts that meet ANSI standards. The lamps are not recommended for use in drafty areas, or locations where the ambient temperature is less than 60°F, except as noted. They should not be operated on low power factor ballasts, reduced light or reduced current ballasts, dimming ballasts or emergency system inverter ballasts.
- (4) These lamps do not use PFA to seal the cathode ends as T-8 lamps with the PFA/Shat-R-Kote Combination. While less expensive, these lamps IF NOT USED ON ELECTRONIC BALLAST MUST BE USED IN REFRIGERATED AREAS WHERE AMBIENT TEMPERATURES DO NOT EXCEED 45°F. Due to the high heat generated at the cathode ends, any use of these lamps in conditions above 45°F may cause deterioration of the protective coating. Conversely, T-8 lamps used in freezing temperatures will not operate efficiently, coated or uncoated. Because Shat-R-Shield, Inc. has no control over the temperature range in the areas where lamps are operated, their performance cannot be guaranteed. However, T-8 lamps for refrigerated areas are being used in refrigerated areas with apparent success and can be expected to perform as well as other Shat-R-Shield lamps.
- (5) When used in insect electrocutors, we recommend replacement of lamps after 7,000 hours of use because the black light in a coated or uncoated lamp deteriorates at a predictable rate. After 7,000 hours, the lamp's ability to attract insects is ineffective.
- (6) Appliance lamp for use with starters.
- (7) To be operated on electronic ballasts.
- € These lamps comply with United States federal energy efficiency requirements.

PFA Coated, Shatter-Resistant Incandescent Lamps

Incande	escent L	.amps							
Nominal Lamp Watts	Bulb	Base	UPC/ Catalog Order#	Ordering Description	Std. Pkg. Qty.	Comments	Avg. Life (Hours)	Volts	M.O.L. (Inches)
30	R-20	Med. Brass	01910S	30R20/FL	12	REFLECTOR FLOOD	2,000	130	315/16
40	A-15	Medium	01111S	40A15/IF	120	APPLIANCE/FROST	1.000	130	31/2
	A-15	Medium	01116S	40A15/IF	12	APPLIANCE/FROST	1,000	130	31/2
50	R-20	Medium	01727S	50R20/FL	12	REFLECTOR FLOOD	2,000	130	315/16
60	A-19	Medium	01220	60A19/IF/IS	48	INDUSTRIAL SERVICE/FROST	3,500	130	47/16
	A-19	Medium	01218	60A19/IF/IS	12	INDUSTRIAL SERVICE/FROST	3,500	130	47/16
		· · · · · ·	9,987	120	47/16				
	F-15	Medium	01813S	60F15/CL	24	FLAME SHAPE/CLEAR	1,500	120	41/2
65	BR-30	Medium	01222	65BR30/FL	12	REFLECTOR FLOOD	2,000	130	5 ³ / ₈
75	A-19	Medium	01231S	75A19/IF	48	FROST	750	130	4 ⁷ / ₁₆
	A-19	Medium	01219S	75A19/IF	12	FROST	750	130	47/16
			Above lamp operating at 120 volts (66 watts) >>						47/16
100	A-19	Medium	01224	100A19/IF	48	FROST	750	130	47/16
	A-21	Medium	01310	100A21/IF/RS/VS	60	ROUGH SERVICE/VIBRATION SERVICE/FROST	1,000	130	5 ⁵ / ₁₆
	A-21	Medium	01312	100A21/IF/RS/VS	6	ROUGH SERVICE/VIBRATION SERVICE/FROST	1,000	130	55/16
	Above lamp operating at 120 volts (94 watts) >>							120	55/16
	PAR-38	Medium	01616	100PAR38/FL	12	PAR FLOOD	1,500	130	5 ⁵ / ₁₆
120	BR-40	Medium	01726S	120BR40/FL	24	REFLECTOR FLOOD	2,000	130	61/2
125	BR-40	Medium	01729	125BR40/1	6	CLEAR HEAT LAMP	##	120	71/4
150	A-21	Medium	01316	150A21/35/IF/RS	60	ROUGH SERVICE/FROST	2,100	130	55/16
					Above lan	np operating at 120 volts (141 watts) >>	5,950	120	55/16
	PAR-38	Medium	01611S	150PAR38/FL	12	PAR FLOOD	750	130	55/16
						np operating at 120 volts (132 watts) >>	2,000	120	55/16
200	PS-30	Medium	01511S	200PS30/RS	60	ROUGH SERVICE/FROST	1,000	130	81/16
						np operating at 120 volts (177 watts) >>	2,830	120	81/16
250	BR-40	Medium	01725I	250BR40/1	12	CLEAR HEAT LAMP	##	120	61/2
	R-40	Medium	01713I	250R40/RED	12	RED HEAT LAMP	##	120	67/8
300	PS-30	Medium	01512	300PS30/IF	60	FROST	750	130	81/16
		, , ,		+		np operating at 120 volts (265 watts) >>	2,120	120	81/16
	PS-35	Mogul	01513	300PS35/IF	12	FROST	1,000	130	93/8
					Above lan	np operating at 120 volts (265 watts) >>	2,854	120	93/8

PFA Coated, Shatter-Resistant Halogen Lamps

Halogen PAR Lamps

Nominal Lamp Watts	Bulb	Base	UPC/ Catalog Order#	Ordering Description	Std. Pkg. Qty.	Comments	Avg. Life (Hours)	Volts	M.O.L. (Inches)
60	PAR-38	Med. Skt.	01620S	60PAR/CAP/IR	15	HALOGEN INFRARED PAR FLOOD	3,000	130	55/16
80	PAR-38	Med. Skt.	01621S	80PAR/CAP/IR	12	HALOGEN INFRARED PAR FLOOD	3,000	120	55/16
90	PAR-38	Med. Skt.	01622S	90PAR/CAP/SPL	15	HALOGEN PAR FLOOD	2,500	130	5 ⁵ / ₁₆
100	PAR-38	Med. Skt.	01623S	100PAR/CAP/IR	12	HALOGEN INFRARED PAR FLOOD	3,000	120	55/16
120	PAR-38	Med. Skt.	01624S	120PAR/CAP/SPL	15	HALOGEN PAR FLOOD	3,000	130	55/16
250	PAR-38	Med. Skt.	01625S	250PAR/CAP/SPL	6	HALOGEN PAR FLOOD	4,500	120	5 ⁵ / ₁₆

\$ – Energy-Saving Product

ALTO® - Reduced Mercury Lamps

- Average laboratory life in excess of 5,000 hours. In-service life depends upon service conditions.

- **NOTE** Energy-Saving lamps are not intended for use in ambient temperatures below 60°F, in drafty locations, on low power factor ballasts, reduced current and light output ballasts, dimming ballasts, or on inventor powered emergency lighting systems.
- **NOTE** The incandescent lamps shown above are stock items. We can provide other PFA coated incandescents, however, there is a minimum order required. Please contact your local distributor, sales rep or the factory for minimum requirements and prices.

EPACT INFORMATION - Certain 130 volt lamps listed above indicate that they can be operated at 120 volt for greater energy savings and longer life. Please note that at 120 volt operation, the life increases and the lumen output decreases.

Heat lamps are not guaranteed by the lamp manufacturer.



Incandescent Lamps

oated with clear and tough PFA, Shat-R-Shield incandescent lamps offer outstanding performance and reliability. PFA is resistant to chemical contamination, degradation, and keeps its integrity and clarity over the life of the bulb. Our coating forms a protective envelope which is designed to protect your employees, worksites and products from broken glass. Our lamps resist breakage from the thermal shock of rain or snow, hot and cold liquids, and even hot weld splatters. Our lamps are also easy to clean, because food and grease will not stick to the smooth PFA coating.

Shat-R-Shield PFA coated incandescent lamps will withstand bulb-wall temperatures of up to 500°F, but continuous burning in ambient temperatures in excess of 150°F could result in some loss of protective coating. Shat-R-Shield lamps are inspected for coating thickness, integrity and lighting performance.

INDUSTRIAL SERVICE LAMPS

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Designed with added strength to the filament to provide long lasting service in areas where high frequencies, shocks or rough handling are normal. Rough service lamps have more supports than vibration service lamps.

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Our PFA coated heat lamps can withstand temperatures up to 500°F. Offered in red or clear types,

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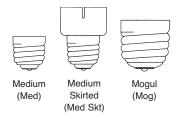
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HALOGEN PAR LAMPS, ALL INCANDESCENTS, HEAT LAMPS (200 WATT and UP)

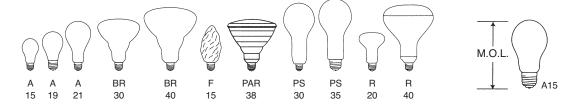
Will operate in any burning position, but fixed-socket usage other than base up, or continuous burning in any position in ambient temperatures above 150°F (66°C), may result in some loss of protective coating.

shat-R-shield Incandescents Safety-Coated Lamps for Your Applications

Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes - Letters indicate the bulb shape while numbers indicate the diameter of the bulb in eighths of an inch.)



Shat-R-Shield Incandescent Lamp Warranty

The plastic coating on a Shat-R-Shield incandescent lamp is guaranteed not to crack, peel or turn yellow and will withstand bulb wall temperatures up to 500° F subject to the following conditions:

- The lamps should not be in enclosed fixtures or fixtures that do not allow heat dissipation.
- Lamps must be installed and operating in ambient temperatures below 150° F.
- The coating is designed to minimize glass shattering in the event a lamp is dropped or accidentally broken.
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Glossary of Terms

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Lumen value at 100 hours of burn time.

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The decrease of the lumen output of a light source over time.

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Mean lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life.

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A measurement of fluorescent lamp length based on the length of the lamp plus the proper allowance for standard lamp holders.

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The operating life (hours) at which 50% of the lamps are still operating. Where a (+) is used in stating the life, survival rate is 67% at the stated time.

Watt

Unit used to measure power consumption of lamp.

Footnotes

- (1) The pins of these lamps are short circuited inside the end caps and lamp will not operate on preheat or rapid start ballast circuits.
- (2) Designed for service other than illumination.
- (3) Energy-saving lamps are only recommended for use on high power factor lead, indoor ballasts that meet ANSI standards. The lamps are not recommended for use in drafty areas, or locations where the ambient temperature is less than 60°F, except as noted. They should not be operated on low power factor ballasts, reduced light or reduced current ballasts, dimming ballasts or emergency system inverter ballasts.
- (4) These lamps do not use PFA to seal the cathode ends as T-8 lamps with the PFA/Shat-R-Kote Combination. While less expensive, these lamps IF NOT USED ON ELECTRONIC BALLAST MUST BE USED IN REFRIGERATED AREAS WHERE AMBIENT TEMPERATURES DO NOT EXCEED 45°F. Due to the high heat generated at the cathode ends, any use of these lamps in conditions above 45°F may cause deterioration of the protective coating. Conversely, T-8 lamps used in freezing temperatures will not operate efficiently, coated or uncoated. Because Shat-R-Shield, Inc. has no control over the temperature range in the areas where lamps are operated, their performance cannot be guaranteed. However, T-8 lamps for refrigerated areas are being used in refrigerated areas with apparent success and can be expected to perform as well as other Shat-R-Shield lamps.
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