

Access Fixtures

Induction Lighting Fixtures



Wall Packs



High Bays/Low Bays



Area, Sports, & Parking



Street Lighting

Invented in 1890 by Nikola Tesla and used commercially over the past 16 years, induction technology is basically fluorescent lamp lighting without electrodes. It uses magnetic induction to ignite the phosphors instead of electrodes. The main advantages of induction technology are as follows. Electrodes are a significant point of failure on traditional fluorescent lamps causing more frequent replacement. Induction lamps do not have electrodes and consequently have an extremely long life, rated at 100,000 hours. Also, the lack of electrodes makes them more reliable in high-vibration applications. The second major advantage is the ability to use light generating substances that would react with metal electrodes in normal lamps, enabling the use of higher performance substances for more light.

Induction technology delivers an unequaled 100,000 hours of high quality white light which makes them virtually maintenance free. After 100,000 hours, 50% of the drivers will be surviving and at 60,000 hours about 10% failures are expected. 100,000 hours of life is 11 years of life even when run 24/7, or 25 years when operated 10 hours per day. Induction fixtures are virtually maintenance free. That is the equivalent of 100 incandescent lamps, 5 HID lamps, or 5 typical fluorescent lamp life cycles.

The light generated is a crisp white light with 80+ CRI, high reliability and instant on/off. Induction fixtures provide stable light output over a wide range of ambient temperatures, maintaining at least 85% of nominal lumens from -30° F to 130° F when used in an enclosed fixture with a heat sink. Additionally, induction systems can start at temperatures as low as -40° F.

Induction fixtures are energy efficient, too. A 250w Induction lamp can be compared to a new probe start 400w Metal Halide from a light output standpoint, however a 250w induction fixture uses 265 watts while the 400w HID uses approximate 454 watts. The savings is 189 watts. If operated 5 days a week, 12 hours a day and electricity costs \$.12/kwh the annual savings in just energy is \$69.93 per fixture. The maintenance and replacement savings are significant, too. Another one of the advantages is that induction fixtures operate at a lower temperature than competitor fixtures reducing cooling costs where applicable.

Access Fixtures 40 Jackson St. Suite 1000 Worcester, MA 01608

www.AccessFixtures.com

TEL 877.635.9282 FAX 508.507.3625 Sales@AccessFixtures.com

Long life, high CRI & efficacy are major factors for selecting induction fixtures

Type	Lumens per Watt	Life	Color Rendering Index
Incandescent	15 to 25 L/WT	1000 Hours	90 CRI (100 for Halogen)
Florescent	50 to 100 L/WT	10,000 to 20,000 hours	54 to 90 CRI
Induction	65 to 90 L/WT	100,000 hours	85 CRI
Metal Halide (MH)	60 to 80 L/WT	10,000 to 20,000 hours	60 to 80 CRI
Pulse Start MH	100 L/WT	20,000 hours	60 to 80 CRI
High Pressure Sodium	80 to 140 L/WT	24,000 hours	20 CRI
Low Pressure Sodium	100 to 180 L/WT	18,000 hours	20 CRI

Features	Advantages	Benefits
No filament or electrodes to be damaged Uses high voltage and high temperature resistant capacitors Highest quality capacitors, resistors, and crystal diodes	Long performance life up to 100,000 hours High lumen maintenance, >85% after 6,000 hours Superior reliability as compared to virtually all other lighting types	Few to no lighting outages due to system failure Virtually zero maintenance costs No re-lamping or recycling costs for 10 years or longer
Electronic ballast with power factor > 0.99 High lumen efficiency of 80 to 90 Lumens per Watt (LPW) Significant energy savings	System efficiency of 50% over magnetic ballasts Better lighting and visibility Lower energy bills and total system cost of ownership	Reduce energy costs up to 50% as compared to HID systems Better visibility enhances employee performance Substantial cost reductions improves profitability
Pre-wired for 120v or 277v Instant start and instant re-strike Reliable starting to -40C	Low cost of installation Will function in most commercial and industrial environments	Easy installation Easy to use Works in very cold environments
Color Rendering (CRI) of >80 Available in 2700, 3500, 4000, 5000, and 6500 Kelvin Working frequency of 210KHz	High CRI enables colors to appear naturally and correct The appropriate operating color is available for any purpose Flicker free performance	Increases safety and security Helps protect eyesight U.V. applications @ 253.7Nm
Amalgam content of < 0.25mg Harmonic distortion meets the International L Class Standard Electromagnetic Compatibility meets international standards Lamps/Ballasts are listed & certified by CE, FCC, UL, & ISO	Less mercury entering the waste stream Less chance of interference with the electrical grid Less chance of harm to electronic devices World wide acceptance	Health and environmental safety/protection Electrical grid safety Safe for use near other electronic devices Great for use in virtually any facility and location

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Performance Metrics

Lamp/Ballast Type	Wattage	System Wattage	Lamp Life	CRI	Mean Lumens	Mean Pupil Lumens
High Pressure Sodium	70	88	24,000	21	5,670	3,232
High Pressure Sodium	150	188	24,000	21	14,000	7,980
High Pressure Sodium	250	300	24,000	21	25,600	14,592
High Pressure Sodium	400	464	24,000	21	45,000	25,650
High Pressure Sodium	1000	1,100	24,000	21	126,000	71,820
Induction	40	41	100,000	80	3,400	5,508
Induction	80	82	100,000	80	6,800	11,016
Induction	100	102	100,000	80	8,500	13,770
Induction	120	122	100,000	80	10,200	16,524
Induction	200	204	100,000	80	17,000	27,540
Metal Halide	150	188	15,000	65	11,300	16,837
Metal Halide	175	215	10,000	65	10,000	14,900
Metal Halide	250	295	10,000	65	17,000	25,330
Metal Halide	400	456	10,000	65	28,800	42,912
Metal Halide	1,000	1,070	12,000	65	92,900	138,421
Low Pressure Sodium	180	220	16000	0	26,100	9,918
Low Pressure Sodium	135	178	16000	0	19,140	7,273
Low Pressure Sodium	90	124	16000	0	11095	4,216
Low Pressure Sodium	55	80	18000	0	6655	2,529
Low Pressure Sodium	35	60	18000	0	4000	1,520

Operating Costs

Lamp/Ballast Type	Wattage	Lamp Changes Over 10 Years	Energy Used Over 10 Years	Maintenance Over 10 Years	Material Cost Over 10 Years	Cost of Operation Over 10 Years
High Pressure Sodium	70	3.7	\$927	\$201	\$73	\$1,201
High Pressure Sodium	150	3.7	\$1,971	\$201	\$73	\$2,245
High Pressure Sodium	250	3.7	\$3,154	\$201	\$73	\$3,427
High Pressure Sodium	400	3.7	\$4,878	\$201	\$73	\$5,151
High Pressure Sodium	1000	3.7	\$11,563	\$201	\$224	\$11,988
Induction	40	0	\$429	\$0	\$0	\$429
Induction	80	0	\$858	\$0	\$0	\$858
Induction	100	0	\$1,072	\$0	\$0	\$1,072
Induction	120	0	\$1,287	\$0	\$0	\$1,287
Induction	200	0	\$2,144	\$0	\$0	\$2,144
Metal Halide	150	5.8	\$1,971	\$321	\$187	\$2,479
Metal Halide	175	8.8	\$2,263	\$482	\$278	\$3,022
Metal Halide	250	8.8	\$3,101	\$482	\$280	\$3,863
Metal Halide	400	8.8	\$4,793	\$482	\$280	\$5,556
Metal Halide	1,000	7.3	\$11,248	\$402	\$365	\$12,014
Low Pressure Sodium	180	5.5	\$2,308	\$301	\$345	\$2,954
Low Pressure Sodium	135	5.5	\$1,873	\$301	\$257	\$2,432
Low Pressure Sodium	90	5.5	\$1,306	\$301	\$203	\$1,809
Low Pressure Sodium	55	4.9	\$838	\$268	\$161	\$1,267
Low Pressure Sodium	35	4.9	\$629	\$268	\$161	\$1,057

Based on 24 hours, 7 days per week operating time

Based on \$ 0.12 KWH and \$55 per hour for Labor and Equipment such as lift trucks

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