

WTP		EXISTING WATTS PER	NEW WATTS PER	COMMENTS
AREA	EXISTING FIXTURE/LAMP	QTY	NEW FIXTUR/LAMP	
FILTER ROOM	PAR 38 INCANDESCENT	16	75 PAR 38 LED	23
3RD FLOOR OFFC	T-12 FLUORESCENT 4 LAMP	2	168 T-8 FLUORESCENT	84 EXISTING BALLAST MAGNETIC NO PCB
3RD FLOOR MECH	T-12 FLUORESCENT 4 LAMP	16	168 T-8 FLUORESCENT	84
EAST STAIRWELL	T-12 FLUORESCENT 2 LAMP	6	92 T-8 FLUORESCENT	42
WEST STAIRWELL	PAR 38 INCANDESCENT	8	90 PAR 38 LED	23
2ND FLOOR	2 X 4 FLRECSNT 4 LAMP	42	112 FO28 4 FOOT	84 RELAMP AND LOW BALLAST FACTOR (LBF) BALLAST
NORTH SAIRWELL	T-8 FLRESCENT 2 LAMP	2	60 FO28 4 FOOT	42 RELAMP AND LBF BALLAST
FILTER ROOM	T-8 FLRESCENT 2 LAMP	24	60 FO28 4 FOOT	42 RELAMP ONLY????
FILTER ROOM	T-12 FLUORESCENT 2 LAMP	16	80 FO28 4 FOOT	42 LAMPS AND LBF BALLAST
CARBON ROOM	T-12 FLUORESCENT 2 LAMP	19	80 FO28 4 FOOT	42 LAMPS AND LBF BALLAST
EXTR FLOCC TNK	PAR 38 INCANDESCI 1 LAMP	4	90 PAR 38 LED	23
FLOCC TANK WALL	A-19 WALL SCNCE 2 LAMP	3	120 CMPCT FLUORCNT	13 REPLACE DOWNLIGHT IN FIXTURE ONLY
SED BASINS	T-8 FLRESCENT 2 LAMP	8	60 FO32 4 FOOT	48 INSTALL MECHANICAL TWIST TIMERS & LBF BALLASTS
ELEVATOR	T-12 FLUORESCENT 3 LAMP	1	126 FO28 4 FOOT	63 LAMPS AND LBF BALLAST
CONF ROOM	T-8 FLRESCENT 4 LAMP	8	112 FO28 4 FOOT	84 LAMPS AND LBF BALLAST
1ST FLR LOBBY	2 X 2 FLUORESCNT 3 LAMP	9	50 2X2 NEW 2 LAMP	26 2 LAMP LBF BALLAST IN 3 LAMP FIXTURE
2ND FLOOR	2 X 2 FLUORESCNT 3 LAMP	30	50 2X2 NEW 2 LAMP	26 2 LAMP LBF BALLAST IN 3 LAMP FIXTURE
PIPE GALLERY	T-8 FLRESCENT 2 LAMP	16	60 FO28 4 FOOT	42 LAMPS AND LBF BALLAST
PARTS ROOM	T-8 FLRESCENT 2 LAMP	6	60 FO32 4 FOOT	48 LAMPS LBF BALLAST WALL SENSOR
SWITCH GEAR	T-8 FLRESCENT 2 LAMP	8	60 FO28 4 FOOT	42 LAMPS AND LBF BALLAST
BLOWER ROOM	T-8 FLRESCENT 2 LAMP	6	60 FO28 4 FOOT	42 LAMPS AND LBF BALLAST
GARAGE	T-8 FLRESCENT 2 LAMP	6	60 FO32 4 FOOT	42 LAMPS AND LBF BALLAST
VALVE ROOM	T-8 FLRESCENT 2 LAMP	1	60 FO28 4 FOOT	48 LAMPS LBF BALLAST WALL SENSOR
GRS GUN ROOM	100 WATT INCAN 1 LAMP	1	100 CMPCT FLUORCNT	13 TWIST TIMER
CLEAR WELL	PAR 38 INCANDESCENT	1	90 PAR 38 LED	23 LAMPS AND LBF BALLAST
HD PUMP ROOM	T-12 FLUORESCENT 4 LAMP	8	168 FO28 4 FOOT	84 LAMPS AND LBF BALLAST
HD PUMP ROOM	T-12 FLUORESCENT 2 LAMP	2	80 FO28 4 FOOT	42 LAMPS AND LBF BALLAST
ELECTRIC ROOM	T-12 FLUORESCENT 2 LAMP	4	80 F028 4 FOOT	42 LAMPS BALLAST WALL SENSOR
CHLORINE RM	T-12 FLUORESCENT 2 LAMP	5	80 FO32 4 FOOT	48 LAMPS AND LBF BALLAST (2) 3 WAY SENSORS
FLODRIDE ROOM	T-12 FLUORESCENT 2 LAMP	1	80 FO32 4 FOOT	48 LAMPS LBF BALLAST WALL SENSOR
BOILER ROOM	T-12 FLUORESCENT 2 LAMP	16	80 FO32 4 FOOT	48 LAMPS AND LBF BALLAST
BOILER ROOM	T-8 FLRESCENT 2 LAMP	4	60 F032	48 LAMPS AND LBF BALLAST
ELEV MCHN RM	T-8 FLRESCENT 2 LAMP	2	60 FO28 4 FOOT	42 LAMPS LBF BALLAST WALL SENSOR
RWPS	INCANDESCENT	3	100 CMPCT FLUORCNT	18
RWPS BASEMENT	INCANDESCENT	3	100 CMPCT FLUORCNT	18
BOILER ROOM	T-8 FLRESCENT 2 LAMP	4	60 F032	48 LAMPS AND LBF BALLAST
ELEV MCHN RM	T-8 FLRESCENT 2 LAMP	2	60 FO28 4 FOOT	42 LAMPS LBF BALLAST WALL SENSOR

WPCR

LINE ID	WASTE WATER	ROOM DESCRIPTION	FIXT QTY	EXISTING FIXTURE	Replacements	Sensors	Type of Sensor	EXIST WATT	PROP WATT	EXIST HRS	PROP HRS	EXIST KW	PROP KW	SAVED KW	EXIST RMH	PROP KW/H	SAVED KWH
1	WASTE WATER ADMIN.	BASEMENT	10	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		78	42	2500	2500	0.78	0.42	0.36	950	1050	900
2	WASTE WATER ADMIN.	STAIRS	1	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		78	42	2500	2500	0.078	0.042	0.036	195	105	90
3	WASTE WATER ADMIN.	ELEC. ROOM	1	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		78	42	2500	2500	0.078	0.042	0.036	195	105	90
4	WASTE WATER ADMIN.	BACK OFFICES	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y	WALL	59	42	2500	2500	0.236	0.168	0.068	590	420	170
5	WASTE WATER ADMIN.	HALL	5	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		78	42	2500	2500	0.468	0.252	0.216	1170	630	540
6	WASTE WATER ADMIN.	PUMP OFFICE	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y	WALL	59	42	2500	2500	0.236	0.168	0.068	590	420	170
7	WASTE WATER ADMIN.	PLANT MGR.	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y	WALL	59	42	2500	2500	0.236	0.168	0.068	590	420	170
8	WASTE WATER ADMIN.	OFFICE	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y	WALL	59	42	2500	2500	0.236	0.168	0.068	590	420	170
9	WASTE WATER ADMIN.	GARAGE	6	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		78	42	2500	2500	0.468	0.252	0.216	1170	630	540
10	WASTE WATER ADMIN.	HALL	1	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		78	42	2500	2500	0.078	0.042	0.036	195	105	90
11	WASTE WATER ADMIN.	HALL	1	Missing/Damaged	New 2x4 Lens	N		0	0	2500	2500	0	0	0	0	0	0
12	WASTE WATER ADMIN.	ENTRY	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N		59	42	2500	2500	0.354	0.252	0.102	885	630	255
13	WASTE WATER ADMIN.	ENTRY	6	Missing/Damaged	New 2x4 Lens	N		0	0	2500	2500	0	0	0	0	0	0
14	WASTE WATER ADMIN.	SUPER	4	2x4 4T12 Rec.	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	Y	CEILING	156	48	2500	2500	0.624	0.192	0.432	1560	480	1080
15	WASTE WATER ADMIN.	ADMIN ASST.	2	2x4 4T12 Rec.	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	Y	WALL	156	48	2500	2500	0.312	0.096	0.216	780	240	540
16	WASTE WATER ADMIN.	ADMIN ASST.	1	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y		78	42	2500	2500	0.078	0.042	0.036	195	105	90
17	WASTE WATER ADMIN.	LAB	12	2x4 4T12 Rec.	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	Y	CEILING	156	48	2500	2500	1.872	0.576	1.296	4680	1440	3240
18	WASTE WATER ADMIN.	STORAGE	2	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y	WALL	78	42	2500	2500	0.156	0.084	0.072	390	210	180
19	WASTE WATER ADMIN.	OPER. OFFICE	2	2x4 4T12 Rec.	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	Y	CEILING	156	48	2500	2500	0.312	0.096	0.216	780	240	540
20	WASTE WATER ADMIN.	OPER. OFFICE	2	Missing/Damaged	New 2x4 Lens	Y		0	0	2500	2500	0	0	0	0	0	0
21	WASTE WATER ADMIN.	SERVER	2	2x4 4T12 Rec.	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	Y	WALL	156	48	2500	2500	0.312	0.096	0.216	780	240	540
22	WASTE WATER ADMIN.	CONF. ROOM	7	2x4 4T12 Rec.	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	Y	WALL	156	48	2500	2500	1.092	0.336	0.756	2730	840	1890
23	WASTE WATER ADMIN.	BREAKROOM	6	2x2 T18 U-Tube	3 Lamp fixture with a Normal power ballast, 17 watt lamps and a reflector	Y	WALL	59	44	1500	1500	0.354	0.264	0.09	885	660	225
24	WASTE WATER ADMIN.	LOCKER 2	2	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	Y	WALL	78	42	2500	2500	0.156	0.084	0.072	390	210	180
25	WASTE WATER ADMIN.	CLOSET	1	60w Incandescent	23watt One-piece Compact Fluorescent	N		60	23	2500	2500	0.06	0.023	0.037	150	57.5	92.5

Item No.	Room	Room Name	Quantity	Fixture Description	Notes	Wattage	Height	Area	Volume	Cost	Material	Notes	Wattage	Height	Area	Volume	Cost	Material
26	WASTE WATER ADMIN.	LOCKER 1	3	2x4 4T12 Rec.		156	48	2500	2500	0.468	0.144	0.324	1170	360	810			
27	WASTE WATER ADMIN.	LOCKER 1	1	4' 2 Lamp T12	2 Lamp fixture with a Normal power ballast, 28 watt lamps and a reflector	78	30	2500	2500	0.078	0.03	0.048	195	75	120			
28	WASTE WATER ADMIN.	HALL	5	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 17 watt lamps	78	42	2500	2500	0.39	0.21	0.18	975	525	450			
29	WASTE WATER ADMIN.	OUTSIDE FIXTURES	2	100w Incandescent	23 watt One-piece Compact Fluorescent	100	23	3000	3000	0.2	0.046	0.154	600	138	462			
30	WASTE WATER ADMIN.	OUTSIDE FIXTURES	5	250w High Pressure So	New 2-lamp T5 Wall Pack	292	58	3000	3000	1.45	0.29	1.17	4380	970	3510			
31	WASTE WATER ADMIN.	OUTSIDE FIXTURES	1	Add Material	Wallpack Bracket	0	0	3000	3000	0	0	0	0	0	0			
32	WASTE WATER ADMIN.	OUTSIDE FIXTURES	2	High Fixture	High Time	0	0	3000	3000	0	0	0	0	0	0			
33	DRYER WW	SCALE	18	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	1.062	0.756	0.306	2655	1890	765			
34	DRYER WW	SCALE	4	High Fixture	High Time	0	0	3000	3000	0	0	0	0	0	0			
35	DRYER WW	RTO	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
36	DRYER WW	GRAVITY BELT	6	250w Metal Halide	New 4-lamp T8 Highway with High power ballasts and 28 watt lamps	292	127	2500	2500	1.752	0.762	0.99	4380	1905	2475			
37	DRYER WW	ELEC. ROOM	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.354	0.252	0.102	885	630	255			
38	DRYER WW	STAIRS	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
39	DRYER WW	BASEMENT	16	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.944	0.672	0.272	2360	1680	660			
40	DRYER WW	STAIRS	8	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.472	0.336	0.136	1180	840	340			
41	DRYER WW	ELEC. CONTROL	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
42	DRYER WW	LOCKER ROOM	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.236	0.168	0.068	590	420	170			
43	DRYER WW	ELEVATOR	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
44	DRYER WW	ENTRY	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
45	DRYER WW	DRYER 4	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
46	DRYER WW	2ND FLOOR HALL	3	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.177	0.126	0.051	442.5	315	127.5			
47	DRYER WW	CONTROL ROOM	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.354	0.252	0.102	885	630	255			
48	DRYER WW	BELT FILTER	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.118	0.084	0.034	295	210	85			
49	DRYER WW	STAIRS	8	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	59	42	2500	2500	0.472	0.336	0.136	1180	840	340			
50	DRYER WW	MAINT. STORAGE	8	8' 2 Lamp T12	New 4-lamp Belly Pan with a Low power ballast and 28 watt lamps	140	84	2500	2500	1.12	0.672	0.448	2800	1680	1120			
51	DRYER WW	MAINT. BLDG.	9	8' 2 Lamp T12	New 4-lamp Belly Pan with a Low power ballast and 28 watt lamps	140	84	2500	2500	1.26	0.756	0.504	3150	1890	1260			
52	DRYER WW	MAINT. BLDG.	1	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	78	42	2500	2500	0.078	0.042	0.036	195	105	90			
53	DRYER WW	DRYER 4	11	400w Metal Halide	320w Pulse Start MH Lamp and ballast	460	360	2500	2500	5.06	3.96	1.1	12650	9900	2750			
54	DRYER WW	BELT FILTER	8	250w Metal Halide	No Change	292	292	2500	2500	3.336	3.336	0	5840	5840	0			
55	DRYER WW	OUTSIDE FIXTURES	1	100w Incandescent	New 2-lamp 13 watt Compact Fluorescent Wall Pack	100	26	3000	3000	0.1	0.026	0.074	300	78	222			
56	DRYER WW	OUTSIDE FIXTURES	14	250w High Pressure So	New 2-lamp T5 Wall Pack	292	58	3000	3000	4.088	0.812	3.276	12264	2436	9828			
57	DRYER WW	OUTSIDE FIXTURES	4	Add Material	Wallpack Bracket	0	0	3000	3000	0	0	0	0	0	0			
58	DRYER WW	OUTSIDE FIXTURES	17	High Fixture	High Time	0	0	3000	3000	0	0	0	0	0	0			

59	DIGESTER BLDG.	SOUTH ENTRY	1	100w Incandescent	23 watt One-piece Compact Fluorescent	N	100	23	2500	2500	0.1	0.023	0.077	250	57.5	92.5	
60	DIGESTER BLDG.	BASEMENT	14	200w Incandescent	40 watt One-piece compact Fluorescent	N	200	40	2500	2500	2.8	0.56	2.24	7000	1400	5600	
61	DIGESTER BLDG.	STAIRS	2	100w Incandescent	23 watt One-piece Compact Fluorescent	N	100	23	2500	2500	0.2	0.046	0.154	500	115	385	
62	DIGESTER BLDG.	RR	1	100w Incandescent	23 watt One-piece Compact Fluorescent	N	100	23	2500	2500	0.1	0.023	0.077	250	57.5	192.5	
63	DIGESTER BLDG.	LAB 2	2	100w Incandescent	23 watt One-piece Compact Fluorescent	N	100	23	2500	2500	0.2	0.046	0.154	500	115	385	
64	DIGESTER BLDG.	LAB 2	6	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	2500	0.468	0.252	0.216	1170	630	540	
65	DIGESTER BLDG.	CLOSET	2	100w Incandescent	23 watt One-piece Compact Fluorescent	N	100	23	2500	2500	0.2	0.046	0.154	500	115	385	
66	DIGESTER BLDG.	STORAGE	5	100w Incandescent	23 watt One-piece Compact Fluorescent	N	100	23	2500	2500	0.5	0.115	0.385	1250	287.5	962.5	
67	DIGESTER BLDG.	STORAGE	3	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	2500	0.734	0.126	0.108	585	315	270	
68	DIGESTER BLDG.	BOILER	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.736	0.168	0.068	590	420	170	
69	DIGESTER BLDG.	ROOF	2	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	8760	0.06	0.006	0.054	525.6	52.56	473.04	
70	DIGESTER BLDG.	OUTSIDE FIXTURES	3	100w Incandescent	New 2-lamp T3 watt Compact Fluorescent Wall Pack	N	100	26	3000	3000	0.3	0.078	0.222	900	234	666	
71	DIGESTER BLDG.	OUTSIDE FIXTURES	2	250w High Pressure So	New 2-lamp T5 Wall Pack	N	292	58	3000	3000	0.584	0.115	0.468	1752	343	1404	
72	DIGESTER BLDG.	OUTSIDE FIXTURES	2	Add Material	Wallpack Bracket	N	0	0	3000	3000	0	0	0	0	0	0	
73	EMERGENCY BLOWER BLDG.	BLOWER ROOM	12	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	2500	0.936	0.504	0.432	2340	1260	1080	
74	EMERGENCY BLOWER BLDG.	MCC	4	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	2500	0.312	0.168	0.344	780	420	360	
75	EMERGENCY BLOWER BLDG.	SUB "B"	6	4' 4 Lamp T12	4 Lamp fixture with a Low power ballast and 28 watt lamps	N	156	84	2500	2500	0.936	0.504	0.432	2340	1260	1080	
76	EMERGENCY BLOWER BLDG.	EQ RECYCLE	6	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	2500	0.468	0.252	0.216	1170	630	540	
77	EMERGENCY BLOWER BLDG.	STORAGE POD	15	400w Metal Halide	New 6-lamp T8 Highway with High power ballasts and 28 watt lamps	Y	CEILING	460	196	2500	2500	6.9	2.94	3.96	17250	7350	9900
78	EMERGENCY BLOWER BLDG.	GENERATOR	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.118	0.084	0.034	295	210	85	
79	EMERGENCY BLOWER BLDG.	GEN. SWITCH	10	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.59	0.42	0.17	1475	1050	425	
80	EMERGENCY BLOWER BLDG.	OUTSIDE FIXTURES	3	100w Incandescent	New 2-lamp T3 watt Compact Fluorescent Wall Pack	N	100	26	3000	3000	0.3	0.078	0.222	900	234	666	
81	EMERGENCY BLOWER BLDG.	OUTSIDE FIXTURES	3	250w High Pressure So	New 2-lamp T5 Wall Pack	N	292	58	3000	3000	0.876	0.174	0.702	2628	522	2106	
82	EMERGENCY BLOWER BLDG.	OUTSIDE FIXTURES	1	Add Material	Wallpack Bracket	N	0	0	3000	3000	0	0	0	0	0	0	
83	TPS EAST	STAIRWELL E	10	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.59	0.42	0.17	1475	1050	425	
84	TPS EAST	LOWER PUMPE	5	400w Metal Halide	New 6-lamp T5 Highway with High power ballasts and 28 watt lamps	N	460	354	2500	2500	2.3	1.77	0.53	5750	4425	1325	
85	TPS EAST	LOWER PUMPE	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.354	0.252	0.102	885	630	255	
86	TPS EAST	STAIRWELL W	10	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.59	0.42	0.17	1475	1050	425	
87	TPS EAST	MCC	10	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.59	0.42	0.17	1475	1050	425	
88	TPS EAST	OLD LIGHT STREAM	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.354	0.252	0.102	885	630	255	
89	TPS EAST	SCUM PUMP	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2500	0.354	0.252	0.102	885	630	255	
90	TPS EAST	2nd CLARIFIER	2	400w Metal Halide	320w Pulse Start MH Lamp and ballast	N	460	360	2500	2500	0.92	0.72	0.2	2300	1300	800	

51	TPS EAST	OUTSIDE FIXTURES	5	100w Incandescent	New 2-lamp 13 watt Compact Fluorescent Wall Pack	N	100	26	3000	0.5	0.5	0.57	1300	390	1110
52	CHEM CONTAINMENT	CHEM. CONTAINMENT	1	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.03	0.07	262.8	26.28	285.52
53	CHEM CONTAINMENT	MCC	1	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.03	0.07	262.8	26.28	285.52
54	CHEM CONTAINMENT	MCC	5	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	0.39	0.21	0.18	875	525	450
55	CHEM CONTAINMENT	BFF MCC	11	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.649	0.42	0.187	1692.5	1155	487.5
56	CHEM CONTAINMENT	LOWER SCREEN	6	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	0.468	0.232	0.126	1170	630	540
57	CHEM CONTAINMENT	OUTSIDE FIXTURES	4	100w Incandescent	New 2-lamp 13 watt Compact Fluorescent Wall Pack	N	100	26	3000	0.4	0.164	0.296	1200	312	888
58	CHEM CONTAINMENT	OUTSIDE FIXTURES	4	250w High Pressure So	New 2-lamp T5 Wall Pack	N	292	58	3000	1.158	0.232	0.935	3504	696	2808
59	CHEM CONTAINMENT	OUTSIDE FIXTURES	4	Add Material	Wallpack Bracket	N	0	0	3000	0	0	0	0	0	0
100	RAZ PUMP	RAZ PUMP	3	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	0.394	0.165	0.108	885	315	270
101	RAZ PUMP	OUTSIDE FIXTURES	4	250w High Pressure So	New 2-lamp T5 Wall Pack	N	292	58	3000	1.158	0.232	0.936	3504	696	2808
102	RAZ PUMP	OUTSIDE FIXTURES	4	Add Material	Wallpack Bracket	N	0	0	3000	0	0	0	0	0	0
103	BIO REACTORS AB	OUTSIDE FIXTURES	1	250w Metal Halide	60 watt One-piece Compact Fluorescent (Bypass ballast)	N	292	60	3000	0.392	0.06	0.232	876	180	696
104	BIO REACTORS AB	OUTSIDE FIXTURES	2	175w Metal Halide	60 watt One-piece Compact Fluorescent (Bypass ballast)	N	208	60	3000	0.416	0.12	0.296	1248	260	888
105	BIO REACTORS AB	OUTSIDE FIXTURES	4	400w Metal Halide	New 4-lamp T5 Wall Pack	N	460	116	3000	1.84	0.464	1.376	5520	392	4128
106	BIO REACTORS AB	OUTSIDE FIXTURES	4	Add Material	Wallpack Bracket	N	0	0	3000	0	0	0	0	0	0
107	PROCESS BLOWER DUCT	MCC	1	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.003	0.027	262.8	6.28	286.52
108	PROCESS BLOWER DUCT	MCC	7	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	0.545	0.294	0.252	1365	735	630
109	PROCESS BLOWER DUCT	BLOWER	2	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.006	0.054	275.6	52.56	473.04
110	PROCESS BLOWER DUCT	BLOWER	8	250w Metal Halide	New 4-lamp T8 Highbay with High power ballast and 28 watt lamps	N	292	127	2500	2.335	1.116	1.32	5840	2540	3300
111	PROCESS BLOWER DUCT	OUTSIDE FIXTURES	8	250w High Pressure So	New 2-lamp T5 Wall Pack	N	292	58	3000	2.335	0.464	1.872	7008	1392	5616
112	PISTA	STORAGE	2	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.006	0.054	275.6	52.56	473.04
113	PISTA	STORAGE	8	4' 2 Lamp T12	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	78	42	2500	0.624	0.336	0.298	1560	840	720
114	PISTA	PUMP	2	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.006	0.054	275.6	52.56	473.04
115	PISTA	PUMP	4	400w Metal Halide	New 6-lamp T5 Highbay with High power ballast and 28 watt lamps	N	460	354	2500	2.009	1.416	0.424	4600	3540	3060
116	PISTA	METHANOL BLDG.	3	Exit Incandescent	NEW LED Exit Sign	N	30	3	8760	0.03	0.009	0.081	278.4	78.84	709.56
117	PISTA	METHANOL BLDG.	4	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.296	0.168	0.068	590	420	170
118	PISTA	OUTSIDE FIXTURES	2	400w Metal Halide	320w Pulse Start MH Lamp and ballast	N	460	360	3000	0.2	0.72	0.2	2760	2160	600
119	PISTA	OUTSIDE FIXTURES	11	250w High Pressure So	New 2-lamp T5 Wall Pack	N	292	58	3000	3.242	0.658	2.574	8635	1914	8722
120	WATER TREATMENT CHEMICAL	FLUSH MIX	40	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	2.38	1.68	0.68	5900	4200	1700
121	WATER TREATMENT CHEMICAL	ELEC. ROOM	6	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.354	0.252	0.102	885	630	255
122	WATER TREATMENT CHEMICAL	ACID PUMP	2	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.118	0.084	0.034	295	210	85
123	WATER TREATMENT CHEMICAL	FILTER	3	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.177	0.126	0.051	442.5	315	127.5
124	WATER TREATMENT CHEMICAL	MEZANINE	8	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.472	0.336	0.136	1180	840	340
125	WATER TREATMENT CHEMICAL	GARAGE	4	400w Metal Halide	New 6-lamp T5 Highbay with High power ballast and 28 watt lamps	Y	460	354	2500	1.84	1.416	0.424	4600	3540	1060
126	WATER TREATMENT CHEMICAL	CLZ PUMP	5	4' 2 Lamp T8	2 Lamp fixture with a Low power ballast and 28 watt lamps	N	59	42	2500	0.354	0.252	0.102	885	630	255

QUICKTRONIC® T8 Instant Start UNIVERSAL VOLTAGE

High Efficiency Series

Low Ballast Factor

Lamp/Ballast Guide

32W T8 - OCTRON®
QHE ISL SC Models
 1-lamp QHE1x32T8/UNV
 2-lamp QHE2x32T8/UNV
 3-lamp QHE3x32T8/UNV
 4-lamp QHE4x32T8/UNV

Also operates:
 FBO32, FBO31, FO25, FBO24,
 FO17, FBO16, FO30/SS (30W),
 FBO30/SS (30W), FBO29/SS (29W),
 FO28/SS (28W) & FO25/SS (25W)

FO40T8 operation:
 1 lamp on 2L ballast
 2 lamps on 3L ballast
 3 lamps on 4L ballast

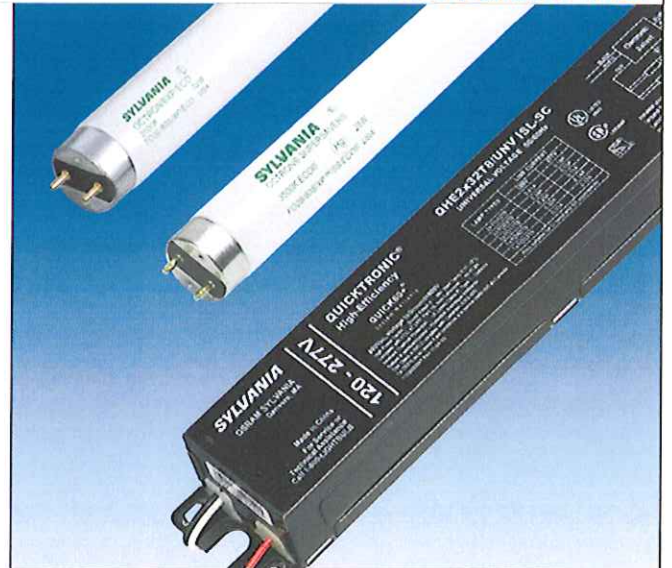
Note: FO40T8 0°F Starting Temp.

SYLVANIA QUICKTRONIC High Efficiency (QHE) energy-saving electronic T8 ballasts save up to 6% over standard electronic ballasts without compromising light output or lamp life. The added energy savings also provides for a quicker payback. QHE ballasts also meet the most demanding utility rebate standards.

SYLVANIA QUICKTRONIC High Efficiency (QHE) operates OCTRON T8 lamps with maximum efficacy and high lumen output, and provides **30-50% energy savings** when compared to F40T12 magnetic systems.

Small can enclosure allows for low profile fixture design. Small size also provides transportation, inventory and ergonomic benefits.

This product is also offered in new banded packaging and pallet packs.



SYLVANIA QUICKTRONIC High Efficiency (QHE) is also covered by our QUICK 60+® warranty, the first and most comprehensive lamp & ballast system warranty in the industry.

Parallel circuitry is utilized to keep the remaining lamps lit if one or more should go out.

Key System Features

- **High Efficiency Systems** over 90% efficient
- **Over 100 LPW (lumens/watt)** with OCTRON SUPERSAVER® lamps
- **Lowest power T8 I.S. Systems**
- **Universal voltage (120-277)**
- **Small Can enclosure size**
- **30-50% Energy savings**
- **-20°F (-29°C) min. starting temp.** for OCTRON lamps
- **60°F (16°C) min. starting temperature** with OCTRON SUPERSAVER lamps
- **<10% THD**
- **Virtually eliminates lamp flicker**

System Information

SYLVANIA QUICKTRONIC High Efficiency (QHE) operates from 120V through 277V, eliminating "wrong voltage" wiring errors and reducing the number of models in inventory by half.

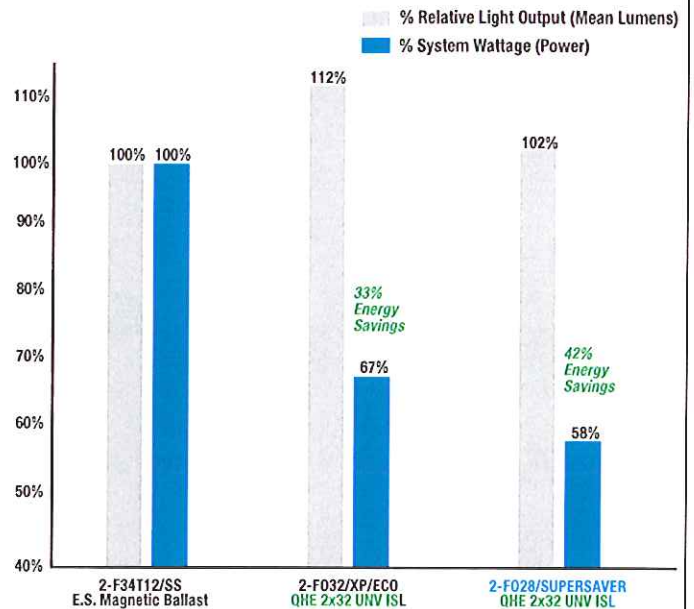
SYLVANIA QUICKTRONIC High Efficiency (QHE) uses instant start operation to provide the highest system efficacy and to assure low temperature starting capability. Instant start also provides for maximum remote wiring distances.

SYLVANIA QUICKTRONIC High Efficiency (QHE) electronic ballasts have very low harmonic distortion (<10% THD) for high system performance.

Ballast operates at >42kHz to reduce potential interference with infrared control systems.

A complete OSRAM SYLVANIA System Performance Guide showing performance characteristics for all combinations of lamps and ballasts is available upon request.

System Type (2-lamp)	Input Wattage	Initial Lumens	System LPW	Mean Lumens	Energy Savings
F34T12 - E.S. Magnetic Ballast	72	4660	65	3960	Baseline
F032/XP - QHE2x32T8/UNV ISL-SC	48	4680	98	4445	33%
F028/SS - QHE2x32T8/UNV ISL-SC	42	4250	101	4040	42%



Application Information

SYLVANIA QUICKTRONIC High Efficiency is ideally suited for:

- Any applications where the lowest power T8 systems are needed for maximum energy savings
- Energy Retrofits
- Commercial & Retail
- Hospitality & Institutional
- New Construction

ECS069

Low Ballast Factor T8 Instant Start UNV VOLTAGE High Efficiency Systems

<10% THD High Efficiency Electronic T8 Fluorescent Systems (Low Ballast Factor)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Wattage (W)	System Efficacy (lm/W)
49861	QHE 1X32T8/UNV ISL-SC	120-277	0.21/0.09	F032/XP	3000	1	0.78	2340	25	94
			0.20/0.09	F030/SS	2850	1	0.78	2220	24	93
			0.19/0.08	F028/SS	2725	1	0.78	2125	22	97
			0.17/0.08	F025/SS	2475	1	0.78	1930	20	97
49863	QHE 2X32T8/UNV ISL-SC	120-277	0.41/0.18	F032/XP	3000	2	0.78	4680	48	98
			0.38/0.16	F030/SS	2850	2	0.78	4445	45	99
			0.35/0.15	F028/SS	2725	2	0.78	4250	42	101
			0.32/0.14	F025/SS	2475	2	0.78	3860	37	104
49865	QHE 3X32T8/UNV ISL-SC	120-277	0.61/0.27	F032/XP	3000	3	0.78	7020	71	99
			0.58/0.25	F030/SS	2850	3	0.78	6670	68	98
			0.53/0.23	F028/SS	2725	3	0.78	6380	63	101
			0.48/0.21	F025/SS	2475	3	0.78	5790	55	105
49867	QHE 4X32T8/UNV ISL-SC	120-277	0.80/0.35	F032/XP	3000	4	0.78	9360	95	99
			0.75/0.32	F030/SS	2850	4	0.78	8890	89	100
			0.71/0.31	F028/SS	2725	4	0.78	8500	84	101
			0.62/0.27	F025/SS	2475	4	0.78	7720	74	104

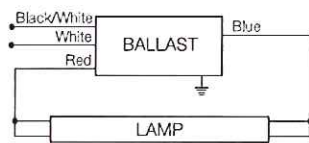
Products listed above are 10 packs.

840 PC Pallet Packs

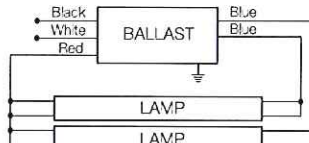
49862 QHE1x32T8/UNV-ISL-SC-PAL 49864 QHE2x32T8/UNV-ISL-SC-PAL
49866 QHE3x32T8/UNV-ISL-SC-PAL 49868 QHE4x32T8/UNV-ISL-SC-PAL

10 PC Banded Packs

49837 QHE1x32T8/UNV-ISL-SC-B 49838 QHE2x32T8/UNV-ISL-SC-B
49839 QHE3x32T8/UNV-ISL-SC-B 49840 QHE4x32T8/UNV-ISL-SC-B

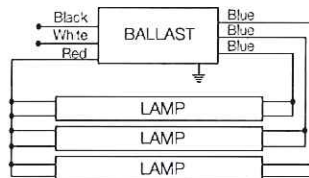


QUICKTRONIC 1x32



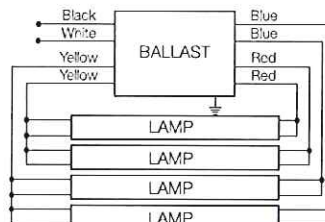
Note: For one lamp application, cap any blue lead. Insulate to 600 volts.

QUICKTRONIC 2x32



Note: For two lamp application, cap any blue lead. Insulate to 600 volts.

QUICKTRONIC 3x32



Note: For three lamp application, cap any unused blue lead. Insulate to 600 volts.

QUICKTRONIC 4x32

Specifications¹

Starting Method: Instant Start
Ballast Factor: 0.78
Circuit Type: Parallel
Lamp Frequency: > 40KHz
Lamp CCF: Less than 1.7
Starting Temp:¹
-20°F for OCTRON T8 lamps;
60°F for SUPERSAVER® T8 lamps
0°F for F040T8

Input Frequency: 50/60 Hz
Low THD: < 10%
Power Factor: > 98%
Voltage Range: 108-305V

UL Listed Class P, Type 1 Outdoor
CSA Certified (where applicable)
70°C Max Case Temperature
FCC 47CFR Part 18 Non-Consumer
Class A Sound Rating
ANSI C62.41 Cat. A Transient Protection
Remote Mounting up to 20 feet¹

¹ Operation below 50°F may affect light output or lamp operation – see "Low Temp. Starting" definition.

System Life / Warranty

QUICKTRONIC products are covered by our QUICK 60+® warranty, a comprehensive lamp and ballast system warranty. For additional details, refer to our QUICK 60+ warranty bulletin.

Ordering Guide

Specifications subject to change without notice.

Dimensions:

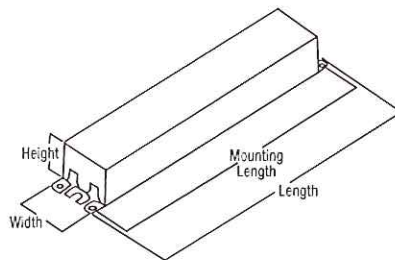
Overall: 9.5" L x 1.68" W x 1.18" H
Mounting: 8.90"

Packaging:

Quantity: 10 pieces/840 pieces
Weight: 1.6 lbs each (approx)

Wiring:

Leads only (no connectors provided)



Item Number	49863	QHE 2	x 32T8 / UNV ISL-SC	Case Size
QUICKTRONIC High Efficiency				Starting/Ballast Factor
Number of Lamps				Line Voltage (120-277V)
				Primary Lamp Wattage

OCTRON® 28W XP® SUPERSAVER® ECOLOGIC®3

EXtended Performance Fluorescent Lamps



SYLVANIA OCTRON 28 Watt XP SUPERSAVER ECOLOGIC3 lamps operate on standard T8 instant start systems and provide 12.5% energy savings over standard 32 Watt OCTRON lamps. At 10¢/kWh and 4,000 hours of operation per year, the 12.5% savings translates to a savings of \$6.40 per fixture per year for a 4-lamp fixture with a normal ballast factor, instant start ballast. The 94% lumen maintenance of the OCTRON F028/800XP/SS/ECO3 lamp assures that light levels are maintained while energy is saved. These lamps pass the Federal TCLP test, classifying them as non-hazardous waste in most states. Group re-lamp to realize the benefits of these OCTRON lamps in your facility.

Key Features & Benefits

- 28 Watt, 4-foot, SUPERSAVER energy saving, T8 lamp
- 12.5% energy savings compared to standard 32W T8 lamp
- A member of the SYLVANIA ECOLOGIC3 family of lamps
- 2,725 initial lumens (850 is 2,600)
- 94% lumen maintenance at 40% of rated life
- 3000K, 3500K, 4100K & 5000K
- 85 CRI (850 is 80 CRI)
- Dimmable (see application note 4)
- Retrofit lamp for existing T8 instant start systems
 - 24,000 hours average rated life @ 3 hrs per start
 - 36,000 hours average rated life @ 12 hrs per start
- Approved on OSRAM SYLVANIA QUICK-TRONIC® PSX and PSN ballasts
 - 36,000 hours average rated life @ 3 hrs per start
 - 42,000 hours average rated life @ 12 hrs per start

SYLVANIA OCTRON T8 ECOLOGIC3 fluorescent lamps pass the Federal Toxicity Characteristic Leaching Procedure (TCLP)¹ criteria for classification as non-hazardous waste in most states.²



This light source meets restrictions on hazardous substances.

ECOLOGIC3 represents a more comprehensive approach to sustainability encompassing high efficiency, long life and RoHS/TCLP compliance.



1. TCLP test results are based on NEMA LL Series standards and are available on request.
2. Lamp disposal regulations may vary; check your local & state regulations.

Product Offering

Lamp Type	Wattage	CCT	CRI
F028/830XP/SS/ECO3	28	3000K	85
F028/835XP/SS/ECO3	28	3500K	85
F028/841XP/SS/ECO3	28	4100K	85
F028/850XP/SS/ECO3	28	5000K	80

Application Information

Applications

- Hospitals
- Industrial
- Office
- Retail
- Schools
- Many applications with T8 instant start ballasts currently using 32W T8 lamps

Fixtures

Contact your local fixture agent for available fixtures.

Application Notes

1. Recommended to be used on T8 F32 Instant or Programmed Start ballasts with minimum open circuit voltage of 550V RMS at the lamp.
 - a. Electronically ballasted fixture configurations which operate lamps remotely, such as Master/Satellite applications, can cause reduction of lamp open circuit voltage, in the remote fixture, below the minimum required for reliable lamp starting. For more information, please call 1-800-LIGHTBULB and ask for Ballast Technical Assistance or call your fixture manufacturer.
 - b. Not recommended to be used: (1) in remotely ballasted fixtures with lamp open circuit voltages below 550V, (2) with Rapid Start ballasts unless the lamp open circuit voltage is greater than 570V, (3) in air handling fixtures, (4) on low power factor ballasts or (5) inverter operated emergency lighting systems unless any of the above equipment is specifically listed for 28 watt lamps. Any of the above situations could result in lamp starting and stabilization problems or system compatibility issues.

SEE THE WORLD IN A NEW LIGHT



Specification Data

Fixture Description:	Type
Project/Job:	
SYLVANIA lamp:	
SYLVANIA ballast:	
Notes:	

Ordering Information

Item Number	Ordering Abbreviation	Watts	Bulb	Base	Initial Lumens	lm/W	Mean Lumens ¹	Avg. Rated Life (hrs.) ²	CCT	CRI
22177	FO28/830XP/SS/ECO3	28	T8	Medium bi-pin	2,725	97	2,562	36,000	3000K	85
22178	FO28/835XP/SS/ECO3	28	T8	Medium bi-pin	2,725	97	2,562	36,000	3500K	85
22179	FO28/841XP/SS/ECO3	28	T8	Medium bi-pin	2,725	97	2,562	36,000	4100K	85
22184	FO28/850XP/SS/ECO3	28	T8	Medium bi-pin	2,600	93	2,444	36,000	5000K	80

1. Measured at 40% of rated life.

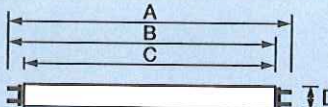
2. Based on 3 hours/start on programmed rapid start ballasts. At 12 hours/start, average rated life = 42,000 hours. On instant start ballasts, average rated life is 24,000 hours at 3 hours per start and 36,000 hours at 12 hours per start.

Ordering Guide

FO	28	/	8	35	XP	/	SS	/	ECO3
Fluorescent	Wattage		CRI ≥ 80	Color Temperature	EXtended		SUPERSAVER		ECOLOGIC3
OCTRON	28			30 = 3000K CCT 35 = 3500K CCT 41 = 4100K CCT 50 = 5000K CCT	Performance				

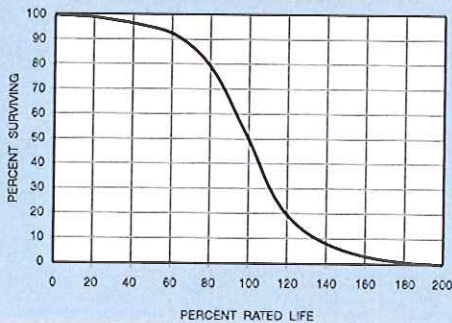
Lamp Dimensions

Lamp Type	(A) Max. Overall Length (in.)	(B) Base Face to Opposite Pin (in.)	(C) Max. Base Face to Base Face (in.)	(D) Max. Outside Diameter (in.)
FO28	47.78"	Min. 47.41" Max. 47.50"	47.22"	1.1"

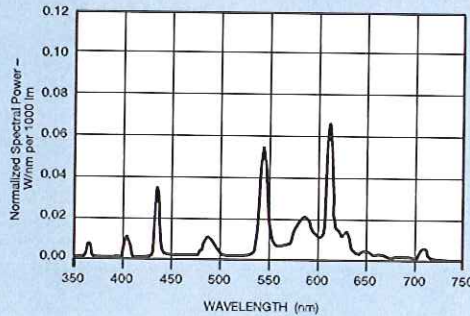


Technical Information

Typical Fluorescent Lamp Mortality



OCTRON 830



Application Information (continued)

Application Notes

- If an operating lamp is exposed to drafts and/or the ambient temperature falls below 60°F, striation (a rhythmic pulsing pattern of light running down the tube) and/or reduction in lamp brightness may occur. While visually disconcerting, neither behavior is damaging to the lamp and removing the cause (draft or temperature) will return the lamp to normal operation.
- Fixture must conform to ANSI C78.81 – 2005 requirements for luminaire design.
- Contact OSRAM SYLVANIA for approved dimming ballasts.

SYLVANIA, ECOLOGIC, OCTRON, QUICK 60+, SUPERSAVER and XP are registered trademarks of OSRAM SYLVANIA Inc. SEE THE WORLD IN A NEW LIGHT is a registered trademark of OSRAM SYLVANIA Inc. QUICKTRONIC is a registered trademark of OSRAM GmbH.

Sample Specification

Lamp(s) shall be OCTRON® 28W XP® SUPERSAVER® ECOLOGIC®3 4-foot lamp(s) having medium bi-pin bases. Lamp(s) shall be designed to pass the Federal TCLP test in force at the time of manufacture. Lamp(s) shall have an average rated life of 24,000 hours at 3 hours per start when operated on T8 instant start ballasts, 2,725 initial lumens (2,600 for 5000K), 94% lumen maintenance at 40% of rated life, a correlated color temperature of (3000K, 3500K, 4100K or 5000K) and a CRI of (80, 85). The OCTRON SUPERSAVER ECOLOGIC3 lamp(s) shall be operated on QUICKTRONIC® electronic, high frequency ballasts with complete system warranty from the manufacturer covering lamps and ballast.

Warranty Information

QUICK 60+® warranty for OSRAM SYLVANIA lamp and ballast combination

Limited 36 month lamp warranty and a five year ballast warranty is possible if both lamps and ballast are provided by OSRAM SYLVANIA. See the QUICK 60+ warranty for details and restrictions.

United States

OSRAM SYLVANIA
100 Endicott Street
Danvers, MA 01923

Trade

Phone: 1-800-255-5042
Fax: 1-800-255-5043

National Accounts

Phone: 1-800-562-4671
Fax: 1-800-562-4674

OEM/Special Markets

Phone: 1-800-762-7191
Fax: 1-800-762-7192

Display/Optic

Phone: 1-888-677-2627
Fax: 1-800-762-7192

Canada

OSRAM SYLVANIA LTD.
2001 Drew Road
Mississauga, ON L5S 1S4

Trade

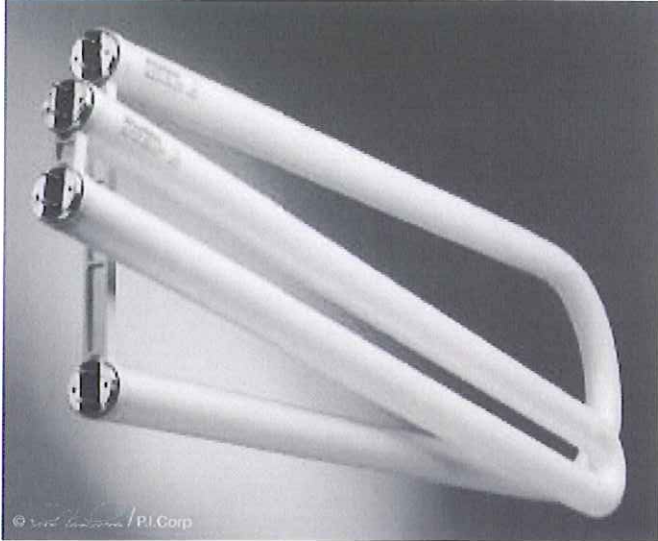
Phone: 1-800-263-2852
Fax: 1-800-667-6772

OEM/Special Markets/Display/Optic

Phone: 1-800-265-2852
Fax: 1-800-667-6772

www.sylvania.com

OCTRON® CURVALUME® XPS® ECOLOGIC® Fluorescent Lamps



- **EXtended Performance Super OCTRON CURVALUME T8**
- Longer life than any other CURVALUME T8 or T12
 - 30,000 hours average rated life on QUICKTRONIC® Xtreme PSX ballast
 - Extend relamp cycles
- Higher initial lumens compared to conventional CURVALUME T8
- 95% lumen maintenance at 8000 hours
- Use fewer lamps or fewer fixtures
- Improved CRI – 85
- ECOLOGIC – Pass Federal TCLP Limits¹
- 1-5/8" (31W) & 6" (32W) leg spacing lamps
- 3000K, 3500K, 4100K & 5000K
- Operates on instant, rapid and programmed rapid start electronic T8 ballasts.

¹ Regulations may vary. Check with your local and state regulators.

SYLVANIA OCTRON CURVALUME XPS T8 fluorescent lamps deliver the highest light output of all CURVALUME T8 lamps. Their initial lumen output is 9% higher than 700 Series CURVALUMES and 5% higher than 800 Series CURVALUME lamps.

OCTRON CURVALUME XPS/ECO® lamps are ideal for 2x2 troffers and operate on the same ballasts as linear OCTRON, OCTRON XP™, and OCTRON XPS T8 lamps providing maintenance ease and color consistency throughout an installation. When used together with QUICKTRONIC PSX ballasts, the XPS/PSX system provides the lowest possible energy consumption in a 2x2 configuration while maintaining high light levels and maximizing lamp life.

ECOLOGIC is a comprehensive program of OSRAM SYLVANIA focused on addressing environmental issues at various stages of lamp life.



Product Availability

Lamp Type	Leg Spacing	Average Rated Life *
FB031/830/XPS/ECO	1-5/8"	30,000
FB031/835/XPS/ECO	1-5/8"	30,000
FB031/841/XPS/ECO	1-5/8"	30,000
FB032/830/XPS/6/ECO	6"	30,000
FB032/835/XPS/6/ECO	6"	30,000
FB032/841/XPS/6/ECO	6"	30,000
FB032/850/XPS/6/ECO	6"	30,000

*Based on 3 hrs./start on QUICKTRONIC PSX ballasts.

System Comparison

2' x 2' Fixture (Two Lamps)

Lamp Type	Ballast	Ballast Factor	System Wattage	Mean System Lumens ¹	Mean Lumen Change (%)	Energy Savings vs. FB40/CW/SS (%)	Life 3 hrs/start
FB40/CW/6/SS	E. S. Magnetic	0.88	72	3890	—	—	18,000
FB40/D41/6/SS	E. S. Magnetic	0.88	72	4220	8%	0%	18,000
FB032/741	System 32 LP	0.77	51	3820	-2%	29%	15,000
FB032/841/XP	System 32 LP	0.77	51	4200	8%	29%	18,000
FB032/841/XPS	PSX	0.71	45	4047	4%	38%	30,000

¹ At 8000 hours.

Application Information

Applications

Offices
Schools
Retail
General Lighting
Hospitals

Application Notes

1. Lamps can start at temperatures as low as 0°F (dependant on ballast). Operation below 50°F may affect lumen output or lamp operation.
2. For cold temperature applications, use in suitably enclosed fixture to maximize lumen output.
3. For rapid start operation, check with ballast manufacturer for ground plane requirement.
4. For maximum energy savings and longest lamp life, operate XPS lamps on QUICKTRONIC PSX ballasts.

SEE THE WORLD IN A NEW LIGHT

SYLVANIA



Sample Specification

Lamp(s) shall be OCTRON® CURVALUME® XPS®/ECO® (FBO31 or FBO32) having medium bi-pin bases and (1-5/8" or 6") leg spacing. Lamps shall have a correlated color temperature of (3000K, 3500K, 4100K or 5000K) and CRI of 85. The OCTRON lamps shall be operated on dedicated QUICKTRONIC® (System 32, System 32LP, System 32 PLUS, or PSX) ballasts, with complete system warranty from the manufacturer covering lamps and ballast.

Warranty Information

QUICK 60+® warranty for SYLVANIA lamp and ballast combination

Limited three year (36 month) OCTRON CURVALUME XPS lamp warranty and a five year QUICKTRONIC electronic ballast warranty if both lamps and ballasts are provided by OSRAM SYLVANIA. See the QUICK 60+ warranty for details and restrictions.

Ordering and Specification Information

Item Number	Ordering Abbreviation	Leg Spacing (inches)	Watts	Initial Lumens	Mean* Lumens	Avg. Rated Life (hrs)**	Bulb	Nominal Length (inches)	Color Temp.	CRI
21552	FBO31/830/XPS/ECO ²	1-5/8"	31	2900	2755	30,000	T-8	22.5"	3000K	85
21553	FBO31/835/XPS/ECO ²	1-5/8"	31	2900	2755	30,000	T-8	22.5"	3500K	85
21554	FBO31/841/XPS/ECO ²	1-5/8"	31	2900	2755	30,000	T-8	22.5"	4100K	85
22094	FBO32/830/XPS/6/ECO	6"	32	3000	2850	30,000	T-8	22.5"	3000K	85
22095	FBO32/835/XPS/6/ECO	6"	32	3000	2850	30,000	T-8	22.5"	3500K	85
22096	FBO32/841/XPS/6/ECO	6"	32	3000	2850	30,000	T-8	22.5"	4100K	85
22168	FBO32/850/XPS/6/ECO	6"	32	2980	2830	30,000	T-8	22.5"	5000K	85

* At 8000 hours.

** Based on 3 hrs/start on QUICKTRONIC PSX ballast. 18,000 hour average rated life on instant start, 24,000 hour life on rapid and other programmed rapid start electronic ballasts.

Ordering Guide

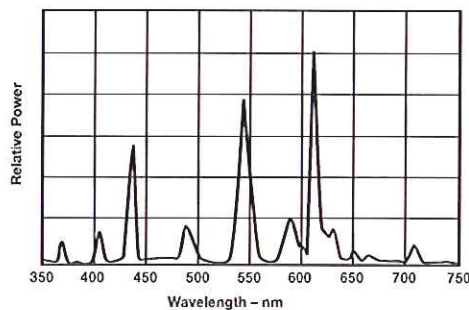
FBO	32	/	8	35	/	XPS	/	6	/	ECO
Fluorescent	Wattage:		8 = 85 CRI	30 = 3000K		EXtended		6 = 6 inch		ECOLOGIC
Bent	31 or			35 = 3500K		Performance		blank = 1-5/8"		Lamp
OCTRON®	32 watts			41 = 4100K		Super		leg spacing		
				50 = 5000K						

Dimensions

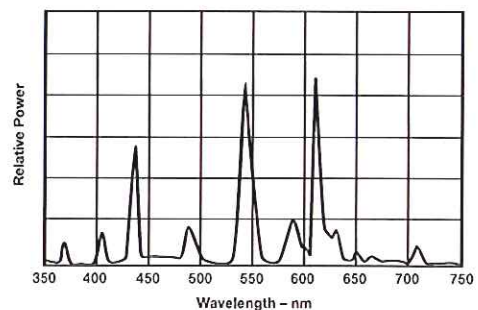
Lamp Type	(A) Maximum Overall Length (in.)	(B) Max. Base to Top of Lamp (in.)	(C) Leg Spacing Pin to Opposite Pin (in.)
FBO31	23	22.6	1.625
FBO32	23	22.6	6.0

Technical Information

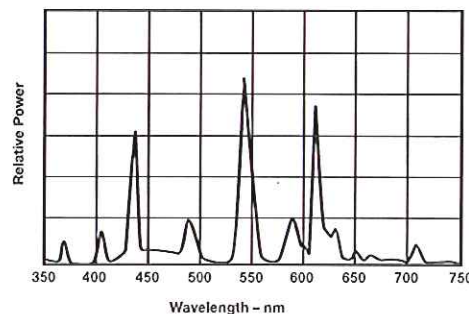
OCTRON® 830 XPS®



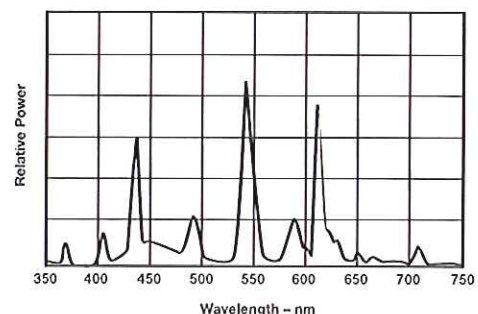
OCTRON® 835 XPS®



OCTRON® 841 XPS®



OCTRON® 850 XPS®



OSRAM SYLVANIA
National Customer
Support Center
18725 N. Union Street
Westfield, IN 46074

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Fax: 1-800-562-4674

OEM & Special Markets

Phone: 1-800-762-7191
Fax: 1-800-762-7192

Photo-Optic

Phone: 1-888-677-2627
Fax: 1-800-762-7192

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OSRAM SYLVANIA LTD.
Headquarters
2001 Drew Road
Mississauga, ON L5S 1S4

Industrial & Commercial

Phone: 1-800-263-2852
Fax: 1-800-667-6772

Special Markets

Phone: 1-800-265-2852
Fax: 1-800-667-6772

Visit our website: www.sylvania.com

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XP is a trademark of OSRAM SYLVANIA, Inc.

QUICKTRONIC is a registered trademark of OSRAM GmbH, used under license.

T3 Ultra Compact CFLs | 12,000 Hours average rated life, 120Volts

Applications:

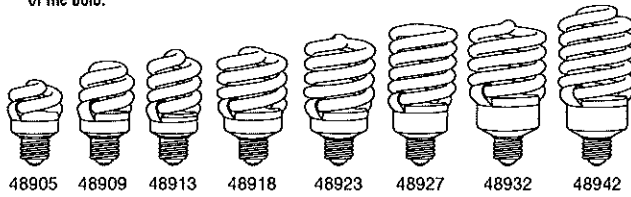
See below.

Special Application Options: (Ordering Suffix)

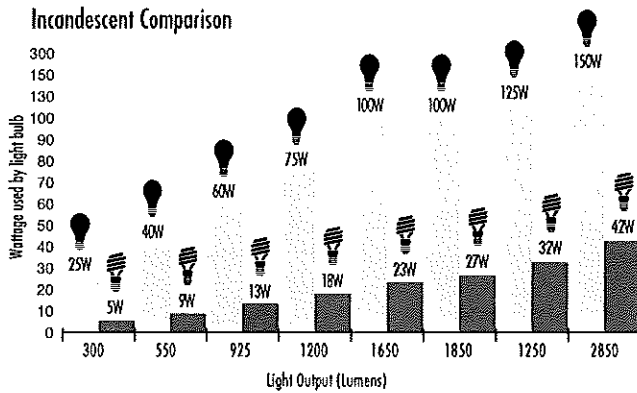
- 3000°K (30K), 3500°K (35K), 4100°K (41K), 5000°K (50K), 6500°K (65K), Full Spectrum (FS)
- Long Neck 1.65" (165), 1.75" (175), 2.25" (225)
- Wet location (WL)
- Shatter Coat (SS)

Features and Benefits:

- Ultra high efficiency ballast increases lumen output
- Lateral cathode design optimizes thermal efficiency
- Exclusive end of life circuitry
- Long life, 12,000 hours average rated life
- New design and construction improves lumen maintenance over the life complete of the bulb.

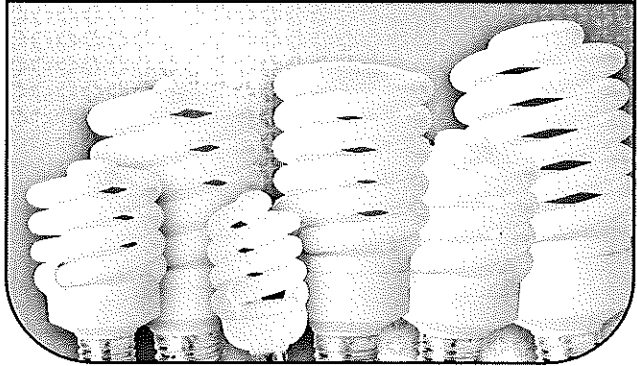


Incandescent Comparison



Catalog Number

Notes | Type




Specifications: (at full brightness)

End of Life Protection	Yes
Ballast Type	Electronic
Starting Method	Instant Start
Input Line Voltage	120VAC
Input Line Frequency	50/60HZ
Color Temperature	2700°K
Color Rendering Index	82
Minimum Starting Temperature	-20°F, -29°C
Maximum Operating Temperature	160°F, 71°C
U.L. / C.U.L. Listed	Yes - E149698
FCC Compliance	47 CFR Part 18
Lamp Operating Frequency	45 KHZ
Lamp Current Crest Factor	<1.60
Total Harmonic Distortion	<150%
High Power Factor Rated	>.50

Special Application Notes:

- Up to 23 watt is UL approved for totally enclosed fixtures.
- Use a 27w and 32w in an open recessed can
- Do not use a 27w and 32w in an enclosed recessed can. Use voids the warranty.
- Do not use a 42w in an enclosed or open recessed can or any type of enclosed fixture.
- Use voids the warranty.



Warranties and Certifications:	Item #	Wattage	Incandescent Wattage Comparison	Initial Lumens	M.O.L. (inches)	Diameter (inches)	Lamp Life (hours)	Ideal for:							
								Table/Floor Lamps	Chandeliers	Recessed Cans	Bare Bulb Fixtures	High Bay Fixtures	Ceiling Fixtures	Desk Lamp	Outdoor Covered
 RoHS Compliant 24 MONTH WARRANTY	48905	5	25	300	3.0	1.9	12K	•	•	•	•	•	•	•	•
	48905C	5	25	300	3.0	1.9	12K	•	•	•	•	•	•	•	•
	48909	9	40	600	3.6	1.8	12K	•	•	•	•	•	•	•	•
	48913	13	60	925	3.9	1.8	12K	•	•	•	•	•	•	•	•
	48913C	13	60	925	3.8	1.8	12K	•	•	•	•	•	•	•	•
	48918	18	75	1300	4.0	2.4	12K	•	•	•	•	•	•	•	•
	48923	23	100	1650	4.4	2.4	12K	•	•	•	•	•	•	•	•
	48927	27	100	1850	5.1	2.4	12K	•	•	•	•	•	•	•	•
	48932	32	125	2150	5.1	2.7	12K	•	•	•	•	•	•	•	•
48942	42	150	2850	5.7	2.4	12K	•	•	•	•	•	•	•	•	



THORO LED

HIGH BRIGHTNESS LED LAMPS

PAR 30 / PAR 38



Applications:

- Landscape accent/ Spot lighting
- Architecture Lighting
- Display Case Accent
- Artwork Lighting
- Mood Lighting
- Amusement Park Accent
- Recessed and Dimmable Applications

Common Specifications

Base	E26/E27
Input Voltage	AC110V / AC230V
Input Frequency	50Hz/60Hz
LED Type	CREE
Beam Angle	15°, 30°, 45°, 60°
LED Life	50,000 Hours

Dimming Specifications

Dimming Range	5%-100%
Type	Switch (Triac)
Available Work Mode	Trailing edge (Recommended) Front edge
Recommended Dimmer Brands	Lutron "Skylark" Leviton TCL MASANO

High Brightness LED PAR 30 Lamps 15W

Model #	Description
TLPAR30D15W28-15	15W, 15° Angle, 2800K
TLPAR30D15W28-45	15W, 45° Angle, 2800K
TLPAR30D15W28-60	15W, 60° Angle, 2800K
TLPAR30D15W35-15	15W, 15° Angle, 3500K
TLPAR30D15W35-45	15W, 45° Angle, 3500K
TLPAR30D15W35-60	15W, 60° Angle, 3500K
TLPAR30D15W60-15	15W, 15° Angle, 6000K
TLPAR30D15W60-45	15W, 45° Angle, 6000K
TLPAR30D15W60-60	15W, 60° Angle, 6000K

Illuminance

Color	Beam Angle	Luminous Flux
Cool White	30°	496
Natural White	30°	523
Warm White	30°	424
Cool White	45°	455
Natural White	45°	493
Warm White	45°	392

High Brightness LED PAR 38 Lamps 27W

Model #	Description
TLPAR38D27W28-15	27W, 15° Angle, 2800K
TLPAR38D27W28-45	27W, 45° Angle, 2800K
TLPAR38D27W28-60	27W, 60° Angle, 2800K
TLPAR38D27W35-15	27W, 15° Angle, 3500K
TLPAR38D27W35-45	27W, 45° Angle, 3500K
TLPAR38D27W35-60	27W, 60° Angle, 3500K
TLPAR38D27W60-15	27W, 15° Angle, 6000K
TLPAR38D27W60-45	27W, 45° Angle, 6000K
TLPAR38D27W60-60	27W, 60° Angle, 6000K

Illuminance

Color	Beam Angle	Luminous Flux
Cool White	30°	935
Natural White	30°	956
Warm White	30°	776
Cool White	45°	886
Natural White	45°	891
Warm White	45°	751



WSD PDT



WALL SWITCH DECORATOR SENSOR LINE VOLTAGE • PASSIVE DUAL TECHNOLOGY (PDT)

SPECIFICATIONS

FEATURES

- Patented Dual Technology with PIR / Microphonics™ Detection
- Self-Contained Relay - No Power Pack Needed
- Interchangeable Hot & Load Wires - Impossible to Wire Backwards
- No Neutral Connection Required
- Small Motion Detection to 20 ft (6.10 m)
- Self-Grounding Mounting Strap
- No Minimum Load
- Push-Button Programmable w/o Removing the Switch Plate
- Adjustable Time Delay
- 3-way & 4-way Switching
- Green LED Indicator

PHYSICAL SPECS

- SIZE 4.2"H x 1.8"W x 1.5"D (10.67cm x 4.57cm x 3.81cm)
- WEIGHT 5 oz
- MOUNTING Single Gang Switch Box
- MOUNTING HEIGHT 30-48 in (76.2-121.9 cm)
- COLORS White, Ivory, Gray, Almond, Black

ELECTRICAL SPECS

- MAXIMUM LOAD
 - 800 W @ 120 VAC
 - 1200 W @ 277 VAC
 - 1500 W @ 347 VAC
- MINIMUM LOAD None
- MOTOR LOAD 1/4 HP
- FREQUENCY 50/60 Hz (timers are 1.2x for 50 Hz)

ENVIRONMENTAL SPECS

- OPERATING TEMP 14° to 160° F (-10° to 71° C)
- STORAGE TEMP -14° to 160° F (-26° to 71° C)
- RELATIVE HUMIDITY 20 to 90% non-condensing

OTHER

- UL and CUL Listed
- Title 24 Compliant
- 5 Year Warranty
- Made in the U.S.A.

The WSD PDT Series is a Wall Switch Decorator style Passive Dual Technology (PDT) occupancy sensor. The combination of Passive Infrared and patented Microphonics™ detection allows this sensor to literally see & hear occupants. It is ideal for restrooms with stalls, private offices where occupant turns their back to the sensor, or rooms with obstructions.

SENSOR OPERATION & MODES

Passive Dual Technology (PDT) sensors first see motion using Passive Infrared (PIR) and then engage Microphonics™ to hear sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self-adapt a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity. When occupancy is detected, a self-contained relay switches the connected lighting load on. The sensor is line powered and can switch line voltage (see specifications). A timer, factory set at 10 minutes, keeps the lights on during brief periods of inactivity. This timer is push-button programmable from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected. If needed, a 10 second grace period also allows the lights to be voice reactivated after shutting off. This state-of-the-art design requires no field calibration or sensitivity adjustments.

ON MODES

- AUTOMATIC ON (default)** - Lights come on when occupancy is detected.
- MANUAL ON** - Requires the occupant manually turn on lights via the push-button.
- REDUCED TURN ON** - Sensor is initially set to only detect large motions, effectively ignoring PIR signals reflected off of surfaces, while still sensing occupants when they enter the room. Once lights are on, the sensor returns to maximum sensitivity.

SWITCH MODES

- PREDICTIVE OFF MODE (default)** - This mode allows occupants to turn lights off via the switch without losing the convenience of having the lights automatically turn on when they re-enter the room. Pressing the switch turns the lights off and temporarily disables the occupancy detection in the sensor. After a short exit time delay, the occupancy detection reactivates and monitors for an additional grace period. If no occupancy is detected, the zone will remain in Automatic On operation. If occupancy is detected, the zone will go to a Permanent Off mode, requiring the switch to be pressed again in order to turn the lights on and restore the sensor to Automatic On operation.
- PERMANENT OFF** - Pressing the switch turns the lights and the sensor off. Lights will not come on until switch is pressed again.
- SWITCH DISABLE** - Prevents user from manually turning off the lights via the push-button. Button can still be utilized for programming.

OPTIONS

VANDAL-RESISTANT LENS (V)

- Ideal for high abuse or public areas, where occupants simply come and go
- Decreases detection range by 50%

INHIBIT PHOTOCELL (P)

- Auto set-point calibration
- Photocell prevents lights from turning on if adequate daylight is available, but does not turn lights off

347 VAC (347)

- Allows sensor to be powered from and switch 347 VAC
- Wall Plate Included

COLOR

- White, Ivory, Gray, Almond, Black
- Wall Plate Included

LOW TEMP/HIGH HUMIDITY (LT)

- Sensor is corrosion resistant
- Operates down to -4° F (-20°C)

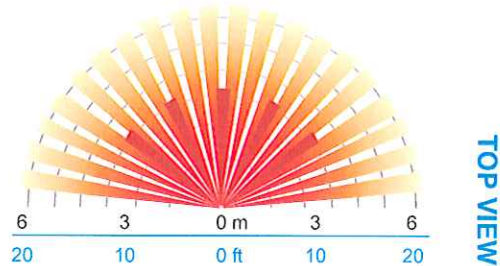
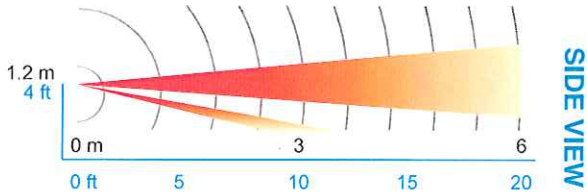
ORDERING INFO WSD PDT [LENS] [PHOTOCELL] [VOLTAGE] [COLOR] [TEMP/HUMIDITY]

LENS	PHOTOCELL	VOLTAGE	COLOR	TEMP/HUMIDITY
Blank = None V = Vandal Resistant	Blank = None P = Photocell	Blank = 120/277 VAC 347 = 347 VAC	WH = White IV = Ivory GY = Gray AL = Almond BK = Black	Blank = Standard LT = Low Temp

COVERAGE PATTERN

WSD WALL SWITCH DECORATOR LENS W/ MICROPHONICS™

- Small motion (e.g. hand movements) detection up to 20 ft (6.10 m)
- Large motion (e.g. walking) detection up to 50 ft (15.24 m)
- Wall-to-Wall coverage
- Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area
- Advanced filtering is utilized to prevent non-occupant noises from keeping the lights on



WIRING (DO NOT WIRE HOT)

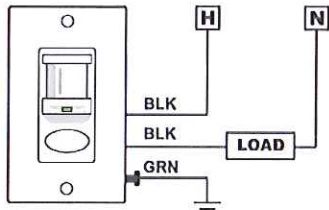
STANDARD WIRING

- BLACK* - Line Input
 - BLACK* - Load Output
 - GREEN SCREW - Ground (required connection)
- *BLACK wires can be reversed

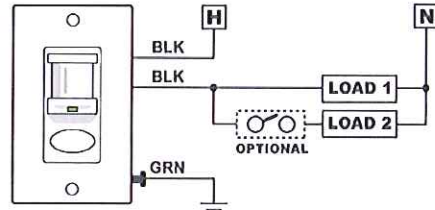
347 VAC OPTION (347)

Black wires are replaced w/ Red wires

STANDARD CONFIGURATION



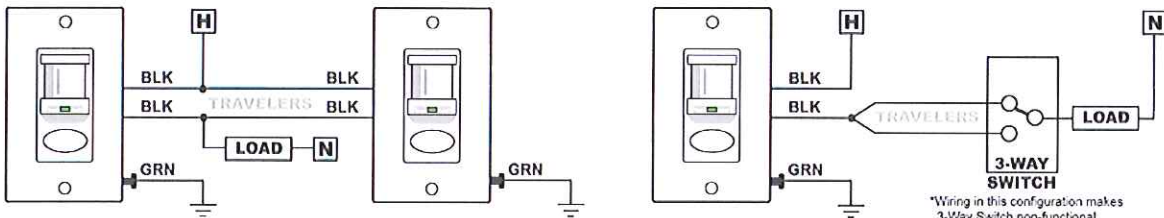
BI-LEVEL CONFIGURATION



Note: Connection to Ground required for sensor to function

3-WAY WIRING CONFIGURATIONS

Travelers are used to wire sensors (or sensor and 3-way switch) in parallel.



Note: Connection to Ground required for sensor to function

WARNING

Fire Hazard Caution: Maximum Lamps 1500 Watts, Type 347 VAC.

Attention: Risque d'incendie : Puissance Maximales Des Lampes 1500 Watts, Type 347 VAC.

Warning: The units are intended to be installed by a qualified person with properly rated branch circuit protectors as per applicable local and national regulations (CEC, NEC).



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of 60 months. Sensor Switch, Inc., upon prompt notice of such defect, will, at its option, provide a Returned Material Authorization number and repair or replace returned product.
LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

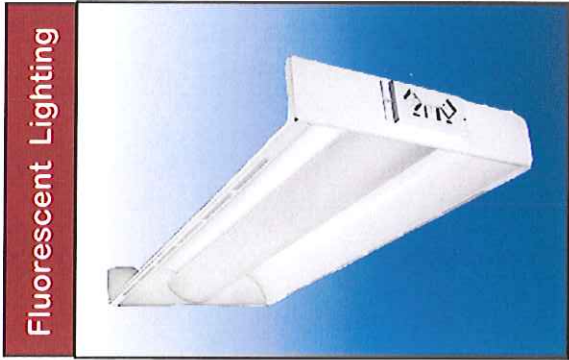
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T065-004-P

Series RDI

Recessed Direct/Indirect



Application

Premium grade, recessed, high performance, lay-in direct/indirect coffered T-bar troffer with modern styling and high visual comfort. Comes with single basket shaped perforated metal shield. Available in 2'x2' and 2'x4' configurations. Shallow design accommodates mounting into low ceiling plenums. For use in indoor applications where low glare, high quality and ease of installation are required.

Features

- Single, basket shaped perforated metal shield.
- Translucent, opal white acrylic diffuser overlay.
- Clean appearance.
- No exposed fasteners.
- T5, T8 or Biax lamps.
- UL listed and labeled

Construction

Die and brake formed, heavy gauge cold rolled steel housing assembly. Precision formed, cold rolled steel reflector. Die formed, perforated cold rolled steel shielding. Metal shielding flexes over mounting studs on housing, for easy installation and re-lamping. Wiring access plate or knockouts are provided on back of housing, for flexible conduit attachment.

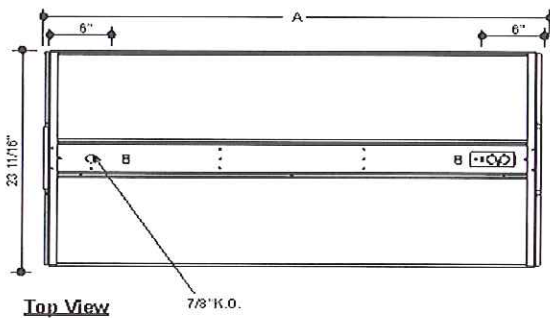
Optics

Shields are perforated for direct illumination and contain a translucent opal white acrylic overlay diffuser for visual comfort. Indirect reflectors are precision formed and contoured to provide soft, low glare indirect illumination while maintaining high efficiency and a wide uniform lighting distribution.

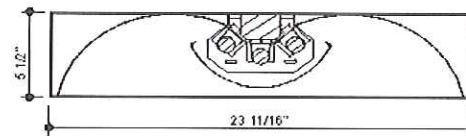
Ordering Information

Series	Dimensions	LampQty.	Lamp Wattage	Voltage	Ballast Options	Dimming Options	Lamp Options
RDI	22=2x2	2	17	120	BB=Battery Backup	AD7=Advance	L130=3000k
		3	25	277	DS=Dual Switching	Mark 7	L135=3500k
	24=2x4		32	UNV		AD10=Advance	L141=4100k
			FP14	(120-277)		Mark10	L150=5000k
			FP21			LDE=Lutron	
			FP28			Eco10	
	FP54			LDH=Lutron			
	40 BX				Hi-Lume		
	(2x2)						

Dimensions



MODEL	NOMINAL LENGTH	A
2x2	24"	23 3/4"
2x4	48"	47 3/4"



End View



300-308 Vine Street, NW, Washington, DC
 20012 Office: (202) 882-5181 Fax:
 (202) 882-5182

Type:
 Cat. #:
 Project: