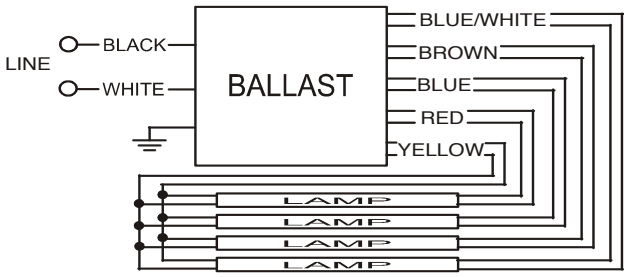
Electrical Specifications at 120V

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (℉/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
* F17T8	3	17	60/16	0.57	69	1.35	10	0.99	1.6	1.96
F17T8	4	17	60/16	0.68	82	1.24	10	0.99	1.6	1.51
F25T8	3	25	0/-18	0.80	96	1.32	10	0.99	1.6	1.38
F25T8	4	25	0/-18	0.96	115	1.22	10	0.99	1.6	1.06
F32T8	3	32	0/-18	1.05	126	1.29	10	0.99	1.6	1.02
F32T8	4	32	0/-18	1.28	153	1.18	10	0.99	1.6	0.77
F32T8/ES (25W)	3	25	60/16	0.84	101	1.32	10	0.99	1.6	1.31
F32T8/ES (25W)	4	25	60/16	1.07	121	1.21	10	0.99	1.6	1.00
F32T8/ES (28W)	3	28	60/16	0.93	110	1.32	10	0.99	1.6	1.20
F32T8/ES (28W)	4	28	60/16	1.11	132	1.20	10	0.99	1.6	0.91
F32T8/ES (30W)	3	30	60/16	0.92	111	1.31	10	0.99	1.6	1.18
F32T8/ES (30W)	4	30	60/16	1.13	135	1.20	10	0.99	1.6	0.89

Wiring Diagram



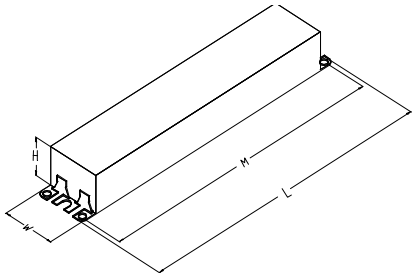
The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.
Black	25	63.5
White	25	63.5
Blue	33	83.8
Red	33	83.8
Yellow	48	121.9
Gray		0
Violet		0

	in.	cm.
Yellow/Blue		0
Blue/White	33	83.8
Brown	33	83.8
Orange		0
Orange/Black		0
Black/White		0
Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
16.7 "	1.7 "	1.18 "	16.34 "
16 7/10	1 7/10	1 9/50	16 17/50
42.4 cm	4.3 cm	3 cm	41.5 cm

Revised 04/04/12

Optanium IOP4PSP32HLG

IOP4PSP32HLG@120V	
Brand Name	**OPTANIUM**
Ballast Type	**Electronic**
Starting Method	**Programmed Start**
Lamp Connection	**Parallel**
Input Voltage	**120-277**
Input Frequency	**50/60 HZ**
Status	**Active**

Electrical Specifications at 120V

Notes:

Section I - Physical Characteristics

1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.

1.2 Ballast shall be provided with integral leads color-coded per ANSI C82.11.

Section II - Performance

2.1 Ballast shall be _____ (Instant or Programmed) Start.

2.2 Ballast shall provide Independent Lamp Operation (ILO) for Instant Start or Programmed Start Parallel ballasts allowing remaining lamp(s) to maintain full light output when one or more lamps fail.

2.3 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.

2.4 Ballast shall operate from 50/60 Hz input source of _____ (120V through 277V or 347V) with sustained variations of +/- 10% (voltage and frequency).

2.5 Ballast shall be high frequency electronic type and operate lamps at a frequency between 42 kHz and 52 kHz to avoid interference with infrared devices, eliminate visible flicker and avoid Article Surveillance System, such as anti-theft devices.

2.6 Ballast shall have a Power Factor greater than 0.98 for primary lamp.

2.7 Ballast shall have a minimum ballast factor for primary lamp application as follows: 0.77 for Low Watt, 0.87 for Normal Light Output, and 1.18 for High Light for Instant Start ballasts or 0.71 for Low Watt and 0.88 for Normal Light Output for Programmed Start ballasts.

2.8 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.

2.9 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.

2.10 Ballast shall have a Class A sound rating for all 4-foot lamps and smaller.

2.11 Ballast shall have a minimum starting temperature of -29C (-20F) on Instant Start ballasts or -18C (0F) on Programmed Start ballasts for standard T8 lamps and 16C (60F) for energy-saving T8 lamps. Consult lamp manufacturer for temperature versus light output characteristics.

2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.

2.13 Ballast shall have lamp striation-reduction circuitry.

2.14 Programmed Start ballast shall provide lamp EOL protection circuitry.

2.15 Maximum distance for Energy Saving Lamps in Remote/Tandem wiring applications shall be 6 feet for Instant Start and Programmed Start models.

Section III - Regulatory

3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).

3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.

3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.

3.4 Ballast shall comply with ANSI C82.11 where applicable.

3.5 Ballast shall comply with applicable requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, for Non-Consumer equipment.

3.6 Ballast shall meet NEMA Premium/CEE High Performance T8 Lighting System Specifications.

3.7 IOP or GOP ballast shall comply with UL Type CC rating.

3.8 Ballast shall comply with NEMA 410 for in-rush current limits.

3.9 Ballast shall meet RoHS Compliance Standards

Section IV - Other

4.1 Ballast shall be manufactured in an ISO 9001 Qualified factory.

4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at maximum case temperature of 90C.

4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

4.4 Energy-saving T8 lamps (25W, 28W or 30W) may experience lamp striations if operated on ballasts not rated for their use.

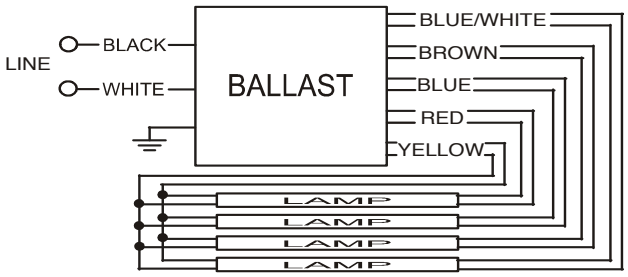
Revised 04/04/12

Optanium IOP4PSP32HLG

Electrical Specifications at 277V

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (℉/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
* F17T8	3	17	0/-18	0.26	69	1.35	10	0.98	1.6	1.96
F17T8	4	17	0/-18	0.29	81	1.24	10	0.98	1.6	1.53
F25T8	3	25	0/-18	0.35	95	1.32	10	0.98	1.6	1.39
F25T8	4	25	0/-18	0.42	114	1.22	10	0.98	1.6	1.07
F32T8	3	32	0/-18	0.45	122	1.29	10	0.98	1.6	1.06
F32T8	4	32	0/-18	0.55	149	1.17	10	0.98	1.6	0.78
F32T8/ES (25W)	3	25	60/16	0.37	100	1.32	10	0.98	1.6	1.32
F32T8/ES (25W)	4	25	60/16	0.44	120	1.21	10	0.98	1.6	1.01
F32T8/ES (28W)	3	28	60/16	0.40	108	1.32	10	0.98	1.6	1.22
F32T8/ES (28W)	4	28	60/16	0.48	130	1.20	10	0.98	1.6	0.92
F32T8/ES (30W)	3	30	60/16	0.41	110	1.31	10	0.98	1.6	1.19
F32T8/ES (30W)	4	30	60/16	0.49	133	1.20	10	0.98	1.6	0.90

Wiring Diagram



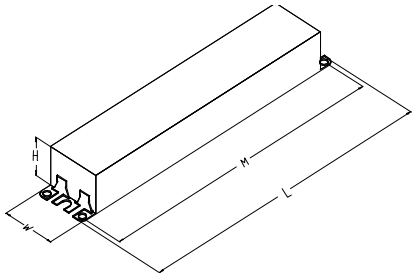
The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.
Black	25	63.5
White	25	63.5
Blue	33	83.8
Red	33	83.8
Yellow	48	121.9
Gray		0
Violet		0

	in.	cm.
Yellow/Blue		0
Blue/White	33	83.8
Brown	33	83.8
Orange		0
Orange/Black		0
Black/White		0
Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
16.7 "	1.7 "	1.18 "	16.34 "
16 7/10	1 7/10	1 9/50	16 17/50
42.4 cm	4.3 cm	3 cm	41.5 cm

Revised 04/04/12

IOP4PSP32HLG@277V	
Brand Name	**OPTANIUM**
Ballast Type	**Electronic**
Starting Method	**Programmed Start**
Lamp Connection	**Parallel**
Input Voltage	**120-277**
Input Frequency	**50/60 HZ**
Status	**Active**

Electrical Specifications at 277V

Notes:

Section I - Physical Characteristics

1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.

1.2 Ballast shall be provided with integral leads color-coded per ANSI C82.11.

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2.1 Ballast shall be _____ (Instant or Programmed) Start.

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3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).

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3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.

3.4 Ballast shall comply with ANSI C82.11 where applicable.

3.5 Ballast shall comply with applicable requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, for Non-Consumer equipment.

3.6 Ballast shall meet NEMA Premium/CEE High Performance T8 Lighting System Specifications.

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3.9 Ballast shall meet RoHS Compliance Standards

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Revised 04/04/12

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