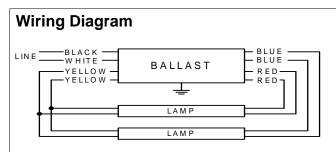


IOP-2PSP54-SC@120V					
Brand Name	OPTANIUM T5				
Ballast Type	Electronic				
Starting Method	Programmed Start				
Lamp Connection	Parallel				
Input Voltage	120-277				
Input Frequency	50/60 HZ				
Status	Active				

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
F54T5/HO	1	54	-20/-29	0.50	60	1.00	10	0.98	1.7	1.67
* F54T5/HO	2	54	-20/-29	0.99	117	1.00	10	0.98	1.7	0.85
F54T5/HO/ES (44W)	1	44	5/-15	0.39	46	1.00	10	0.98	1.7	2.17
F54T5/HO/ES (44W)	2	44	5/-15	0.77	91	1.00	10	0.98	1.7	1.10
F54T5/HO/ES (49W)	1	49	-20/-29	0.52	57	1.00	10	0.98	1.7	1.75
F54T5/HO/ES (49W)	2	49	-20/-29	0.92	109	1.00	10	0.98	1.7	0.92
FT36W/2G11	1	36	-20/-29	0.39	46	1.20	10	0.98	1.7	2.61
FT36W/2G11	2	36	-20/-29	0.18	46	1.20	10	0.98	1.7	2.61
FT55W/2G11	1	55	-20/-29	0.49	58	0.90	10	0.95	1.7	1.55
FT55W/2G11	2	55	-20/-29	0.92	110	0.90	10	0.95	1.7	0.82



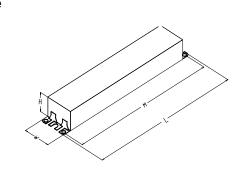


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.]		in.	cm.
Black	26	66		Yellow/Blue		0
White	26	66		Blue/White		0
Blue	28	71.1		Brown		0
Red	20	68.6		Orange		0
		116.8		Orange/Black		0
Yellow	46		-	Black/White		0
Gray		0		Red/White		0
Violet		0				0

Enclosure



Enclosure Dimensions

1	• • • • • • •			
	OverAll (L)	Width (W)	Height (H)	Mounting (M)
	9.50 "	1.7 "	1.18 "	8.90 "
	9 1/2	1 7/10	1 9/50	8 9/10
	24.1 cm	4.3 cm	3 cm	22.6 cm



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IOP-2PSP54-SC@120V

Brand Name	OPTANIUM T5
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Parallel
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

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

Notes:

2.1 Ballast shall be Programmed Start.

2.2 Ballast shall provide Independent Lamp Operation (ILO) for 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 through 480V) 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 Systems, 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 ballast factor of 1.0 for primary T5HO lamps or a ballast factor of 0.95 or 1.15 for primary T5HE lamps at full light output.

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 with primary lamp.

2.10 Ballast shall have a Class A sound rating.

2.11 Ballast shall have a minimum starting temperature of ______ {-18C (0F) or -29C (-20F) or 0C (32F)} for primary lamp. 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 provide Lamp EOL Protection Circuit.

2.14 Ballast for step-dim applications shall have a 50% control step where the input power is <=50% of the full light input power for the primary lamp.

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 comply with UL Type CC rating.

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

Section IV - Other

4.1 Ballast shall be manufactured in a factory certified to ISO 9001 Quality System Standards.

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.

4.3 Ballast designated 90C shall carry a three-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 90C.

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



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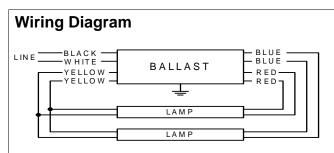
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IOP-2PSP54-SC@277V					
Brand Name	OPTANIUM T5				
Ballast Type	Electronic				
Starting Method	Programmed Start				
Lamp Connection	Parallel				
Input Voltage	120-277				
Input Frequency	50/60 HZ				
Status	Active				

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
F54T5/HO	1	54	-20/-29	0.22	60	1.00	10	0.98	1.7	1.67
* F54T5/HO	2	54	-20/-29	0.42	114	1.00	10	0.98	1.7	0.88
F54T5/HO/ES (44W)	1	44	5/-15	0.18	46	1.00	10	0.98	1.7	2.17
F54T5/HO/ES (44W)	2	44	5/-15	0.34	91	1.00	10	0.98	1.7	1.10
F54T5/HO/ES (49W)	1	49	-20/-29	0.23	57	1.00	10	0.98	1.7	1.75
F54T5/HO/ES (49W)	2	49	-20/-29	0.39	105	1.00	10	0.98	1.7	0.95
FT36W/2G11	1	36	-20/-29	0.73	88	1.20	10	0.98	1.7	1.36
FT36W/2G11	2	36	-20/-29	0.31	85	1.20	10	0.98	1.7	1.41
FT55W/2G11	1	55	-20/-29	0.22	58	0.90	10	0.98	1.7	1.55
FT55W/2G11	2	55	-20/-29	0.40	108	0.90	10	0.98	1.7	0.83



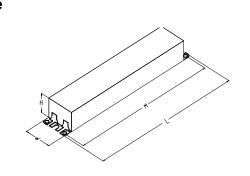


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

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	in.	cm.]		in.	cm.
Black	26	66		Yellow/Blue		0
White	26	66		Blue/White		0
Blue	28	71.1		Brown		0
Red	20	68.6		Orange		0
		116.8		Orange/Black		0
Yellow	46		-	Black/White		0
Gray		0		Red/White		0
Violet		0		1100/11110		0

Enclosure



Enclosure Dimensions

1	• • • • • • •			
	OverAll (L)	Width (W)	Height (H)	Mounting (M)
	9.50 "	1.7 "	1.18 "	8.90 "
	9 1/2	1 7/10	1 9/50	8 9/10
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IOP-2PSP54-SC@277V

Brand Name	OPTANIUM T5
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Parallel
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

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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Notes:

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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 comply with UL Type CC rating.

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

Section IV - Other

4.1 Ballast shall be manufactured in a factory certified to ISO 9001 Quality System Standards.

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.

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



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