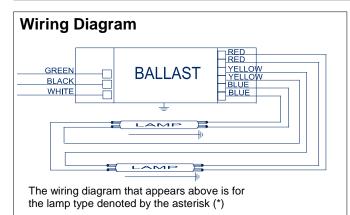


<b>Electrical</b>	<b>Specifications</b>

ICN-2S24-T@120						
Brand Name	CENTIUM T5					
Ballast Type	Electronic					
Starting Method	Programmed Start					
Lamp Connection	Series					
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.
F24T5/HO	1	24	0/-18	0.22	26	1.02	10	0.98	1.7	3.92
* F24T5/HO	2	24	0/-18	0.44	52	1.00	10	0.98	1.7	1.92
F39T5/HO	1	39	0/-18	0.33	40	0.90	10	0.98	1.7	2.25
FC12T5	1	40	0/-18	0.33	40	0.84	10	0.98	1.7	2.10
FC9T5	1	22	0/-18	0.22	26	1.02	10	0.98	1.7	3.92
FC9T5	2	22	0/-18	0.42	51	1.00	10	0.98	1.7	1.96
FT24W/2G11	1	24	0/-18	0.22	26	1.02	10	0.98	1.7	3.92
FT24W/2G11	2	24	0/-18	0.42	51	1.00	10	0.98	1.7	1.96
FT36W/2G11	1	36	0/-18	0.28	33	0.90	10	0.98	1.7	2.73
FT40W/2G11/RS	1	40	0/-18	0.39	46	1.00	10	0.98	1.7	2.17

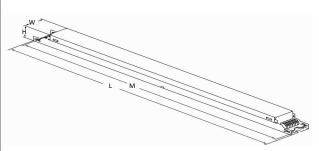


## Standard Lead Length (inches)

	in.	cm.
Black	0	0
White	0	0
Blue	0	0
Red	0	0
Yellow	0	0
Gray		0
Violet		0

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





## **Enclosure Dimensions**

OverAll (L)	Width (W)	Height (H)	Mounting (M)
14.17 "	1.18 "	1.06 "	13.78 "
14 17/100	1 9/50	1 3/50	13 39/50
36 cm	3 cm	2.7 cm	35 cm







Revised 05/31/13



ICN-2524-1@120					
Brand Name	CENTIUM T5				
Ballast Type	Electronic				
Starting Method	Programmed Start				
Lamp Connection	Series				
Input Voltage	120-277				
Input Frequency	50/60 HZ				
Status	Active				

T@400

#### 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 or poke-in wire trap connectors color-coded per ANSI C82.11.

#### Section II - Performance

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of \_\_\_\_\_\_ (120V through 277V, 347V or 347V through 480V) with sustained variations of +/- 10% (voltage and frequency).
- 2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.0 for primary lamp application.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of \_\_\_\_\_ {-18C (0F) or -29C (-20F)} for primary lamp. Consult lamp manufacturer for temperature versus light output characteristics.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.
- 2.13 Four-lamp ballast shall have (semi-independent or independent) lamp operation.

## 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. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at a maximum case temperature of 90C.
- 4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

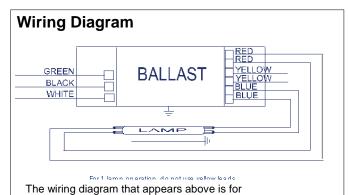


Revised 05/31/13



ICN-2S24-T@120						
Brand Name	CENTIUM T5					
Ballast Type	Electronic					
Starting Method	Programmed Start					
Lamp Connection	Series					
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.
* F24T5/HO	1	24	0/-18	0.22	26	1.02	10	0.98	1.7	3.92
F24T5/HO	2	24	0/-18	0.44	52	1.00	10	0.98	1.7	1.92
F39T5/HO	1	39	0/-18	0.33	40	0.90	10	0.98	1.7	2.25
FC12T5	1	40	0/-18	0.33	40	0.84	10	0.98	1.7	2.10
FC9T5	1	22	0/-18	0.22	26	1.02	10	0.98	1.7	3.92
FC9T5	2	22	0/-18	0.42	51	1.00	10	0.98	1.7	1.96
FT24W/2G11	1	24	0/-18	0.22	26	1.02	10	0.98	1.7	3.92
FT24W/2G11	2	24	0/-18	0.42	51	1.00	10	0.98	1.7	1.96
FT36W/2G11	1	36	0/-18	0.28	33	0.90	10	0.98	1.7	2.73
FT40W/2G11/RS	1	40	0/-18	0.39	46	1.00	10	0.98	1.7	2.17



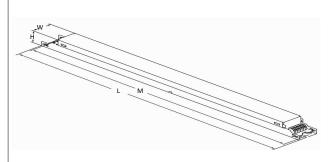
the lamp type denoted by the asterisk (\*)

## **Standard Lead Length (inches)**

	in.	cm.
Black	0	0
White	0	0
Blue	0	0
Red	0	0
Yellow	0	0
Gray		0
Violet		0

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

## **Enclosure**



## **Enclosure Dimensions**

OverAll (L)	Width (W)	Height (H)	Mounting (M)
14.17 "	1.18 "	1.06 "	13.78 "
14 17/100	1 9/50	1 3/50	13 39/50
36 cm	3 cm	2.7 cm	35 cm







Revised 05/31/13



ICN-2524-1@120							
Brand Name	CENTIUM T5						
Ballast Type	Electronic						
Starting Method	Programmed Start						
Lamp Connection	Series						
Input Voltage	120-277						
Input Frequency	50/60 HZ						
Status	Active						

T@400

#### 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 or poke-in wire trap connectors color-coded per ANSI C82.11.

#### Section II - Performance

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of \_\_\_\_\_\_ (120V through 277V, 347V or 347V through 480V) with sustained variations of +/- 10% (voltage and frequency).
- 2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.0 for primary lamp application.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of \_\_\_\_\_ {-18C (0F) or -29C (-20F)} for primary lamp. Consult lamp manufacturer for temperature versus light output characteristics.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.
- 2.13 Four-lamp ballast shall have (semi-independent or independent) lamp operation.

## 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. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at a maximum case temperature of 90C.
- 4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

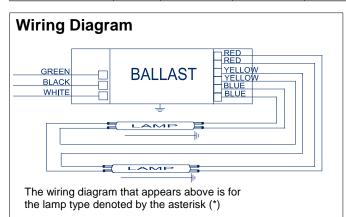


Revised 05/31/13



ICN-2S24-T@277							
Brand Name CENTIUM T5							
Ballast Type	Electronic						
Starting Method	Programmed Start						
Lamp Connection	Series						
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.
F24T5/HO	1	24	0/-18	0.10	26	1.02	20	0.90	1.7	3.92
* F24T5/HO	2	24	0/-18	0.19	52	1.00	10	0.98	1.7	1.92
F39T5/HO	1	39	0/-18	0.15	40	0.90	10	0.98	1.7	2.25
FC12T5	1	40	0/-18	0.15	40	0.84	10	0.98	1.7	2.10
FC9T5	1	22	0/-18	0.10	26	1.02	20	0.90	1.7	3.92
FC9T5	2	22	0/-18	0.18	51	1.00	10	0.98	1.7	1.96
FT24W/2G11	1	24	0/-18	0.10	26	1.02	20	0.90	1.7	3.92
FT24W/2G11	2	24	0/-18	0.18	51	1.00	10	0.98	1.7	1.96
FT36W/2G11	1	36	0/-18	0.12	33	0.90	15	0.95	1.7	2.73
FT40W/2G11/RS	1	40	0/-18	0.17	46	1.00	10	0.98	1.7	2.17

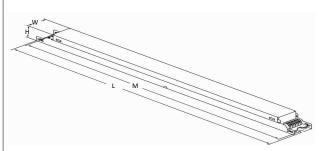


## **Standard Lead Length (inches)**

	in.	cm.
Black	0	0
White	0	0
Blue	0	0
Red	0	0
Yellow	0	0
Gray		0
Violet		0

in.	cm.
	0
	0
	0
	0
	0
	0
	0
	in.

# Enclosure



## **Enclosure Dimensions**

OverAll (L)	Width (W)	Height (H)	Mounting (M)
14.17 "	1.18 "	1.06 "	13.78 "
14 17/100	1 9/50	1 3/50	13 39/50
36 cm	3 cm	2.7 cm	35 cm







Revised 05/31/13



1011-202 <del>1</del> -1 @ 211						
Brand Name	CENTIUM T5					
Ballast Type	Electronic					
Starting Method	Programmed Start					
Lamp Connection	Series					
Input Voltage	120-277					
Input Frequency	50/60 HZ					
Status	Active					

ICN-2S24-T@277

#### 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 or poke-in wire trap connectors color-coded per ANSI C82.11.

#### Section II - Performance

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of \_\_\_\_\_\_ (120V through 277V, 347V or 347V through 480V) with sustained variations of +/- 10% (voltage and frequency).
- 2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.0 for primary lamp application.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of \_\_\_\_\_ {-18C (0F) or -29C (-20F)} for primary lamp. Consult lamp manufacturer for temperature versus light output characteristics.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.
- 2.13 Four-lamp ballast shall have (semi-independent or independent) lamp operation.

## 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. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at a maximum case temperature of 90C.
- 4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.



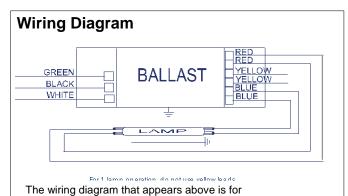
Revised 05/31/13



<b>Electrical</b>	<b>Specifications</b>

ICN-2S24-T@277							
Brand Name	CENTIUM T5						
Ballast Type	Electronic						
Starting Method	Programmed Start						
Lamp Connection	Series						
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.
* F24T5/HO	1	24	0/-18	0.10	26	1.02	20	0.90	1.7	3.92
F24T5/HO	2	24	0/-18	0.19	52	1.00	10	0.98	1.7	1.92
F39T5/HO	1	39	0/-18	0.15	40	0.90	10	0.98	1.7	2.25
FC12T5	1	40	0/-18	0.15	40	0.84	10	0.98	1.7	2.10
FC9T5	1	22	0/-18	0.10	26	1.02	20	0.90	1.7	3.92
FC9T5	2	22	0/-18	0.18	51	1.00	10	0.98	1.7	1.96
FT24W/2G11	1	24	0/-18	0.10	26	1.02	20	0.90	1.7	3.92
FT24W/2G11	2	24	0/-18	0.18	51	1.00	10	0.98	1.7	1.96
FT36W/2G11	1	36	0/-18	0.12	33	0.90	15	0.95	1.7	2.73
FT40W/2G11/RS	1	40	0/-18	0.17	46	1.00	10	0.98	1.7	2.17

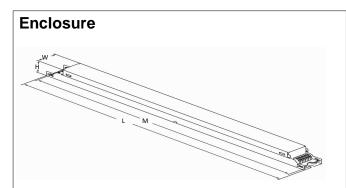


Standard Lead Length (inches)

the lamp type denoted by the asterisk (\*)

		J
	in.	cm.
Black	0	0
White	0	0
Blue	0	0
Red	0	0
Yellow	0	0
Gray		0
Violet		0

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



## **Enclosure Dimensions**

OverAll (L)	Width (W)	Height (H)	Mounting (M)
14.17 "	1.18 "	1.06 "	13.78 "
14 17/100	1 9/50	1 3/50	13 39/50
36 cm	3 cm	2.7 cm	35 cm







Revised 05/31/13



ICN-2524-1@277		
Brand Name	CENTIUM T5	
Ballast Type	Electronic	
Starting Method	Programmed Start	
Lamp Connection	Series	
Input Voltage	120-277	
Input Frequency	50/60 HZ	
Status	Active	

#### 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 or poke-in wire trap connectors color-coded per ANSI C82.11.

#### Section II - Performance

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of \_\_\_\_\_\_ (120V through 277V, 347V or 347V through 480V) with sustained variations of +/- 10% (voltage and frequency).
- 2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.0 for primary lamp application.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of \_\_\_\_\_ {-18C (0F) or -29C (-20F)} for primary lamp. Consult lamp manufacturer for temperature versus light output characteristics.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.
- 2.13 Four-lamp ballast shall have (semi-independent or independent) lamp operation.

## 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. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at a maximum case temperature of 90C.
- 4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.



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