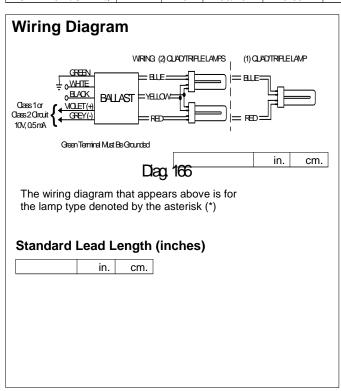
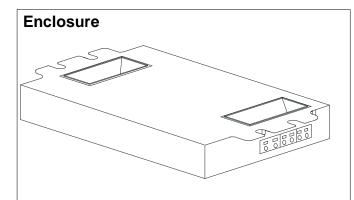


Electrical Specifications

IZT-2T42-M5-LD@120				
Brand Name	MARK 7 0-10V			
Ballast Type	Electronic Dimming			
Starting Method	Programmed Start			
Lamp Connection	Series			
Input Voltage	120-280			
Input Frequency	50/60 HZ			
Status	Active			

Lamp Type	Num.	Rated	Min. Start	Input	Input Power	Ballast Factor	MAX	Power	Lamp Current	B.E.F.
	of	Lamp	Temp	Current	(Watts)	(min/max)	THD	Factor	Crest Factor	
	Lamps	Watts	(°F/C)	(Amps)	(min/max)		%			
CFTR32W/GX24Q	2	32	50/10	0.63	19/75	0.03/1.00	10	0.99	1.6	1.33
* CFTR42W/GX24Q	2	42	50/10	0.82	18/98	0.03/1.00	10	0.99	1.6	1.02
CFTR57W/GX24Q	1	57	50/10	0.55	16/65	0.03/1.00	10	0.99	1.6	1.54
CFTR70W/GX24Q	1	70	50/10	0.63	16/75	0.03/1.00	10	0.99	1.6	1.33





Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
4.98 "	3.00 "	1.18 "	4.60 "
4 49/50	3	1 9/50	4 3/5
12.6 cm	7.6 cm	3 cm	11.7 cm





Revised 11/11/05



Electrical Specifications

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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 available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 VZT-4PSP32-G ballast shall provide Independent Lamp Operation (ILO) allowing remaining lamp(s) to maintain full light output when one or more lamps fail.

Brand Name MARK 7 0-10V
Ballast Type Electronic Dimming

Starting Method | Programmed Start

Series 120-280

Active

50/60 HZ

Lamp Connection

Input Voltage
Input Frequency

Status

- 2.3 Ballast shall be provided with integral protection circuitry to withstand connection of low voltage control leads to mains power supply. In this event, ballast shall default to maximum light output.
- 2.4 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.5 Ballast shall operate from 50/60 Hz input source of 120V or 277V or 347V with sustained variations of +/- 10% (voltage and frequency). IntelliVolt models shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
- 2.6 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.
- 2.7 Ballast shall have a Power Factor greater than 0.98 at full light output and greater than 0.90 throughout the dimming range for primary lamp.
- 2.8 Ballast shall have a minimum ballast factor of 1.00 (120V and 277V 1-3 lamp models) or 0.88 (120V and 277V 4 lamp models and 347V 2-3 lamp models) or 1.18 (277V 4 lamp HL models) at maximum light output and 0.03 at minimum light output for primary lamp.
- 2.9 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.10 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage and 100% power.
- 2.11 Ballast shall have a Class A sound rating.
- 2.12 Ballast shall have a minimum starting temperature of 10C (50F) for primary lamp.
- 2.13 Ballast shall provide Lamp EOL Protection Circuit for all T5, T5/HO and CFL lamps.
- 2.14 Ballast shall control lamp light output from 100% 3% relative light output for series operation T8 and CFL lamps, 100% 10% relative light output for parallel operation T8 and 100% 1% relative light output for T5/HO lamps.
- 2.15 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.16 Ballast shall tolerate sustained open circuit and short circuit output conditions.

Section III - Regulatory Requirements

- 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 the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
- 3.6 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 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.
- 4.4 Ballast shall be controlled by a Class 1 or Class 2 low voltage 0-10VDC controller.

4.5 Ballast shall be Philips Advance part #	or approved equal.

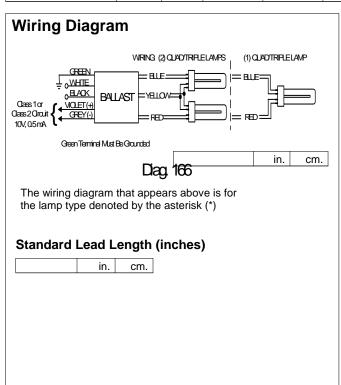
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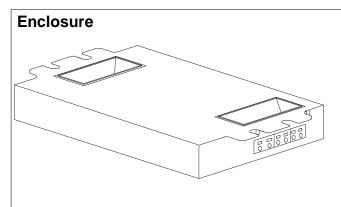


Electrical	Specifications

IZT-2T42-M5-LD@277				
Brand Name	MARK 7 0-10V			
Ballast Type	Electronic Dimming			
Starting Method	Programmed Start			
Lamp Connection	Series			
Input Voltage	120-280			
Input Frequency	50/60 HZ			
Status	Active			

Lamp Type	Num.	Rated	Min. Start	Input	Input Power	Ballast Factor	MAX	Power	Lamp Current	B.E.F.
	of	Lamp	Temp	Current	(Watts)	(min/max)	THD	Factor	Crest Factor	
	Lamps	Watts	(°F/C)	(Amps)	(min/max)		%			
CFTR32W/GX24Q	2	32	50/10	0.21	19/75	0.03/1.00	10	0.99	1.6	1.33
* CFTR42W/GX24Q	2	42	50/10	0.36	18/98	0.03/1.00	10	0.99	1.6	1.02
CFTR57W/GX24Q	1	57	50/10	0.24	16/65	0.03/1.00	10	0.99	1.6	1.54
CFTR70W/GX24Q	1	70	50/10	0.27	16/75	0.03/1.00	10	0.99	1.6	1.33





Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
4.98 "	3.00 "	1.18 "	4.60 "
4 49/50	3	1 9/50	4 3/5
12.6 cm	7.6 cm	3 cm	11.7 cm





Revised 11/11/05



Electrical Specifications

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 available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 VZT-4PSP32-G ballast shall provide Independent Lamp Operation (ILO) allowing remaining lamp(s) to maintain full light output when one or more lamps fail.

Brand Name MARK 7 0-10V
Ballast Type Electronic Dimming

Lamp Connection

Input Voltage
Input Frequency

Status

Starting Method | Programmed Start

Series 120-280

Active

50/60 HZ

- 2.3 Ballast shall be provided with integral protection circuitry to withstand connection of low voltage control leads to mains power supply. In this event, ballast shall default to maximum light output.
- 2.4 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.5 Ballast shall operate from 50/60 Hz input source of 120V or 277V or 347V with sustained variations of +/- 10% (voltage and frequency). IntelliVolt models shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
- 2.6 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.
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- 2.9 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.10 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage and 100% power.
- 2.11 Ballast shall have a Class A sound rating.
- 2.12 Ballast shall have a minimum starting temperature of 10C (50F) for primary lamp.
- 2.13 Ballast shall provide Lamp EOL Protection Circuit for all T5, T5/HO and CFL lamps.
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- 2.15 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.16 Ballast shall tolerate sustained open circuit and short circuit output conditions.

Section III - Regulatory Requirements

- 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 the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
- 3.6 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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