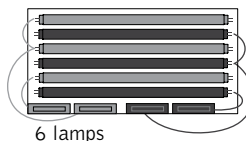
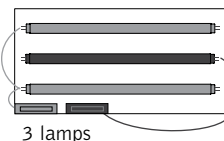
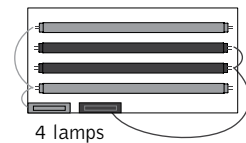
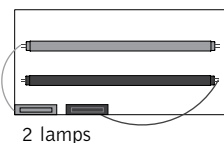


ballast wiring options

standard layouts for default ballasts

- 'A' circuit
- 'B' circuit

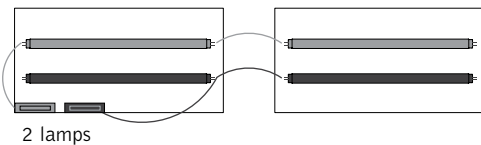
separate circuit (SC) — an inboard/outboard or left/right configuration



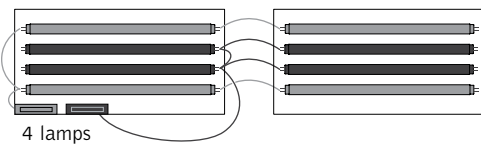
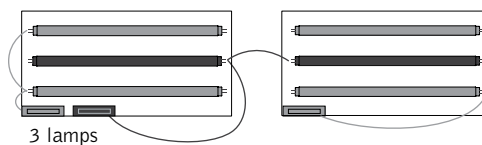
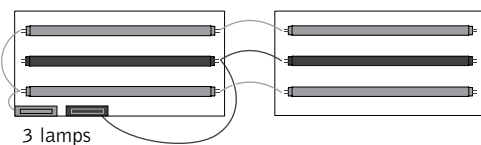
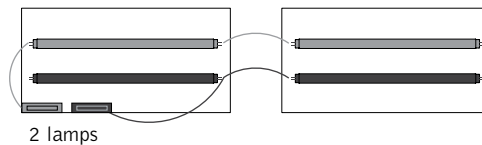
note: For non-parallel lamp positions such as Metro Pendant, Sky and Skydome families, please consult factory for wiring options

separate circuit tandem (SCT) — an inboard/outboard or left/right tandem configuration

1 - 4-lamp ballasts (T8)



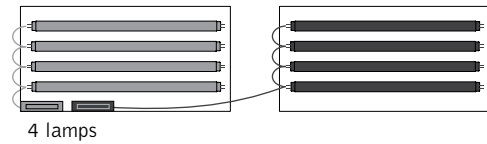
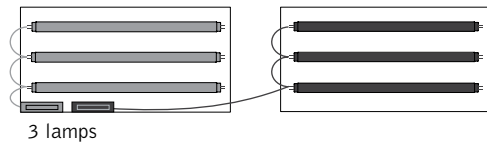
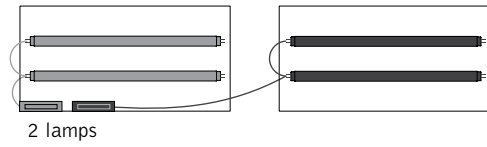
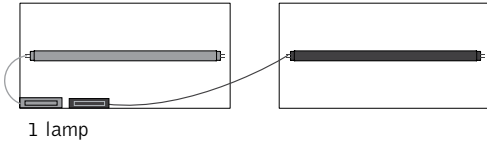
1 & 2-lamp ballasts (T5/T5H0)



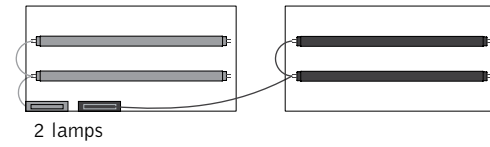
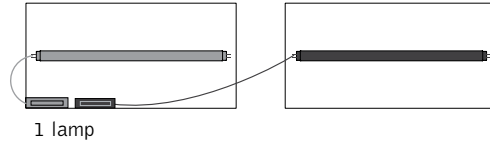
notes: Ballast quantity and location may differ from that shown based on type and availability.
Not recommended for dimming or energy saving lamp applications, consult factory for additional information.
Standard whip length is 9', 11' option available. Due to ballasts' maximum lamp lead length requirements, actual lengths available may vary.

labor saving master satellite (LS) —a master satellite configuration with separately controlled luminaires

1 - 4-lamp ballasts (T8)

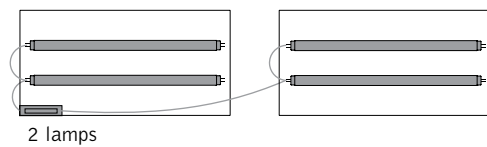
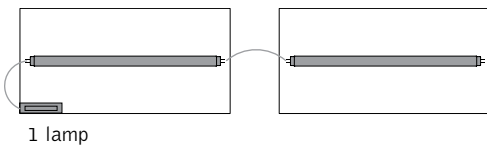


1 & 2-lamp ballasts (T5/T5H0)

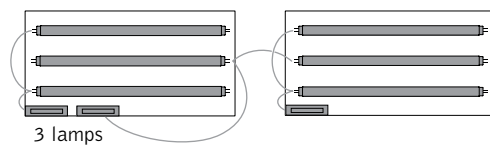
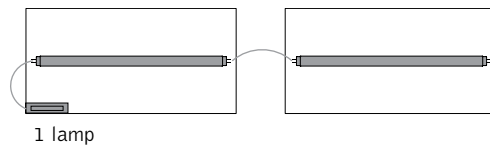


ballast saving tandem (BST) —a single circuit master/satellite configuration to reduce ballast quantity

1 - 4-lamp ballasts (T8)



1 & 2-lamp ballasts (T5/T5H0)



notes: Ballast quantity and location may differ from that shown based on type and availability.
 Not recommended for dimming or energy saving lamp applications, consult factory for additional information.
 Standard whip length is 9', 11' option available. Due to ballasts' maximum lamp lead length requirements, actual lengths available may vary.

ordering code definitions

- EC** Emergency circuit; separate neutral required for code on linear products, all lamps in the designated 4' section equipped for emergency circuit. Default location in last 4' section of run.
- NL** Nightlight; unswitched hot that shares neutral with normal power for 24/7 operation. Default location in last 4' section of run.
- FW** Flex Whip, 6' length
- LVC** Healthcare Lighting LV1200 low voltage controller.
- EM** Standard default emergency battery pack; emergency battery packs provide 90 minutes of illumination for a single lamp. Battery pack requires unswitched hot from same branch circuit as AC ballast.

Initial lumen output for lamp types are as follows:

17W T8	450 Lumens	25W T8	450 Lumens	32W T8	475 Lumens
40W BX	600 Lumens	50W BX	625 Lumens	55W BX	650 Lumens
21W T5	425 Lumens	14W T5	375 Lumens	28W T5	500 Lumens
24W T5HO	450 Lumens	39W T5HO	700 Lumens	54W T5HO	825 Lumens
26–42W CFL	650 Lumens				

(for additional battery options, including high lumen consult factory or visit www.bodine.com or www.iotaengineering.com)

dimming ballast ordering codes

		32T8	54T5HO	28T5	BX40	BX50	BX55	18TT	26TT	32TT	42TT
D1	Advance Mark X (line voltage)	X	X		X		X	X	X	X	X
D7	Advance Mark VII (0-10V)	X	X		X		X	X	X	X	X
DB	Lutron EcoSystem	X	X	X	X	X	X				
DK	Lutron EcoSystem H-Series	X	X	X							
DH	Lutron Hi-Lume ballast	X	X						X	X	
DT	Lutron Eco-10 "TVE" (0-10V)	X									
DE	Lutron Eco-10 ballast	X	X	X	X	X					
D3	Lutron Compact SE				X	X		X	X	X	X
DW	Lutron Tu-wire ballast (120V only)	X						X	X	X	
DL	Lutron Hi-Lume 3D	X									
D0	OSI Quicktronic Pho-Dim (0-10V)		X				X				
DP	OSI Quicktronic Power Sense (0-10V/Line Voltage)	X		X							
DM	OSI Stepped Dim (Step), (.80 ballast factor)		X								
DD	Tridonic Dali (Dali)	X	X	X	X		X				
DS	ULT Super Dim (0-10V)	X		X	X						
DA	ULT BallaStar Stepped Dim (Step)	X		X							
DU	ULT Address-pro	X		X	X						

*Consult factory for compatibility.

dimming by

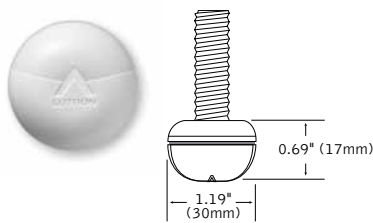


Focal Point is proud to be a Lutron Gold OEM partner. This program allows us to supply Lutron devices directly, which simplifies the ordering process and ensures superior integration of Lutron components.

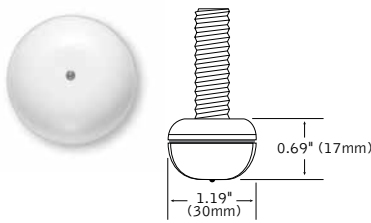
Lutron® EcoSystem™

Lutron EcoSystem offers the quality and convenience of a whole system by one manufacturer, including ballasts, sensors, controls and software.

- DB EcoSystem Ballast
- SF Sensor Feed; to integrate wall controls, sensors and receivers



LY1 Daylight Sensor
Lutron Catalog #EC-DIR-WH
Note: This sensor is directional. Arrow must point towards window.

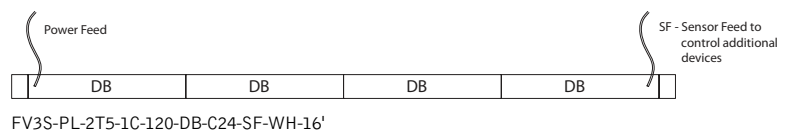
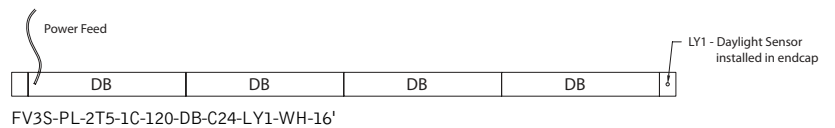


LIR IR Receiver
Lutron Catalog #EC-IR-WH

dimming by Lutron®

- DB EcoSystem Ballast
- DH Hi-Lume ballast, 1%
- DT Eco-10 "TVE" 0-10 volt ballast, 10%
- DE Eco-10 ballast, 10%
- D3 Compact SE, 5%
- DW Tu-wire ballast, 5% (120V only)
- DL Hi-Lume 3D, 1%

EcoSystem ordering example:



*Consult Lutron for specific sensor/ballast details.



WY1 Watt Stopper Daylight Sensor
Watt Stopper Catalog #FD-301



WYSR Watt Stopper Daylight Setup Remote
Watt Stopper Catalog #LSR-301-S
(1 included per order for use with WY1 option only)



WOR Watt Stopper™ Occupant Controller Remote
Watt Stopper Catalog #LSR-301-P
(for use with WY1 option only)

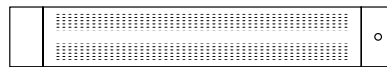


W01 Watt Stopper Occupancy Sensor
Watt Stopper Catalog #FS-205

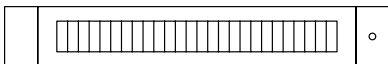
standard sensor placement - opposite end of power feed



verve I



verve II



verve III



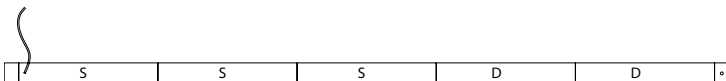
twelve

When ordering integrated sensors with multiple ballast types, please provide the number of 4' units to be controlled in each run within the ballast portion of the catalog number.

examples:



A Lutron daylight sensor to control the last 12' of a 24' run, with the remainder switched:
FV3S-PL-2T5-1C-120-3S/3DB-C24-LY1-WH-24'; where 3S= standard <10% THD Program Start ballasts in (3) 4' sections and 3DB=Lutron EcoSystem ballasts in (3) 4' sections of run.



A Watt Stopper daylight sensor to control the last 8' of a 20' run, with the remaining fixtures switched:
FV3S-PL-2T5-1C-120-3S/2D-C24-WY1-WH-20'; where 3S=standard <10% THD Program Start ballasts in (3) 4' sections and 2D=standard 0-10V dimming ballasts in (2) 4' sections of run.

*Consult Watt Stopper for specific Watt Stopper sensor details. Consult factory for additional sensor options and placement details.

non-dimming fluorescent ballast ordering codes

Standard ballasts

		32T8	54T5H0	28T5	BX40	BX50	BX55
E	<20% THD Instant Start Normal Ballast Factor (default)	X			X		
S	<10% THD Program Start Normal Ballast Factor (default)		X	X		X	X

Advance ballasts

A1	Advance Centium Instant Start Normal Ballast Factor	X			X		
A1L	Advance Centium Instant Start Low Ballast Factor	X					
A1H	Advance Centium Instant Start High Ballast Factor	X					
A2	Advance Centium Program Start Normal Ballast Factor	X	X	X		X	X
A3	Advance Optanium Instant Start Normal Ballast Factor	X					
A3L	Advance Optanium Instant Start Low Ballast Factor	X					
A3H	Advance Optanium Instant Start High Ballast Factor	X					
A4	Advance Optanium Program Start Normal Ballast Factor	X					
A4L	Advance Optanium Program Start Low Ballast Factor	X					
A5	Advance Mark 5	X					
A6	Advance Power Kut Rapid Start Normal Ballast Factor	X					
A7	Advance Standard Instant Start Normal Ballast Factor	X					
A7H	Advance Standard Instant Start High Ballast Factor	X					

Osram ballasts

O1	Osram Professional Series "QTP" Instant Start Normal Ballast Factor	X					
O1L	Osram Professional Series "QTP" Instant Start Low Ballast Factor	X					
O1H	Osram Professional Series "QTP" Instant Start High Ballast Factor	X					
O2	Osram Professional Series "QTP" Program Start Normal Ballast Factor	X	X	X			
O3	Osram High Efficiency "QHE" Instant Start Normal Ballast Factor	X					
O3L	Osram High Efficiency "QHE" Instant Start Low Ballast Factor	X					
O3H	Osram High Efficiency "QHE" Instant Start High Ballast Factor	X					
XT	Osram Extreme Ballast	X					

GE ballasts

F1	GE Ultramax Instant Start Normal Ballast Factor	X					
F1L	GE Ultramax Instant Start Low Ballast Factor	X					
F1H	GE Ultramax Instant Start High Ballast Factor	X					
F2	GE Ultrastart Program Start Normal Ballast Factor	X					
F2L	GE Ultrastart Program Start Low Ballast Factor	X					
F2H	GE Ultrastart Program Start High Ballast Factor	X					

Universal Lighting Technologies (ULT) ballasts

		32T8	54T5H0	28T5	BX40	BX50	BX55
U1	ULT Instant Start Normal Ballast Factor	X					
U1L	ULT Instant Start Low Ballast Factor	X					
U1H	ULT Instant Start High ballast Factor	X					
U2	ULT Program Start Normal Ballast Factor	X	X	X			
U95	ULT Program Start .95 Ballast Factor					X	
U90	ULT Program Start .90 Ballast Factor					X	
U85	ULT Program Start .85 Ballast Factor					X	

voltage options

120	120 volt
277	277 volt
347	347 volt (Consult factory for availability)
UNV	120-277 volt (Dimming and EM are voltage specific)

emergency ballast ordering codes

GTD	Bodine Generator Transfer Device
LP400	Bodine Emergency LP400
LP500	Bodine Emergency LP500
LP550	Bodine Emergency LP550
LP600	Bodine Emergency LP600
LP600STU	Bodine Emergency LP600 Self Testing Universal Voltage
B50	Bodine Emergency B50
B50LP	Bodine Emergency B50LP
B50ST	Bodine Emergency B50 Self Test
B50C	Bodine Emergency B50 Chicago
B70A	Bodine Emergency B70A
B90	Bodine Emergency B90
ETS	IOTA Emergency Transfer Switch
I32	IOTA Emergency I-32
I48	IOTA Emergency I-48
I54	IOTA Emergency ISL-54 Emergency Battery Pack
I540	IOTA Emergency ISL-540 Emergency Battery Pack
I28	IOTA Emergency ISL-28 Emergency Battery Pack
I320	IOTA Emergency I320

Note: Ballast factor and input wattage vary based on lamp wattage consult ballast manufacturer for complete details. Not all ballasts work with all lamp configurations. Due to fixture size requirements, not all ballasts work with all fixtures. Consult factory for compatibility.