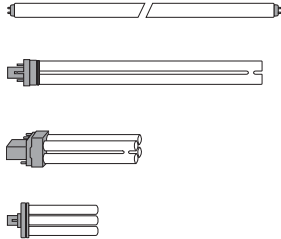


Lamp Information



Fluorescent

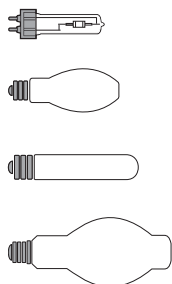
Lamp Designator	Lamp Type	Wattage (W)	Color Temp (K)	CRI	Rated Lamp Life (Hrs.)	Initial Lumens	Design Lumens
F14	F14WT5/Mini Bipin	14	3000, 3500, 4100, 6500	85	20,000	1,350	1,269
F21	F21WT5/Mini Bipin	21	3000, 3500, 4100, 6500	85	20,000	2,100	1,974
F24	F24WT5HO/Mini Bipin	24	3000, 3500, 4100, 6500	85	20,000	2,000	1,880
F26	F26WCFL/GX24Q-3	26	2700, 3000, 3500, 4100	82	10,000	1,800	1,548
F27	FT27W/2G11	27	3000, 3500, 4100	82	12,000	1,800	1,620
F28	F28WT5/Mini Bipin	28	3000, 3500, 4100, 6500	85	20,000	2,900	2,726
F32	F36WCFL/GX24Q-3	32	2700, 3000, 3500, 4100	82	10,000	2,400	2,040
F32	F32WT8/Med Bipin	32	3000, 3500, 4100, 5000	78	20,000	2,850	2,710
F35	F35WT5/Mini Bipin	35	3000, 3500, 4100, 6500	85	20,000	3,650	3,431
F39	F39WT5HO/Mini Bipin	39	3000, 3500, 4100, 6500	85	20,000	3,290	3,000
F39	F39W/2G11	39	3000, 3500, 4100	82	20,000	2,850	2,510
F40	F40W/2G11	40	3000, 3500, 4100	82	20,000	3,150	2,840
F42	F42WCFL/GX24Q-4	42	2700, 3000, 3500, 4100	82	10,000	3,200	2,720
F50	F50W/2G11	50	3000, 3500, 4100	82	14,000	4,000	3,400
F54	F54WT5HO/Mini Bipin	54	3000, 3500, 4100, 6500	85	20,000	5,000	4,700
F55	F55W/2G11	55	3000, 3500, 4100	82	12,000	4,800	4,080
F59	F59WT8/Bipin	59	3000, 3500, 4100	78	15,000	5,800	5,500
F80	F80WT5HO/Mini Bipin	80	3000, 3500, 4100, 6500	85	20,000	7,000	6,580

Data is for reference only. Actual data varies by manufacturer. Contact factory for specifics.

T5 and T8 lamps supplied by others.

Fluorescent lamps contain Mercury (Hg). Dispose of these lamps in accordance with local, state and federal laws.

Lamp Information



High Intensity Discharge (HID)

Lamp Designator	Lamp Type	Wattage (W)	Color Temp (K)	CRI	Rated Lamp Life (Hrs.)	Initial Lumens	Design Lumens
M20	PSCMH20/T4.5/G8.5	20	3,000	83	12,000	1,700	1,275
M39	PSCMH39/T4.5/G8.5	39	3,000	82	12,000	3,400	2,720
M39	PSCMH39/T6/G12	39	4,200	82	12,000	3,400	2,600
M70	PSCMH70/T6/G12	70	4,200	93	15,000	6,200	5,000
M100PS	PSMH100/ED17/Med	150	3,000	75	10,000	7,900	5,800
M150	PSCMH150/T6/G12	150	4,200	94	12,000	12,700	11,000
M175PS	PSMH175/BT28/Mog	175	4,200	65	9,000	12,800	8,300
M250PS	PSMH250/ED28/Mog	250	4,000	70	10,000	25,000	N/A
M315PS	PSCMH315/T9/PGZ18	315	3,000	90	20,000	37,800	34,000
M320PS	PSMH320/ED28/Mog	320	4,000	68	20,000	30,000	24,000
M350PS	PSMH350/ED28/Mog	350	3,700	70	20,000	33,000	26,000
M400PS	PSMH400/ED28/Mog	400	4,000	70	10,000	40,000	N/A
M1000PS	PSMH1000/BT37/Mog	1000	3,800	65	15,000	107,800	86,300
M1000	MH1000/BT56/Mog	1000	3,400	70	18,000	110,000	88,000

Data is for reference only. Actual data varies by manufacturer. Contact factory for specifics.

HID lamps contain Mercury (Hg). Dispose of these lamps in accordance with local, state and federal laws.

Tungsten Halogen



Lamp Designator	Lamp Type	Wattage (W)	Color Temp (K)	Rated Lamp Life (Hrs.)	Initial Lumens
T150	T150W/T4/DC Bay	150	2,950	2,000	2,700
T250	T250W/T4/DC Bay	250	2,950	2,000	4,850
T500	T500W/T4/DC Bay	500	2,950	2,000	10,100

Data is for reference only. Actual data varies by manufacturer. Contact factory for specifics.

Lamps supplied by others.

Fluorescent Ballasts

Fluorescent Ballasts

Standard Fluorescent Ballast Features

- Integral electronic, HPF
- Thermally protected
- Class "A" sound rated
- Low harmonic distortion (less than 20%)
- FCC and NEMA compliant
- Minimum start temperature is 0° F
- 54W T5HO minimum start temperature is -20° F

Emergency Fluorescent Ballasts

A fluorescent emergency ballast provides temporary lighting during power interruption. Operates lamp(s) for a minimum of 90 minutes, or until power is restored, at approximately 30% of full light output in emergency mode. Automatically recharges when power is restored. UL Listed and exceeds NEC/NFPA-LSC emergency illumination requirements.

EMI - Integral Emergency Ballast

A fluorescent emergency ballast, indicator light and test switch are mounted integrally in the fixture.

EMR - Remote Emergency Ballast

Allows for the use of a fluorescent emergency ballast where the ballast cannot be integral with the fixture, or where remote mounting is desired. Indicator light and test switch provided.

EMR with Dimming (DM)

The EMR distance is limited to ½ the maximum remote distance of the dimming ballast. While this varies by ballast model, there are combinations that may restrict the EMR to 0 or 3 feet. For EMR with DM, consult factory.

Dimming Ballasts

Dimming ballasts enable the control of delivering satisfactory light levels, while limiting consumed energy.

DM - Fluorescent Dimming

- Dimming ballasts utilized provide a dimming range down to 10% of full light output.
- The manufacturer of the ballasts used is at the discretion of SPI Lighting, Inc. For other requests, consult factory.

Lamp to Emergency Ballast Maximum Distance

Lamp	Detail	Lumens	Distance
F14	T5 FL	450	9 feet
F17	T8 FL	650	9 feet
F21	T5 FL	500	9 feet
F24	T5HO FL	450	10 feet
F25	T8 FL	650	9 feet
F26 1-lamp	Quad	425	6 feet
F26 2-lamp	Quad	700	6 feet
F26 1-lamp	Triple	425	6 feet
F26 2-lamp	Triple	700	6 feet
F27	Biax	N/A	N/A
F28	T5 FL	800	9 feet
F32 1-lamp	Triple	600	6 feet
F32 2-lamp	Triple	725	6 feet
F32	T8 FL	700	10 feet
F35	T5 FL	N/A	N/A
F39	T5HO FL	700	10 feet
F39	Biax	600	12 feet
F40	Biax	600	10 feet
F40	T8 FL	600	9 feet
F42 1-lamp	Triple	750	6 feet
F42 2-lamp	Triple	750	6 feet
F50	Biax	625	12 feet
F54	T5HO FL	825	10 feet
F55	Biax	650	12 feet
F59	T8 FL	650	9 feet
F80	T5HO FL	N/A	N/A

International Market

50 and 60Hz ballasts are available in different voltages. Please contact factory for specific information.

Fluorescent 347 Volt Operation

Lamp	Description	Available
F14	T5 FL	yes+
F17	T8 FL	yes
F21	T5 FL	no
F24	T5HO FL	yes+
F25	T8 FL	yes
F26	Quad	yes
F26	Triple	yes
F27	Biax	yes
F28	T5 FL	yes
F32	Triple	yes
F32	T8 FL	yes
F35	T5 FL	yes+
F39	T5HO	no
F39	Biax	yes
F40	Biax	yes**
F40	T8 FL	yes
F42	Triple	yes
F50	Biax	yes
F54	T5HO FL	yes
F55	Biax	yes
F59	T8 FL	yes
F80	T5HO FL	no

+ Available in one-lamp configuration only.

** Available in 2 or 3 lamp configuration only.

High Intensity Discharge (HID) Ballasts

HID Ballasts

Magnetic HID Ballasts

Integral: 175, 250, 400 Watt

- Universal 120 - 277 volt operation
- Open core and coil
- CWA-HPF design
- Thermally protected
- Ballast box for remote mounting included

Remote: 1000 Watt

- Multi-tap, 120/208/240/277 volt operation
- Enclosed
- CWA-HPF design
- Not thermally protected
- Power leads at top of unit and lamp leads at both ends
- 16 gauge mounting legs
- Allow 9" between ballasts in all directions when gang mounting to a common surface to provide ventilation
- Field assembly required

Electronic HID Ballasts

Remote or Integral: 175, 250, 400 Watt

- Universal 120 - 277 volt operation
- Thermally protected
- Class "A" sound rated
- Low harmonic distortion (less than 15%)
- HPF electronic design
- Power mains must be cycled off and on to reset ballast after replacing failed lamps

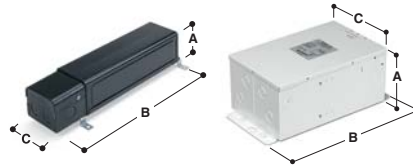
Electronic Ceramic Metal Halide Ballasts

Remote or Integral: 20, 39, 70, 150, 315 Watt

- Thermally protected
- Class "A" sound rated
- Low harmonic distortion (less than 10%)
- FCC compliant
- Maximum 50 ft. remote distance
- Minimum start temperature is -20°F

Standard Remote Ballast Kit

Allows for remote mounting of the HID ballast for Echo products.



Remote Ballast Kit Dimensions

Lamp	Ballast	A	B	C
M39	electronic	2.50"	4.80"	7.00"
M70	electronic	2.50"	4.80"	7.00"
M150	electronic	2.50"	4.80"	7.00"
M175PS	electronic	2.60"	12.00"	4.20"
M250PS	electronic	2.60"	12.00"	4.20"
M250PS	magnetic	5.50"	17.20"	6.10"
M400PS	electronic	2.60"	12.00"	4.20"
M400PS	magnetic	5.50"	17.20"	6.10"
M1000	magnetic	5.75"	14.43"	7.68"

HID Lamp to Ballast Maximum Distance

Lamp	Type	Ballast	Distance
M20PSC	PSC	electronic	50 feet
M39PSC	PSC	electronic	50 feet
M70PSC	PSC	electronic	50 feet
M100PS	PS	magnetic	50 feet
M150PSC	PSC	electronic	50 feet
M175PS	PS	magnetic	50 feet
M250PS	PS	magnetic	50 feet
M315PSC	PSC	electronic	15 feet
M320PS	PS	magnetic	50 feet
M350PS	PS	magnetic	50 feet
M400PS	PS	magnetic	50 feet
M1000	MH	magnetic	190 feet
M1000PS	PS	magnetic	75 feet

PS = Pulse Start Metal Halide
PSC = Pulse Start Ceramic Metal Halide
MH = Metal Halide

International Market

50 and 60Hz ballasts are available in different voltages. Please contact factory for specific information.

HID 347 Volt Operation

Lamp	Description	Available
M20	T4.5 CMH	no
M39	T4.5 CMH	no
M39	T6/G12 MH	yes
M70	T6/G12 MH	yes
M150	T6/G12 MH	yes
M175PS	BT28 MH	yes
M250PS	T15 PSMH	yes*
M315	T9 CMH	no
M400PS	ED28	yes*
M1000	BT37	yes

* For integral and Power Tray™ ballast configurations. If remote ballast is required, a special ballast enclosure will need to be ordered. Contact factory.

Ballast Sound

Magnetic HID ballasts may hum slightly due to the magnetic action in the core and coil assembly. This hum may be amplified by the resonant qualities of the ceilings, walls, floors or furnishings within the space. Careful consideration of these components within the lighting design will ensure the quietest installation possible. For "library quiet" installations use electronic or remote mount ballasts. Please consult factory for additional suggestions.