

B50ST REDiTEST®

Fluorescent Emergency Ballast

PHILIPS bodine

A Division Of Philips Electronics North America Corporation

**Automatic code compliance testing;
One- or two-lamp emergency
illumination;
End-of-lamp-life compatible**

Product Summary

UL LISTED/CSA CERTIFIED
Factory or Field Installation

U.S. Patent No.
5,666,029

Illumination Time
90 Minutes

Initial Light Output
Up to 1400 Lumens

Full Warranty
5 Years (NOT pro-rata)

Dual Input Voltage
120/277 VAC, 60 Hz

AC Input Current
320 mA

AC Input Power Rating
4.0 Watts

Test Switch
Single Pole

Battery
High-Temperature,
Maintenance-Free
Nickel-Cadmium Battery
7- to 10-Year Life Expectancy

Battery Charging Current
320 mA

Recharge Time
24 Hours

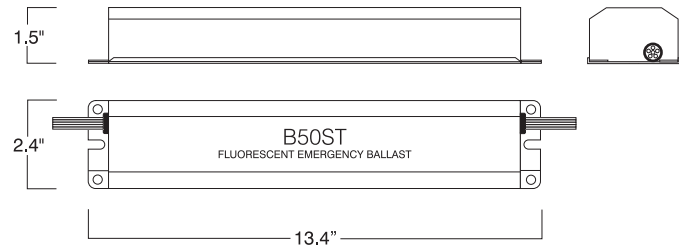
Charging Indicator Light
LED

Temperature Rating (Ambient)
0°C to +55°C
(32°F to 131°F)

Dimensions
13.3" x 2.4" x 1.5"
(339 mm x 60 mm x 38 mm)
Mounting Center 12.8" (325 mm)

Weight
3.6 lbs. (1.64 kg)

Audible Alarm
User Selectable



APPLICATION

The REDiTEST® B50ST fluorescent emergency ballast works in conjunction with an AC ballast to convert new or existing fluorescent fixtures into emergency lighting. The emergency ballast consists of a high-temperature nickel-cadmium battery, charger and electronic circuitry in one compact red case. The B50ST can be used with most 17 - 215 W (2' - 8') T8, T9, T10 or T12 fluorescent lamps without integral starters, including U-shaped, HO, VHO, circline and energy-saving, and (4-pin) long compacts. One- or two-lamp operation may be selected (see Table 1). It is also compatible with most one-, two-, three- and four-lamp electronic, standard, energy-saving and dimming AC ballasts. If used in an emergency-only fixture, no AC ballast is necessary. The B50ST is suitable for indoor locations. It is not suitable for air handling heated air outlets or wet, damp or hazardous locations. For information about specific lamp and ballast compatibility, please call the factory.

OPERATION

During normal operation, the REDiTEST® B50ST constantly monitors charging current and battery voltage. When AC power fails, the B50ST immediately switches to the emergency mode, operating either one or two lamps at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency ballast automatically returns to the charging mode and, using a patented circuit, delays AC ballast operation for approximately 3 seconds to prevent false tripping of the AC ballast end-of-lamp-life shutdown circuits. During automated testing, the B50ST simulates an AC power failure, causing the emergency ballast to switch to emergency mode and conduct a discharge test to monitor battery voltage and discharge current. If the B50ST detects a problem, the status indicator light flashes and, if selected, the audible alarm sounds. When testing is complete, the B50ST returns to the charging mode. The B50ST automatically tests emergency lighting for 30 seconds every 30 days and 90 minutes once a year.

UL, CSA AND CODE COMPLIANCE

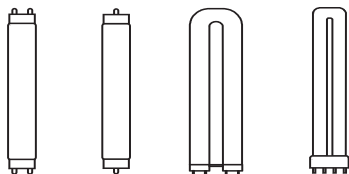
The REDiTEST® B50ST has been tested by Underwriters Laboratories in accordance with the standards set forth in UL 924, "Emergency Lighting and Power Equipment," and by the Canadian Standards Association (CSA) in accordance with the standards set forth in C22.2 No. 141, "Unit Equipment for Emergency Lighting." The B50ST is UL Listed and CSA Certified for factory or field installation. Emergency illumination time exceeds the National Electrical Code (NEC), Life Safety Code (NFPA-LSC), National Building Code of Canada (NBC), National Fire Code of Canada (NFC) and UL 90-minute requirements. Life Safety Code - NFPA 101 (1997) Excerpt 5-9.3 Periodic Testing of Emergency Lighting Equipment. A functional test shall be conducted on every required battery-powered emergency lighting system at 30-day intervals for a minimum of 30 sec. An annual test shall be conducted for a 1 1/2-hr duration. Equipment shall be fully operational for the duration of the test. Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction. Exception: Self-testing/self-diagnostic, battery-operated emergency lighting equipment that automatically performs a minimum 30-sec test and diagnostic routine at least once every 30 days and indicates failures by a status indicator shall be exempt from the 30-day functional test, provided a visual inspection is performed at 30-day intervals.

Specifiers Reference

Project _____ Type _____ Model No. _____
Comments _____

L2000062

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INSTALLATION

The REDiTEST® B50ST does not affect normal fixture operation and may be used with either a switched or unswitched fixture. If a switched fixture is used, an unswitched hot lead must be connected to the emergency ballast. The emergency ballast must be fed from the same branch circuit as the AC ballast. The B50ST may be installed inside, on top of or remote from the fixture. The emergency ballast may be remotely installed up to half the distance the AC ballast manufacturer recommends removing the AC ballast from the lamp or up to 50 feet, whichever is less. Installation is not recommended with fixtures where the ambient temperature may fall below 0°C.

EMERGENCY ILLUMINATION

Depending on the number (one or two), wattage and type of lamps selected, the REDiTEST® B50ST produces up to 1400 lumens initial emergency light output (see Table 2). If two-lamp operation is selected, light output is evenly divided between the lamps for better distribution of emergency illumination.

SPECIFICATION

Emergency lighting shall be provided by using a standard fluorescent fixture equipped with a Philips Bodine REDiTEST® B50ST self-testing/self-diagnostic fluorescent emergency ballast. Electronic circuitry shall be self-testing in design and automatically test emergency lighting for a minimum of 30 seconds every 30 days and 90 minutes once a year. An embedded microcontroller will continually monitor the battery charging current and voltage. The emergency ballast, using a patented circuit, shall delay AC ballast operation for approximately 3 seconds to prevent false tripping of AC ballast end-of-lamp-life shutdown circuits. The B50ST shall consist of a high-temperature, maintenance-free nickel-cadmium battery, charger and electronic circuitry contained in one 13 3/8" x 2 3/8" x 1 1/2" red metal case. A solid-state status indicator light and audible alarm (selectable) to monitor the charger and battery and to indicate test results and status conditions; a single-pole test switch; and installation hardware shall be provided. The emergency ballast shall be capable of operating [one or two] _____ fluorescent lamp(s) (see Table 1) at _____ lumens (see Table 2) initial light output in the emergency mode for a minimum of 90 minutes. It shall be suitable for indoor locations. The B50ST shall have 4 Watts of input power and a 24 Watt-hour battery capacity and shall exceed emergency standards set forth by the current NEC. The emergency ballast shall be UL Listed and CSA Certified for installation inside, on top of or remote from the fixture and shall be warranted for a full five years from date of purchase.

WARRANTY

Model REDiTEST® B50ST is warranted for five (5) full years from date of purchase. This warranty covers only properly installed Philips Bodine emergency ballasts used under normal conditions. For the warranty period, Philips Emergency Lighting will, at its option, repair or replace without charge a defective emergency ballast, provided it is returned to the factory transportation prepaid and our inspection determines it to be defective under terms of the warranty. Repair or replacement, as stated above, shall constitute the purchaser's exclusive warranty, which does not extend to transportation, installation, labor or any other charges; nor does it apply to any equipment of another manufacturer used in conjunction with the emergency ballast.

Table 1 - Lamp Compatibility

LAMP DIAMETER (T8, T9, T10, T12)	BASE	WATTAGE (Length)	NO. of LAMPS (EMERGENCY)
T8, T9, T10, T12 (1", 1-1/4", 1-1/2")	Single or Bipin	17 - 40 W (2' - 4')	1
			2
		40 - 215 W (5' - 8')	1
Long Compact	4-PIN (2G11)	18 - 39 W	1
			2
		40 - 55 W	1
Compact	4-PIN (G24q, GX24q)	18 - 32 W	1
			2
		42 W	1
2D	4-PIN (GR10q)	16 - 38 W	1
			2
		55 W	1

Table 2 - Initial Lumen Output

LAMP	LUMENS	
	1 Lamp	2 Lamps
FO32, FBO31 T8	1350	1350
FO25, FBO24 T8	1250	1100
FO17, FBO16 T8	1050	950
FO96, T8	1400	
F40T12, F40/U	1100	1100
F48T12/HO	1200	
F96T12, HO, VHO	1100	
F40 T12 ES (34 W)	975	975
PL-L 50 W, F50BX/RS, DULUX L 55 W	900	
PL-L 40 W, F40/30BX, DULUX L 40 W	900	
PL-L 36 W, F39/36BX, DULUX L 36 W	1100	1100
PL-L 24 W, F27/24BX/RS, DULUX L 27 W		1000
F38 2D/4P	1000	1100
F28 2D/4P	1100	1100

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