

Self-contained emergency lighting squares in single and twin lamp versions.

Catalog Number	
Comments	Type

Spectron Series

Self-Testing/Self-Diagnostic Electronics System



Surface Mounted

Unit Features

- Completely self-contained
- Fully automatic 90-minute operation
- Compact, low-profile design
- Maintenance-free battery
- Available in single and twin lamp models
- Prismatic lens for uniform illumination
- Polished alzak reflector
- Matte-white frame and satin-black housing
- Remote capability (ERS models only)
- Temperature range: 20°C to 30°C (68°F to 86°F)
- UL924 Listed (Emergency Lighting)



Semi Recessed Mounted

Spectron Features

- Meets UL standards for self-testing/self-diagnostic models
- Provides automatic self-diagnostic monitoring and testing of unit operation
- Automatically performs routine maintenance and assures operational readiness at all times
- Monitors battery, charger, transfer and lamp operation
- Routine discharge cycles insure optimum battery performance and maximum useful life
- Automatic 1-minute self-test every 28 days and 30-minute self-test every 6 months
- Automatic battery protection
- Automatic unit transfer in brownout conditions
- Automatic AC lockout circuit
- Temperature compensated charger
- 15-minute retransfer delay
- Flashing LED indication of unit malfunction or test cycle
- All detected malfunctions retained in memory until corrected and retested
- Test switch allows a programmable 1, 5, 30 or 60-minute system check at any time

Spectron Electronics

The Spectron self-testing/self-diagnostic electronics provide:

- Visual indication of AC power status
- Visual Indication of all self-diagnostic test cycles
- Visual indication of unit malfunctions including:
 - Battery fault • Charger fault • Transfer fault • Lamp fault

LED Indicators

Red Status LED

Under normal operating conditions, the red Status LED indicator will remain off. In the event the Spectron Controller detects a malfunction, the red Status LED will indicate the fault per the table at right.

Red Status LED Code	Description
One blink ON/pause	Battery not connected
Two blinks ON/pause	Battery fault
Three blinks ON/pause	Charger fault
Four blinks ON/pause	Transfer circuit fault
Five blinks ON/pause	Lamp head fault

Green Status LED

The green Status LED serves as both an AC power and a self-test indicator. During normal operation, the green status LED will be constantly illuminated, indicating the presence of AC power. During all automatic or manual self-test cycles, the green Status LED will blink at a 1 cycle per second rate.

Manual Tests

Using the unit test switch, users can initiate 1, 5, 30 or 60-minute diagnostic/discharge cycles per the table at right.

Initiating Action	Test Cycle
Press test switch once	1 minute
Press test switch twice	5 minute
Press test switch 3 times	30 minute
Press test switch 4 times	60 minute

Product Selector

Fixture Type	Model No.	Description
	ESS-I	Single lamp unit - no remote capability
	ERS-I	Single lamp unit with 10 watt remote capability
	ERS-3-I	Single lamp unit with 22 watt remote capability
	ESS-I-2	Twin lamp unit - no remote capability
	ERS-2I-2	Twin lamp with 15 watt remote capability
(✓) Options (add suffix to model number)		
	-EC	Extended connector cable for -FRMI option ⁽¹⁾
	-FRMI	Fully recessed mounting option ⁽²⁾⁽³⁾
(✓) Accessories (order separately)		
	F-SRM	Semi-recessed mounting kit
	F-45G	Wire guard
	RERS-1-0609	Single lamp matching remote fixture, 6V, 9W lamp
	RERS-2-0607	Twin lamp matching remote fixture, 6V, 7W lamps

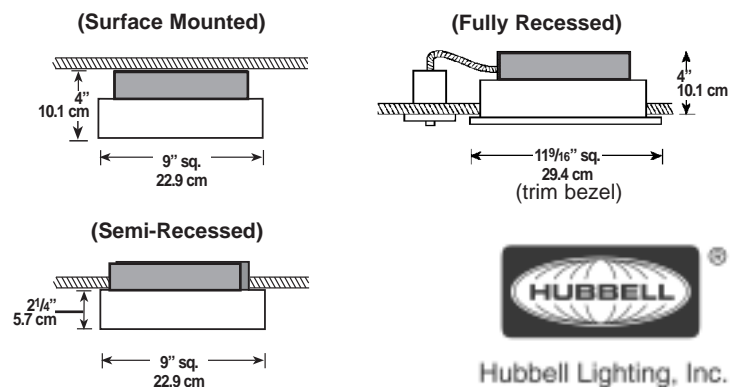
(1) Specify length when ordering. Example: -EC (30')

NOTE: 100-foot maximum cable length (10-foot increments only).

(2) Not available as field retrofit kit.

(3) Not available for use with RERS matching remote fixtures.

Dimensions



Hubbell Lighting, Inc.

Construction

Unit Housing: Injection-molded, high-impact, UV stable thermoplastic.
Finish: Matte-white frame and satin-black housing

Illumination

Lamp Type: Incandescent miniature wedge-base type
Lamp Voltage: 6 volts
Lamp Wattage: 9 watts (single lamp models)
Lamp Wattage: 7.2 watts (twin lamp models)
Rated Lamp Life: 100 hours

Installation

Surface Mounting: LITE² models may be mounted directly to any 3½" or 4" octagonal or 4" square box. ERSI models incorporate fused remote fixture connections.

Recessed Mounting: All Lite² Series I units and matching remote fixture may be semi-recessed in suspended ceilings using the F-SRM mounting kit. Emergency models may be fully recessed when specified with the -FRMI option. The F-SRM semi-recessed kit provides a metal ceiling mounting box that allows the unit's electronics compartment to be recessed into grid type suspended ceilings leaving only the white light box housing with Spectron display panel exposed. Lite² Series I emergency units ordered with the -FRMI fully recessed mounting option are supplied with a factory-wired remote test/monitor module. The remote module is mounted in a utility box (supplied) and installs through the ceiling panel alongside the unit by means of a plaster ring provided. The fully recessed mounting option also includes an adjustable ceiling grid mounting bar and a decorative trim bezel.

Wiring: Pre-stripped AC input leads provided. All AC connections made inside unit housing. Remote capability is available with ERS-I models. Remote output connections are fused.

Operating Temperature Range

All models: 20°C to 30°C (68°F to 86°F)

Electronics

Input: 120/277VAC, 60 Hz. (standard)
Charger: Constant voltage, current limited, temperature compensated type
Transfer: Solid-state design
Built-in Protection: AC lockout, transformer isolation, low battery voltage disconnect, brownout protection and 15-minute retransfer delay
Battery Recharge Cycle: Per UL time standards
Test Means: Integral test switch

Self-Diagnostic Operation

LED Indicators: Red "Service Alert" LED indicator and Green "Operating Status" LED indicator
Visual Fault Indications: Battery fault, charger fault, transfer fault and lamp fault
Service Alert Memory: All detected malfunctions remain in memory until corrected and retested

Self-Testing Operation

Automatic Test Cycles: 1-minute self-test every 28 days (± 3.5 hours) and a 30 minute self-test every 6 months (± 1 day)
Manual Tests: Test switch allows a programmable 1, 5, 30 or 60 minute system check at any time

Battery

Type: Maintenance-free, lead-acid

Power Consumption

120/277VAC: 15 watts (maximum)

Compliances

UL 924
NFPA-101

Warranty

Unit and Electronics: 5 years full
Battery: 10 years (5 years full, 5 years pro-rata)

Suggested Specifications

Self-contained emergency lighting unit shall be Dual-Lite recessed Lite² Series I model. It shall be designed to provide automatic emergency lighting for a minimum of 90 minutes upon failure of normal electrical power. Unit construction shall consist of injection-molded, high-impact, UV stable thermoplastic with matte-white frame and satin-black housing. Unit shall be capable of (surface)(semi-recessed)(fully-recessed) mounting. A universal transformer shall allow operation for 120 or 277VAC, 60 Hz source. Emergency illumination shall be provided by (one)(two) 6 volt,(7.2)(9) watt miniature incandescent lamps. Emergency power source shall be a fully rechargeable, maintenance-free, lead-acid battery. SPECTRON electronics operation shall be fully automatic. Accidental discharge of the unit battery prior to energization will be prevented by an AC lockout circuit. The unit's green Status LED located on the Spectron display panel will illuminate to indicate the presence of AC power. The unit's red Status LED will blink after application of AC power if the battery connection is not completed. During normal operation, the unit's charging circuit will maintain the battery at full capacity and the Spectron Controller shall constantly monitor charger performance. Should the terminal voltage vary from design parameter values, the unit's red Status LED will blink, indicating a malfunction of the battery or charger. Upon interruption of normal AC power, or brownout conditions exceeding a 20% drop from nominal voltage, the Spectron Controller shall automatically switch the emergency lighting load to the battery. Emergency power will be provided for a minimum of 90 minutes. During emergency operation, the battery shall be protected from deep discharge by a low-voltage battery disconnect circuit. Upon return of normal utility power the unit will remain in emergency mode for a period of 15 minutes and the charger shall then begin a recharge cycle. The charger will bring the battery to full capacity within acceptable UL time standards. The Spectron Controller will automatically initiate a one minute discharge/diagnostic test every 28 days ± 3.5 hours and a 30-minute discharge/diagnostic test every 6 months ± 1 day. These tests will be designed to exercise the unit's battery and allow the SPECTRON Controller to analyze emergency operation performance. Any malfunction of the unit's transfer circuit or emergency lamps will cause the red Status LED on the unit's display panel to blink. Under normal operation, all red Status LED blinking indications of unit malfunction shall remain latched until corrected and retested. A manual test switch will allow a user-programmable 1, 5, 30 or 60-minute diagnostic/discharge test at any time. During all automatic and user initiated self-tests, the unit's green Status LED will blink to indicate a diagnostic cycle in process. User self-tests can be canceled at any time by pressing the test switch.