



# T-Grid Spectron Series

Decorative self-testing/self-diagnostic emergency lighting unit designed for fast, easy, recessed installation in suspended ceilings. Additional capacity for powering remote fixtures.

## Spectron Series®

Self-Testing/Self-Diagnostic Electronics System



### Unit Features

- Completely self-contained
- Fully automatic 90-minute operation
- Compact, low-profile design
- 20-gauge heavy metal housing
- Standard white finish
- 6- and 12-volt models
- Premium grade, pure-lead, maintenance-free battery
- Fully adjustable glare-free lighting heads
- Easy to install T-Grid lay-in design
- Flame-rated thermoplastic lamp housings
- Temperature range: 20°C to 30°C (68°F to 86°F)
- UL924 Listed (Emergency Lighting)

### 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
- Test switch allows a programmable 1, 5, 30 or 60-minute system check at any time

Catalog Number	
Comments	Type

## 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.

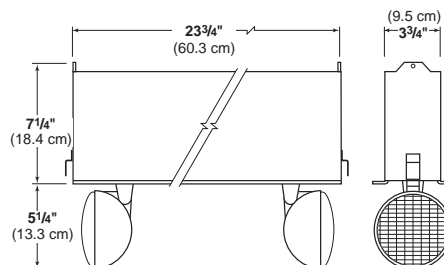
Initiating Action	Test Cycle
Press test switch once	1 minute
Press test switch twice	5 minute
Press test switch 3 times	30 minute
Press test switch 4 times	60 minute

### Product Selector

Fixture Type	Model No.	Voltage	Output Wattage			
			1½ Hrs.	2 Hrs.	3 Hrs	4 Hrs
<b>Standard models</b>						
	<b>TG15I</b>	6	15	--	--	--
	<b>TG30I</b>	6	30	22	15	12
	<b>TG50-12V I</b>	12	50	38	25	20
(✓)	<b>Options (add suffix to model)</b>					
	<b>-V</b>	Voltmeter				
	<b>-3</b>	Unit supplied with three lighting heads				
	<b>-0</b>	Units supplied without lighting heads				
(✓)	<b>Accessories (order separately)</b>					
	<b>SRHSW</b>	Remote lighting head (single) <sup>(1)</sup>				
	<b>SRHDW</b>	Remote lighting head (twin) <sup>(1)</sup>				

(1) Specify voltage and wattage when ordering. Examples: SRHDW1218

### Dimensions



Hubbell Lighting, Inc.

**Construction**

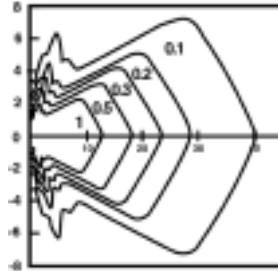
**Unit:** 20-gauge sheet metal junction box, back box and mounting plate and injection-molded, thermoplastic lamp housings  
**Finish:** White

**Illumination**

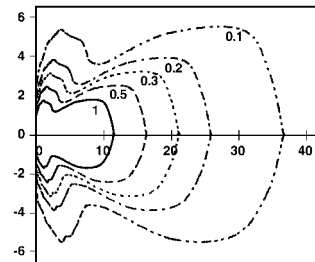
**Lamp Type:** Incandescent  
**Lamp Voltage/Wattage:** 6 volt, 7.2 watts or 12 volt, 7.2 watts  
**Rated Lamp Life:** 100 hours

**Photometrics**

6-volt, 7.2 watt SBT lamp



12-volt, 7.2 watt SBT lamp



Photometrics measured by independent testing laboratory

**Installation**

**Unit Mounting:** The T-Grid Series is designed for recessed mounting in suspended grid ceilings. The trim plate dimensions allow placement of the unit between the suspended ceiling's grid support structure. The unit must be fastened to the building's structure in accordance with local codes; holes in the unit's mounting ears facilitate this requirement. Ceiling tile may require trimming for finished installation. AC, DC-battery and remote fixture connections are made inside the unit housing. Lamphoods attach directly to unit trim plate.

**Wiring:** AC input leads provided. All AC connections made inside unit housing.

**Operating Temperature Range:** 20° to 30°C  
 (68°F to 86°F)

**Electronics**

**Input:** 120/277VAC, 60 Hz. (standard)  
**Built-in Protection:** Reverse polarity, short circuit and low battery voltage disconnect  
**Charger:** Solid-state, thermally compensated, regulated voltage type  
**Transfer:** Solid-state design  
**Battery Recharge Cycle:** Per UL time standards  
**Test Means:** Integral test switch  
**Indicators:** AC-On indicator

**Battery**

**Type:** Sealed, maintenance-free, lead-acid (standard models)

**Power Consumption**

**Maximum:** 12.7 watts at 120 or 277VAC (6 volt models)  
**Maximum:** 27 watts at 120 or 277VAC (12 volt models)

Dual-Lite • [www.dual-lite.com](http://www.dual-lite.com)

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**Compliances**

**UL 924** (all models)  
**NFPA-101** (all models)

**Warranty**

**Unit and Electronics:** 3 years full  
**Batteries:**  
**Standard models:** 3 years full, 3 years pro-rata (6 years total)

**Suggested Specification**

Self-contained emergency lighting unit shall be Dual-Lite recessed T-Grid Series, model number \_\_\_\_\_. It shall be designed to provide automatic emergency lighting for a minimum of 90 minutes upon failure of normal electric power. Unit construction shall consist of a 20-gauge, all-metal housing and trim plate with injection-molded, thermoplastic lamp housings. Unit shall be capable of recessed installation in a suspended grid ceiling. Emergency power source shall be a fully rechargeable, maintenance-free, (lead-acid) battery. Electronics shall be of solid-state design and include a low voltage disconnect circuit, constant potential charger and AC lock-out to prevent accidental discharge of unit prior to AC power being applied. Unit shall be rated for 120/277VAC, 60 Hz. Controls shall include a test switch and AC pilot light indicator. Lamp housing shall be fully directional. Lighting shall be provided by two 7.2 watt sealed-beam type lamps of glare-free design. Units must comply with all UL 924 and NFPA 101 Life Safety Code requirements.

SPECTRON electronics operation shall be fully automatic. 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. 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.

Dimensions to be 23<sup>3</sup>/<sub>4</sub>" (60.3 cm) long x 3<sup>3</sup>/<sub>4</sub>" (9.5cm) wide x 7<sup>1</sup>/<sub>4</sub>" (18.4 cm) high.