

SELF-DIAGNOSTICS

ISD-420-EM-A FLUORESCENT EMERGENCY BALLAST



LUMEN OUTPUT
(1) Lamp - 1300 Lumens
(2) Lamps - 650 Lumens Per Lamp

LAMPS OPERATED
10W-70W 4-pin Rapid Start Compacts including Twin Tube, Triple Tube, Quad, 2D & Straight

EMERGENCY OPERATION
90 Minutes
(1) 10W - 70W or (2) 10W - 32W

The **ISD-420-EM-A** from IOTA Engineering is a UL Listed self-diagnostic fluorescent emergency ballast that allows the same fixture to be used for both normal and emergency operation. In the event of a power failure, the **ISD-420-EM-A** switches to the emergency mode and operates **one or two** of the existing lamps for **90 minutes**. The **ISD-420-EM-A** will self-test for thirty seconds monthly and for ninety minutes annually and will diagnose potential problems within the light fixture. If problems are encountered, the unit will specify failure of the battery, charge, lamp, or inverter by means of an audible beep and flashing red indicator. The dual color LED indicator is lit red when charging and lit green when ready. The unit contains a battery, charger, and inverter circuit in a single can. The **ISD-420-EM-A** can be used with 10W to 70W 4-pin compact fluorescent lamps, providing an initial output of up to **1300 lumens** for one or two lamps, and features lamp selector leads for optimizing the light output for designated lamp types. The **ISD-420-EM-A** provides $\frac{3}{8}$ " flex for wiring to the fixture or ballast compartment and standard switch box containing the test switch, charge light, and unit battery connector.

CASE DIMENSIONS	TECHNICAL SPECIFICATIONS
<p>LENGTH: 13 1/8"</p> <p>MOUNTING CENTER: 12 3/4"</p> <p>HEIGHT: 1 1/2"</p> <p>WIDTH: 2 3/8"</p>	<p>Input Voltage 110-277V, 50-60Hz</p> <p>Input Wattage 3.5 Watts</p> <p>Lamps Operated 10W-70W 4-pin Rapid Start Compact Lamps, including Twin Tube, Triple Tube, Quad, 2D & Straight</p> <p>Emergency Operation (1) 10W-70W or (2) 10W-32W 90 minutes</p> <p>Initial Illumination 1300 lumens (2) lamps 650 lumens each lamp</p> <p>Operating Temp 0° to 55° C</p> <p>Approval U.L. and C.U.L. Listed</p> <p>Weight 5.6 lbs.</p>

U.L. and C.U.L. Listed

Will cold start and operate all specified lamps

Long life high temperature recyclable Ni-Cad battery

90 minute emergency operation

Galvanized steel case

**Includes one-piece test switch and dual color
charge indicator (LPTS) accessories**

Universal voltage 110-277V, 50-60Hz

5-Year Warranty. See Warranty Page for details.

Time delay enhancements

Open circuit isolation

Automatic monthly and annual testing

Internal self-diagnostic circuitry

Tests lamp frequency, battery charge and discharge current

**Meets or exceeds all National Electrical Code and Life
Safety Code Emergency Lighting Requirements**

Damp Location Model available

MODEL NO: ISD-420-EM-A TYPE:
PROJECT:
COMMENTS:

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SAMPLE SPECIFICATION

Emergency lighting shall be provided by using a standard fluorescent fixture equipped with an **IOTA ISD-420-EM-A** self-diagnostic fluorescent emergency battery pack. The **ISD-420-EM-A** shall be designed to automatically test the emergency lighting capability for no less than 30 seconds monthly and 90 minutes annually, and shall monitor lamp frequency, battery charge and battery discharge current. An audible alarm and light-emitting LED shall be provided to indicate test results and charge status. The **ISD-420-EM-A** shall consist of a high temperature, maintenance-free nickel cadmium battery, charger board and an electronic circuit enclosed in a 13 1/8" x 2 3/8" x 1 1/2" vandal-resistant galvanized steel case for installation on top of the fixture and shall provide 3/8" flexible conduit for wiring to the fixture and test switch. A combination one piece test switch and long-life LED charge indicator light for monitoring charger, inverter, battery, and fault conditions shall be included. The fluorescent EM pack shall operate one 10w-70w or two 10w-32w 4-pin rapid start compact fluorescent lamps. The **ISD-420-EM-A** shall provide reduced illumination for a minimum of 90 minutes in the emergency mode with a total initial output of 1300 lumens and will feature lamp selector leads for optimizing light output for the designated lamp type. The **ISD-420-EM-A** shall have 4 watts of input power and a battery capacity of 24 watt hours. The **ISD-420-EM-A** is U.L. Listed and meets or exceeds all NEC and Life Safety Code Emergency Lighting Requirements. The **ISD-420-EM-A** is warranted for a full five (5) years from the date of purchase.

OPTIONS

TEST CONFIGURATION

LPTS

SPECIALTY

DL (DAMP LOCATION)

VOLTAGE RATINGS

UNIVERSAL VOLTAGE 110-277V, 50-60HZ

AVERAGE LUMEN RATINGS

LAMP	1 LAMP	2 LAMPS
13W PL CF 4-PIN	600	675
18W PL CF QUAD 4-PIN	600	950
26W PL CF QUAD 4-PIN	725	1200
32W PL CF QUAD 4-PIN	1050	1250
42W PL CF QUAD 4-PIN	1300	
57W PL CF QUAD 4 PIN	1160	
70W PL CF QUAD 4-PIN	1200	
F282 D/42 4-PIN	800	850
F382 D/42 4-PIN	850	1125

DIAGNOSTIC CODES

LED IS **RED** WHEN CHARGING, **GREEN** WHEN READY

FAILURE TYPE	1 BEEP	1 FLASH	FAILURE CODES OCCUR ONCE EVERY 15 SECONDS WITH 1 SECOND DELAY BETWEEN CODES IN INSTANCES OF MULTIPLE FAILURE
CHARGE FAILURE			
BATTERY FAILURE	2 BEEPS	2 FLASHES	
LAMP FAILURE*	3 BEEPS	3 FLASHES	
INVERTER FAILURE*	4 BEEPS	4 FLASHES	

*IF FAILURE, REPLACE LAMP AND RETEST

REMOTE MOUNTING

When battery packs are remote mounted, the remote distance can not exceed 1/2 of the distance from ballast to lamp specified by the A.C. ballast manufacturer. For example, if the A.C. ballast manufacturer recommends no more than 25' remote distance, then the battery pack should not exceed 12 1/2'. The maximum allowable remote mounting distance is 50' from the lamp.