ILD 10

Constant Power Emergency LED Driver

MODEL NO: _____

TYPE: _____

PROJECT: _____

COMMENTS: _____

LUMEN PERFORMANCE*

Fixture Efficacy	Minute 1	Minute 45	Minute 90
100 lm/W	1000	1000	1000
110 lm/W	1100	1100	1100
120 lm/W	1200	1200	1200
130 lm/W	1300	1300	1300

*Ta = 25°C

DESCRIPTION

The IOTA® **ILD 10** is a UL Listed LED emergency driver that allows the same LED fixture to be used for both normal and emergency operation. In the event of a power failure, the **ILD 10** switches power from the normal AC Driver and operates the fixture for **90 minutes** in the emergency mode from the unit's battery supply. The unit contains a battery, charger, and converter circuit in a narrow profile enclosure for installation within the channel space or wireway. The **ILD 10** will operate an LED load at **10 watts** at a rated output voltage of **10V-55V**. The **ILD 10** design maintains the power levels to the LED array within the compliance levels required by regulatory agencies for the full 90 minutes runtime, even as the system voltage diminishes. Features lithium battery technology for **significantly decreased form factor,** automatic monthly and annual **self-testing** capability, **Quick Disconnect** harness, and AC Activate battery activation circuitry.

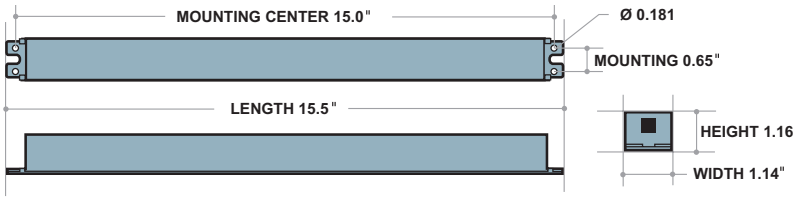
SPECIFICATIONS

Input Voltage	(Universal) 120-277VAC, 50/60Hz
Input Rating	20mA (max)
Output Voltage	10-55VDC Class 2 Compliant
Output Current	1.0A (@10VDC) - 0.18A (@55VDC)
Output Power	10 Watts (constant)
Max. Output Current	1.4A
Surge Protection	Meets ANSI/IEEE C62.41.2-2002
Emergency Operation	90 minutes
Operating Temp	0° to 55° C
EMI	Complies to FCC Commercial Limits
Battery	Lithium Iron-Phosphate 24 Hour Recharge 5-7 Year Life Expectancy
Weight	1.25 lbs.
Approval	UL Listed for factory and field installation CSA C22.2 No 141 CA T20 Appliance Efficiency Database

c UL US LISTED BC

DIMENSIONS

15.5″ x 1.14″ x 1.16″ (mounting center 15″)



PRODUCT ADVANTAGES

- **Constant Power to LED Array**
  Constant wattage delivery maintains illumination for the full emergency runtime across all rated forward voltages with no degradation.
- **Minimum Mounting Footprint**
  Lithium battery and narrow enclosure significantly decreases space requirements without sacrificing output performance.
- **Self-Diagnostic / Self-Testing**
  Monthly and annual self-testing feature satisfies the periodic testing requirements in accordance with NFPA 101 while the on-board diagnostics provides system readiness with visual indicators.
- **Listed for Field or Factory Installation**
  UL Listed for both field or factory installation in United States and Canada.

FEATURES

- UL 924 Listed, UL Listed and Classified to FTBR (US) FTBR7 (Canada)
- Auto-Sense 10-55VDC output is UL 1310 Certified, Output Class 2 Compliant
- **AC Activate** circuitry simplifies wiring by eliminating the need for manual battery connection during installation
- Quick Disconnect harness design simplifies servicing or replacement in the field
- Includes single-piece stainless steel IP67 test switch (or optional alternate switch) and charge indicator accessory
- For use with switched or unswitched fixtures
- **5-Year Warranty**
- Meets or exceeds all NEC, IBC, and Life Safety Code Emergency Lighting Requirements
- Certified for CA Title 20
- Suitable for use in Plenum, Damp Location, and Recessed Type IC Luminaires
- RoHS Compliant RoHS COMPLIANT

iota™

ILD 10

Constant Power Emergency LED Driver

ORDERING GUIDE

ILD | 10 | MVOLT | LQD | 10-55 |

Understanding Your IOTA Driver Model:

- ILD = IOTA Emergency LED Driver with Lithium Battery Technology
- 10 = Emergency Output Wattage (constant)
- MVOLT = 120-277VAC Input
- LQD = Linear Profile with Quick Disconnect harness
- 10-55 = 10-55VDC Class 2 output voltage
- = TBTSPLENUMSS - Stainless Steel Switch IP67 TBTS with Plenum-rated (CMP) Wire
- = TBTSPLENUMWHT - White Plastic TBTS with Plenum-rated (CMP) Wire
- = TBTSPLENUMBLK - Black Mushroom Top Plastic IP67 TBTS with Plenum-rated (CMP) Wire

ILD 10 Sample Specification

Supply and install IOTA ILD 10 Constant Power emergency LED driver system as indicated on the plans. The emergency driver shall be designed for [select “internal” or “external”] mounting to the luminaire including a self-contained, high-temperature, sealed, maintenance-free lithium iron-phosphate battery rated for a 5 to 7-year service life. The unit shall be provided complete with an illuminated push to test switch. The emergency driver system shall be UL class 2 certified in accordance with UL 1310 and shall be UL listed for use in damp location fixtures with a temperature range of 0° to 55° C.

The AC input shall be a two-wire, universal voltage capable 120 thru 277 VAC, 50/60 Hz and be UL Listed to Category Control Number (CCN) FTBR, Emergency Lighting and Power Equipment, and FTBV, Emergency Light-Emitting-Diode Drivers for field installation. Maximum input current of the emergency driver shall be 20mA.

The unit charger shall consist of a two-stage charging system which samples the battery in relation to its temperature, state of charge and input voltage fluctuations. The charger shall be current limited, temperature compensated, short-circuit protected with reverse polarity protection. A low voltage battery disconnect (LVD) circuit shall be provided and will disconnect the load and circuitry from the battery when it reaches approximately 80 to 85% of its nominal terminal voltage, preventing a non-recoverable, deep-discharge condition as well as equipment initialization failure when utility power is restored. The unit shall achieve a full recharge in 24-hours.

The emergency driver shall accommodate an LED load with a forward voltage requirement ranging from 10 to 55VDC. The output voltage sensing shall be automatic and instantaneous with a resulting, inversely-proportional current to maintain constant power to the LED array with an output tolerance of +/- 5%. The unit shall supply the rated load for a minimum of 1 1/2 hours or to 87 1/2% of rated battery terminal voltage. The output power to the LED load during emergency operation shall be held constant 10 watts from minute one throughout the entire emergency run time resulting in no loss or degradation of the light source during emergency operation.

The unit shall be furnished with an electronic, AC-lockout circuit which will connect the battery when the branch circuit is energized, and an electronic brownout circuit which will enable a transfer to emergency operation when utility power dips below an acceptable level.

DIAGNOSTIC CODES

The charge indicator (TBTS) LED will flash **RED** when charging and remain lit solid **GREEN** when fully charged and in the standby mode. The TBTS will flash **GREEN** when self-testing. If a problem is encountered during the test cycle, the TBTS will flash **RED** according to the diagnostic codes below:

Status Indication	Condition
Steady Green	Battery is Fully Charged
Flashing Green	Battery is Charging
OFF	Emergency Mode
ON/OFF Red Flashes	Charge Failure
1 Red Flash	Battery Failure
2 Red Flashes	Load Failure
Solid Red	Battery Not Connected Failure
Long Red Flash	Outside Temperature Range

ACCESSORIES

- KIT ILD TBTS 2V STAINLESS IP67 PLENUM M10 (*285C62) Replacement Architectural Stainless Steel Test Switch Accessory Kit that ships standard, 2V TBTS, Bi-Color, IP67, Plenum rated (CMP) wire.
- KIT ILD TBTS 2V PLASTIC WHT PLENUM M10 (*287YKW) Optional White Plastic Test Switch Accessory Kit, 2V TBTS, Bi-Color.
- KIT ILD TBTS 2V PLASTIC BLK IP67 PLENUM M10 (*287JCP) Optional Black Plastic Test Switch Accessory Kit, 2V TBTS, Bi-Color.
- KIT ILDQDV1 I/O HARNESS M10 (*287JCG) Replacement Quick disconnect input and output harnesses which ships standard with the product. 12-inch lead length.

ILD 10

Constant Power Emergency LED Driver

AC ACTIVATE - DISABLE / ENABLE

Detects the presence of AC power needed to charge the internal batteries of an emergency driver and automatically commissions the driver when AC Power is permanently supplied, thus eliminating the need for manually connecting the battery during installation.

Disable AC Activate:

1) **Remove AC power from the luminaire.** The emergency unit will then power the luminaire from the battery circuit.

2) **Disconnect the battery circuit through one of the following methods**:

Method 1: Press and hold the TBTS button for six seconds until LED Module shuts off.

Method 2: Unplug the TBTS

Enable AC Activate:

1) **Reconnect the TBTS (If unplugged) and restore AC power to the emergency luminaire**. The AC Activate circuitry will detect the presence of AC power and automatically re-activate the battery charging circuit.

SELF-DIAGNOSTICS / SELF-TESTING - DISABLE / ENABLE

Monthly and annual self-testing feature satisfies the periodic testing requirements in accordance with NFPA 101 while the on-board diagnostics provides system readiness with visual indicators.

Disable Self-Diagnostics:

1) Unit must be in Charge mode (flashing or solid GREEN)

2) Press TBTS 1X and release, then press and hold for 6 seconds

3) After release, TBTS will then flash RED, then solid RED

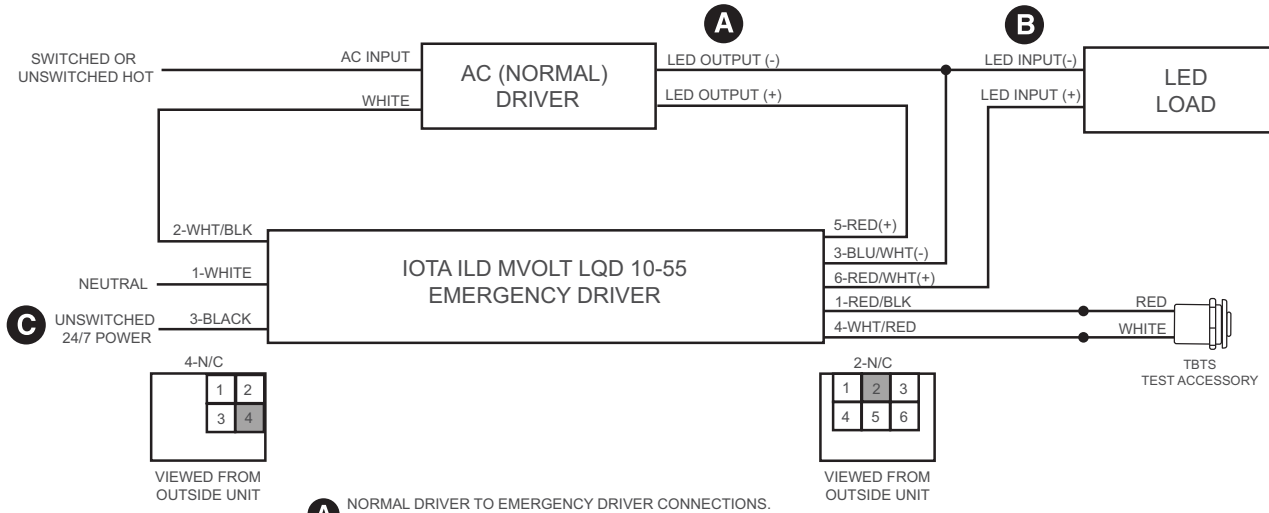
Enable Self-Diagnostics

1) Unit must be in Charge mode (flashing or solid GREEN)

2) Press TBTS 1X and release, then press and hold for 6 seconds

3) After release, TBTS will then flash GREEN, then solid GREEN

WIRING DIAGRAM



A NORMAL DRIVER TO EMERGENCY DRIVER CONNECTIONS. OBSERVE PROPER POLARITY

B LED ARRAY CONNECTIONS. OBSERVE PROPER POLARITY

C THE BATTERY OF THE EMERGENCY DRIVER REQUIRES UNSWITCHED POWER, THEREFORE THE SECOND AC INPUT MUST BE WIRED AHEAD OF THE LOCAL SWITCH.

NOTE: THE TBTS OF THIS UNIT SERVES AS THE UNIT CONNECTOR. TO INITIATE OPERATION, THE TBTS MUST BE CONNECTED AND AC POWER MUST BE SUPPLIED.

Attention: Refer to the IATA website at https://www.iata.org for air transporation requirements and restrictions for lithium batteries and products containing lithium batteries.

Contact IOTA Customer Service to learn more about IOTA standards and best practices for the shipping, handling, and storage of IOTA lithium battery products.

c UL us LISTED

The **ILD 10** is UL Listed and Classified for Field Installation. Refer to the "**CP Series Compatibility and Suitability of Use Guidelines**" addendum for complete project installation requirements.

Warranty: 5-Year Limited Warranty
Complete warranty terms located at *www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx*

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