

eldoLED®

Programming Tool for  
**FieldSET™ LED Drivers**  
for Field Replacement

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# 1 | Introduction

The FieldSET Driver Programming Tool from eldoLED® is a handheld device designed for electrical contractors, installers and distributors to program and configure operating parameters of FieldSET Replacement LED Drivers. The tool is battery operated and does not require a laptop to operate, enabling flexible use in tight spaces.

The FieldSET Driver Programming Tool is capable of programming the two most important driver settings: Output Current (mA) and Minimum Dim Level. The tool is equipped with batch programming functionality, so that the same parameters can be applied to multiple drivers. The FieldSET LED Driver Programming Tool can be used to READ parameters from an existing OPTOTRONIC® driver, and program the same parameters to the FieldSET Replacement LED Driver. After the existing driver settings are READ, the parameters appear on the LCD screen and LED indicators, and can be adjusted accordingly.

If the existing driver is not an OPTOTRONIC brand driver, driver settings can be configured within the programming tool and programmed into the replacement FieldSET driver.

## Table of contents

<b>1   Introduction and Safeguards</b>	2
<b>2   Required Equipment</b>	3
<b>3   FieldSET Replacement LED Driver List</b>	3
<b>4   FieldSET LED Driver Tool at a Glance</b>	4
4.1 Button Functions	4
<b>5   Hardware Connections</b>	5
<b>6   Driver Setup and Operation</b>	6
6.1 Turn device on/off	6
6.2 Read parameters from existing driver	6
6.3 Adjusting the parameters	6
6.4 Programming a replacement driver	6
<b>7   Driver Programming</b>	7
7.1 Scenario 1: OPTOTRONIC LED Driver	7
7.2 Scenario 2: Other Driver with Labeled Programming	7
7.3 Scenario 3: Other Driver with Unknown Programming	8
<b>8   Error Codes</b>	9
<b>9   Battery Replacement</b>	9
<b>10   Specifications</b>	10
10.1 Environmental Specifications	10
10.2 Mechanical Specifications	10
<b>11   Addendum</b>	11

## Important Safeguards



### Warning Risk of Electrical Shock

- Disconnect or turn off power before repair/servicing.
- Verify that supply voltage is correct by comparing it with the replaced driver label information.
- Make all electrical and grounded connections in accordance with the National Electrical Code (NEC) and any applicable local code requirements.



Replacement of existing drivers with FieldSET drivers must be performed by a licensed electrician/electrical contractor. The Product Limited Warranty will be void if a licensed contractor is not used.



FieldSET drivers are intended for the in-field repair of luminaires that have already been installed and operating in the field. FieldSET drivers are not intended for off-site reconditioning of luminaires as defined in Article 100 of NFPA 70, the National Electrical Code.



When using electrical equipment, basic safety precautions should always be followed including the following:

- Do not connect the tool when driver is energized.
- Do not plug tool to the AC side of the driver when driver is energized.
- Only connect the tool between PRG and LED- pins of the driver.
- **Warning:** FieldSET LED Driver Programming Tool is not spill-proof or wet rated.



To avoid risk of damage to the LED board or component, FieldSET drivers should not be programmed to a higher output current than the driver that is currently installed and being replaced/repared.



FieldSET drivers by eldoLED are covered by a 5-year limited warranty. This is the only warranty provided and no other statements create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms can be found at [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

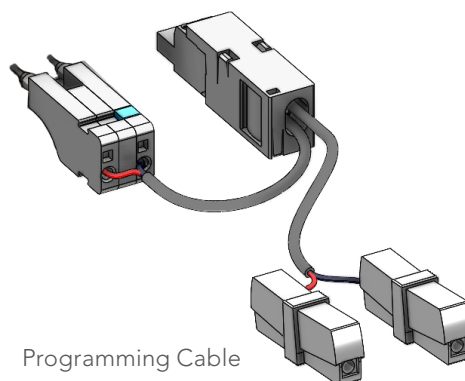
## SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

Visit [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

## 2 | Required Equipment



FieldSET LED Driver Programming Tool



Programming Cable



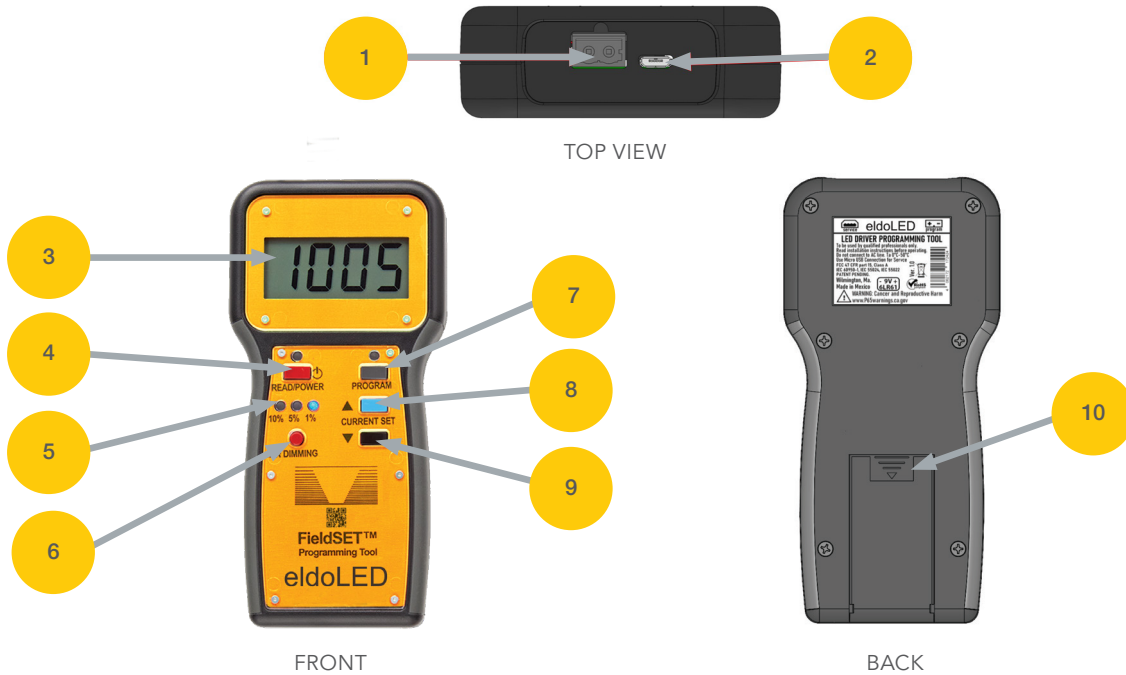
## 3 | Supported LED Driver List

The FieldSET LED Driver Programming Tool can program the FieldSET replacement LED drivers with the desired parameters for replacement in the field. Below is the list of FieldSET Replacement LED Drivers.

### FieldSET Replacement LED Driver List

Driver Models	Driver Description	Application	UPC
OTi 30W UNV 1A0 1DIM DIM-1 FS	30W Linear 120-277V; 0-10V, 1% min dim	Indoor	197589479997
OTi 50W UNV 1A4 1DIM DIM-1 FS	50W Linear 120-277V; 0-10V, 1% min dim	Indoor	197589479973
OTi 85W UNV 2A3 1DIM DIM-1 FS	85W Linear 120-277V; 0-10V, 1% min dim	Indoor	197589479980
OTi 25W UNV 1A2 1DIM DIM-1 FS	25W Compact 120-277V; 0-10V, 1% min dim	Indoor	197589480009
OTi 25W UNV 1A2 1DIM DIM-1 J-HOUSING FS	25W Compact 120-277V; 0-10V, 1% min dim	Indoor	197589480023
OTi 40W UNV 1A4 1DIM DIM-1 FS	40W Compact 120-277V; 0-10V, 1% min dim	Indoor	197589480016
OTi 40W UNV 1A4 1DIM DIM-1 J-HOUSING FS	40W Compact 120-277V; 0-10V, 1% min dim	Indoor	197589480030
OTi 100W UNV 1250C 2DIM P6 FS	100W Outdoor 120-277V; 0-10V, 10% min dim	Industrial/ Outdoor	197589480306
OTi 180W UNV 1250C 2DIM P6 FS	180W Outdoor 120-277V; 0-10V, 10% min dim	Industrial/ Outdoor	197589480290

## 4 | FieldSET™ LED Driver Programming Tool at a Glance



### 4.1 Button Functions

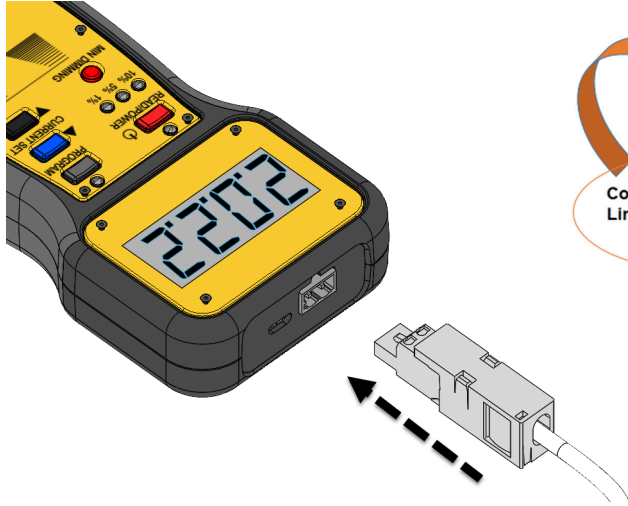
1	Programming Cable Port	a. Allows connection of programming cable to FieldSET Driver Programmer Tool
2	Micro USB	a. Connects to laptop for software updates
3	LCD Display	a. LCD display will present: Output current setting and error codes b. Display flash indicates successful READ/PROGRAM event
4	READ/POWER	a. When device is OFF, press and hold this button for 1 sec to turn ON the device b. When device is ON and properly connected to the LED driver, this button will read the driver settings c. After READ function, output current settings will be presented on the display, and minimum dimming level will be displayed by the Minimum Dimming Indicators d. Audible beep is heard during READ function and display flashes when complete e. READ function is available for any OPTOTRONIC by eldoLED driver f. To turn OFF the device, push and hold the button for 1 second
5	MIN DIMMING Indicators	a. Illuminated LED indicator shows the selected minimum dim level b. Flashing LED indicators show that Dim-to-Off is enabled and the driver will enter standby mode, turning off the LED output when dimmed below the minimum dimming level. c. Solid LED shows that Dim-to-Off is disabled. Driver cannot be turned off (0%) by 0-10V controls; only AC Mains can turn off the driver.
6	MIN DIMMING Selector	a. User can select the Minimum Dimming Level to 1% (blue), 5% (yellow), and 10% (orange) - limited by range of the existing driver to be replaced. b. 0% minimum dimming level, also known as Dim-to-Off, can be selected by pushing and holding the Min Dimming button for 3 seconds.
7	PROGRAM	a. PROGRAM function will apply the displayed parameters to the connected driver b. Audible beep is heard during PROGRAM function and display flashes when successful c. PROGRAM function is available for FieldSET LED drivers (see table FieldSET Replacement LED Driver List)
8/9	CURRENT SET	a. User can set output current levels using up/down increment buttons within the range 150-3000mA

## 5 | Hardware Connections

NOTE: It is strongly recommend you remove the driver you are replacing from the fixture before following the steps below. The driver must be disconnected from Mains Power before removing or making connections.

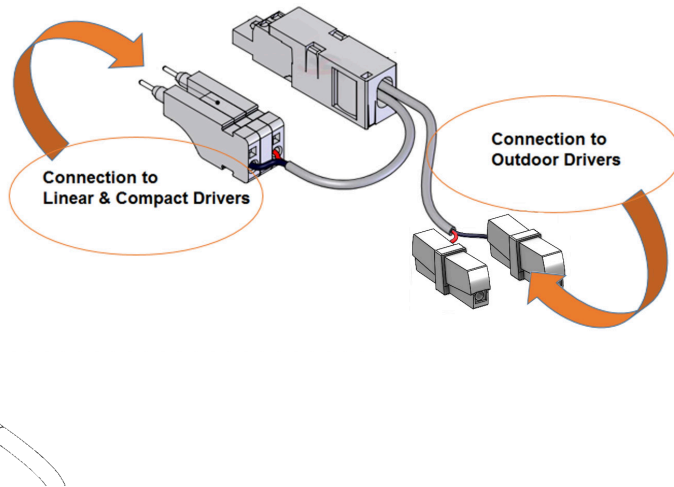
### Step 1

Connect programming cable to FieldSET Driver Programming Tool



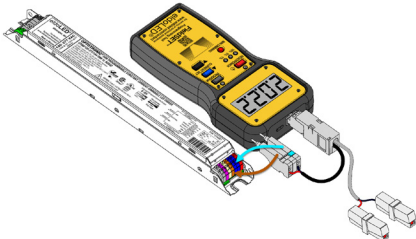
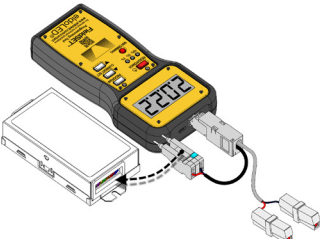
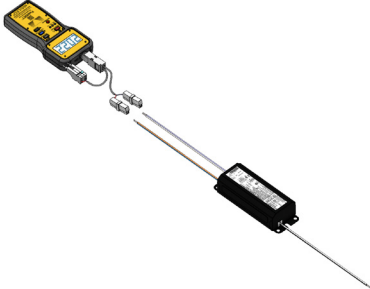
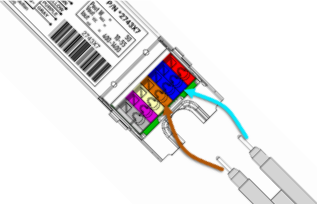
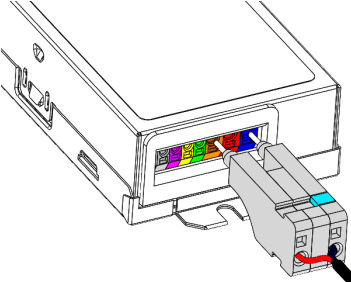
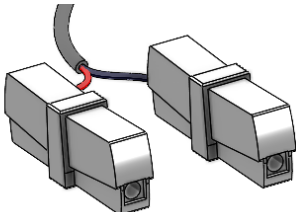
### Step 2

Connect programming cable to driver



### Step 3

Connect programming cable to driver PRG and LED Red POS (+) and Black NEG (-) terminals on the driver

Linear	Compact	Outdoor
		
<p>Note: Pin assembly must be slightly pinched for linear models to accommodate the terminal's pitch.</p> 		
<p><b>Linear/Compact:</b> PRG = <b>Brown</b> LED- = <b>Blue</b></p>		<p><b>Outdoor:</b> PRG = <b>Orange</b> LED- = <b>Blue</b></p>

## 6 | Driver Setup and Operation

### 6.1 Turn ON/OFF the device

1. Push and Hold the READ/POWER button for 3 seconds to turn ON the FieldSET LED Driver Programming Tool.
  - a. Display will flash and audible beep indicates turned ON.
  - b. Display will display double zeros (00) upon initial (out of the box) start-up. After first use, the display and LED indicators will show the previous entered settings when the programmer is turned on.
  - c. If device does not turn ON, check that the batteries are properly inserted and charged. The device uses (1) 9V battery.
2. Device is ready for use.
3. To turn OFF the device, push and hold READ/POWER for 5 seconds.

### 6.2 READ parameters from original OPTOTRONIC driver (note: steps 6.2 only applicable to OPTOTRONIC drivers)

1. Make sure the existing driver is not energized.
2. Press the READ button to enter Read Mode 1.
3. Connect the programming cable to the original driver PRG and LED(-) terminals.
  - a. Audible beep and screen flash indicate successful READ.
4. The driver's settings will be loaded to the programming tool and displayed on the LCD and LED indicators.
5. Press READ button again to exit READ mode. Settings will be stored.

**NOTE: Mode 1 allows the user to customize the driver with preferred settings. The FieldSET Programming Tool is defaulted to Mode 1.**

**Using the FieldSET Programming Tool in Mode 2 allows the user to copy and paste the original driver settings but does not allow the user to modify the driver settings. For Mode 2 programming instructions, reference the Addendum of this FieldSET User Guide.**

### 6.3 Adjust the parameters

1. Use the CURRENT SET to adjust the output current.
2. Use the MIN DIMMING selector to adjust the minimum dimming level.
3. If the driver needs to be dimmed to off (standby mode) by a 0-10V control system, Dim-to-Off can be enabled by pushing and holding the MIN DIMMING.

**WARNING: Increasing the drive current (mA) level of a replacement driver will violate the interchangeability requirements for drivers rated as as Class P by Underwriters Laboratories.**

### 6.4 PROGRAM the FieldSET replacement driver

1. Make sure the driver is not energized.
2. Once the correct settings are loaded to the Programming Tool, press the PROGRAM button to enter program mode.
  - a. The device will beep and wait for connection to a driver
3. Connect the programming cable to the FieldSET driver PRG and LED(-) terminals
  - a. Audible beep and screen flash indicate successful PROGRAM
4. Press PROGRAM button again to exit programming mode.
5. The FieldSET Driver is now ready to install. Refer to the driver wiring instructions.

## 7 | Driver Programming

Three scenarios exist when replacing an originally-installed driver. Please refer to the following instructions for the programming scenario that applies to your replacement:

### Scenario 1

Original driver is a programmable OPTOTRONIC LED driver

#### Step 1

Connect the Programming Cable to the FieldSET Programmer and press and hold the POWER button to turn on. Screen will automatically load settings from prior use.

#### Step 2

To read the settings from the Original Driver, press the READ button and then connect the Programming Cable to the Original Driver (make sure the driver is not energized). If the Read is successful, the screen will flash, audible sound will be heard, and the driver's programmed settings will be displayed on the screen and LED indicators.

#### Step 3

Make any needed adjustments to the program settings (if necessary). Use the CURRENT SET buttons to adjust the output current level and use the MIN DIMMING button to adjust the minimum dimming level. If the FieldSET Replacement Driver should match the exact performance of the Original Driver, do not make any changes to the settings.

**WARNING: increasing the drive current (mA) level of a replacement driver will violate UL Class P's interchangeability requirements.**

#### Step 4

To apply the settings to the FieldSET Replacement Driver, first press the PROGRAM button and then connect the Programming Cable to the FieldSET Replacement Driver. If the settings were successfully loaded, the screen will flash DONE and an audible sound will be heard. Press PROGRAM button again to exit programming mode.

### Scenario 2

Original driver is a brand other than OPTOTRONIC and has a label that includes the output current (mA or A) and/or dim level settings

#### Step 1

Connect the Programming Cable to the FieldSET Driver Programmer Tool and press and hold the POWER button to turn on. Screen will automatically load settings from prior use.

#### Step 2

Use the CURRENT SET buttons to adjust the output current level on the screen and use the MIN DIMMING button to adjust the minimum dimming level to match the settings listed on the Original Driver's label.

#### Step 3

To apply the settings to the FieldSET Replacement Driver, first press the PROGRAM button and then connect the Programming Cable to the FieldSET Replacement Driver. If the settings were successfully loaded, the screen will flash DONE and an audible sound will be heard. Press PROGRAM button again to exit programming mode.

## 7 | Driver Programming (continued)

### Scenario 3

Original driver is a brand other than OPTOTRONIC and does not have a label that includes the output current (mA or A) and/or dim level settings

Contact the fixture manufacturer and ask for the driver settings used in the light fixture. Typically, they will be able to look up this information by fixture part number/description. If the fixture manufacturer is not available, or unable to provide the driver settings, the only option is to measure the driver's output current and dim level in a working system. **Measurements should only be done by qualified personnel with electrical experience or basic training.** Visit an identical working light fixture (same exact part number) to perform the measurement (a multimeter is required.)

#### Measurement Steps - Output Current (mA):

- De-energize the fixture and access the Driver.
- Disconnect any wires connected to the Driver's DIM(+) PURPLE and DIM(-) GRAY or PINK terminals/wires. DIM(+) and DIM(-) should be open-circuit so the Driver outputs 100% when energized.
- Set the Multimeter to measure DC current (mA).
- Connect the Multimeter to measure the Driver's output current to the LED.
- If using a Current Clamp Probe, clamp around the LED(+) RED output wire of the Driver.
- If using Test Leads, you will need to break the connection between Driver's LED(+) RED output and the LED (+) input. Connect the Test Leads in series to close the circuit.
- Safely energize the fixture and measure the output current (mA). Note this value for later use. De-energize the fixture. Leave the Multimeter connected for minimum dim level measurement.

#### Measurement Steps - Minimum Dim Level:

- To measure the minimum dim level, keep the Multimeter installed in the same way as before, and short the Driver's DIM(+) PURPLE and DIM(-) GRAY or PINK terminals/wires. Shorting DIM(+) and DIM(-) will force the Driver to dim its output to the minimum level. Please note, minimum dimming level could be 0% (off).
- This can be achieved by inserting a wire jumper, solid copper 16-22 AWG, between DIM(+) PURPLE and DIM(-) GRAY or PINK.
- If the driver has flying leads, simply connect the DIM(+) and DIM(-) together using a WAGO style Quick Connect or similar.
- Safely energize the fixture and measure the output current (mA) during dimmed state with the Multimeter.
- Calculate the minimum dimming level: Divide the output current during full dimmed state by the output current during full 100% state. It will likely be 1%, 5%, or 10%. Note this value for later use.
- De-energize the fixture. Remove the Multimeter and re-wire the fixture.

### Step 1

Connect the Programming Cable to the FieldSET Programmer and press and hold the POWER button to turn on. Screen will automatically load settings from prior use.

### Step 2

Use the CURRENT SET buttons to adjust the output current level on the screen and use the MIN DIMMING button to adjust the minimum dimming level to match the settings measured from the identical working fixture.

### Step 3

To apply the settings to the FieldSET Replacement Driver, first press the PROGRAM button and then connect the Programming Cable to the FieldSET Replacement Driver. If the settings were successfully loaded, the screen will flash DONE and an audible sound will be heard. Press PROGRAM button again to exit programming mode.





## 10 | Specifications

### Power

Input Voltage (DC)	9V (Battery Operated)
USB Interface	USB 1.1 or 2.0
USB Port Type	Micro-B
USB Cable Length	3 feet
Programming Cable	2-Conductor (22AWG) – Indoor/Outdoor
Programming Cable Length	3 feet

### 10.1 Environmental Specifications

Ambient Operating Temperature	0°C to +50°C
Max. Storage Temp.	0°C to +50°C
Regulatory Standards	
Environmental Standards	RoHS, REACH
IP Rating	IP20
EMI Compliance	FCC Part 15 Class A

### 10.2 Mechanical Specifications

#### Housing

Length	6.5" (165mm)
Width	3.1" (80mm)
Height	1.1" (28mm)



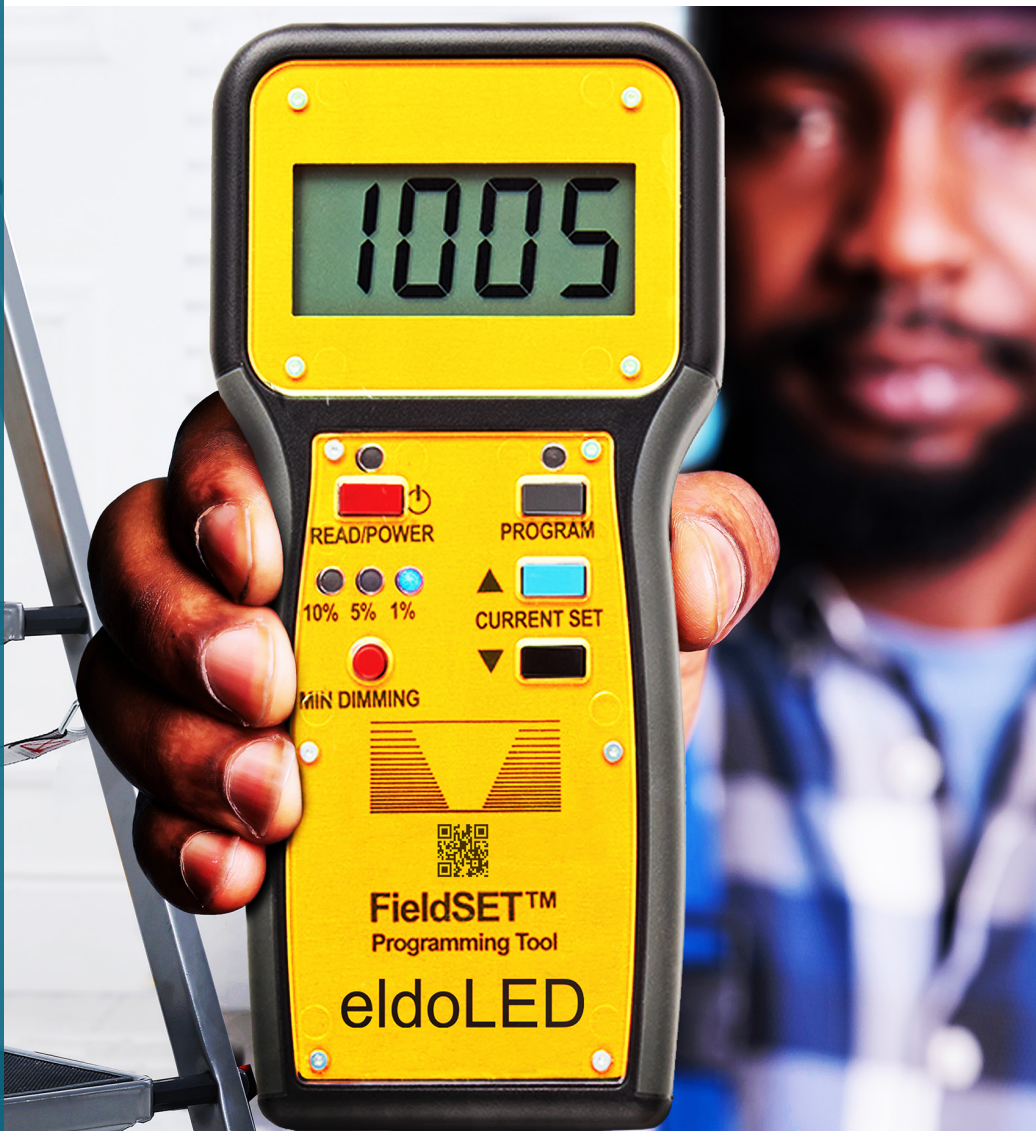
## 11 | Addendum

### Mode 2 – OPTOTRONIC Driver Programming Instructions

1. Make sure the existing driver is not energized.
2. Connect the Programmer to the LED driver
3. Turn the Programmer on and keep it in steady state (both READ & PROGRAM lights are off – no beeping sound)
4. Press the READ & the Current(-) at the same time button to enter Read Mode 2 (for 3 seconds.)  
The screen will show "OP\_2" and flash with the copied output current and dim profile.
  - a. The device will beep and wait for connection to a driver.
5. Connect the programming cable to the original driver PRG and LED(-) terminals.
  - a. Audible beep and screen flash indicate successful READ.
6. The driver's settings will be loaded to the programming tool. The display will show only the output current, dimming level and D2O status (any other feature such as CLO if on the copied will not be visible.)
7. Press READ button again to exit READ mode. Settings will be stored. In Read Mode 2, parameters cannot be adjusted.

**NOTE: Settings are saved even if programmer is turned off (this is visible when "OT\_2" is flashing on LCD.**

**TO REMOVED SAVED INFORMATION: Place the unit in steady state (READ & PROGRAM lights are off) and read a driver. You will not see "OT\_2" flash on the LCD.**



[www.acuitybrands.com](http://www.acuitybrands.com)

Find more resources at  
[www.acuitybrands.com/FieldSET](http://www.acuitybrands.com/FieldSET)



For Technical Support, contact 1-800-241-4754  
or [eldoLEDtechsupport@acuitybrands.com](mailto:eldoLEDtechsupport@acuitybrands.com)

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Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.