



Type(s)
Project
Date
Notes

GENERAL INFORMATION

The Bicolor Luminaire Controller (ELED2-BCL) is designed to operate with bicolor luminaires designed for greenhouses or other controlled horticultural environments where intensity and tunable white color temperature control is desired. With an integral 20 A relay and two robust 0–10 V outputs, the ELED2-BCL modulates light intensity and blends cool and warm LEDs to provide the desired correlated color temperature (CCT) output.

Light intensity and tunable white color temperature is controlled through manual switch action, ambient light level and timeclock commands. Typical applications begin with automating lighting levels based on user defined time schedules while delivering daylighting control for energy savings during peak daytime hours.

APPLICATIONS

- Greenhouses
- CEA environments

ORDERING INFORMATION

Bicolor Luminaire Controller

MODEL	DESCRIPTION
ELED2-BCL 120-277	Bicolor Luminaire Controller, 1/2 in nipple mount, 120–277 VAC

FEATURES

- Designed for LED fixtures with two 0–10 V channels for tunable cool and warm LED white color temperature control
- Integrated daylight harvesting control supporting open and closed loop applications
- Multiple embedded preset values allow lighting scene recall
- Lockout feature allows masking of sensor inputs based on time-of-day events
- Occupancy state options of automatic partial-ON control or vacancy control with manual ON, partial/full-OFF
- Central Command support for BEMS gateway or timeclock control
- Dynamic CCT set point or manual control of tunable white color temperature LED fixtures
- Pre-linking and pre-commissioning available when sold as a system through Echoflex or RAYN Growing Systems
- Range Confirmation allows optimal placement of linked sensors
- Easy commissioning options include embedded Simple Tap technology plus Garibaldi Pro, Echoflex’s remote commissioning software
- Easy installation on electrical junction boxes with 1/2 in nipple mount
- Energy code compliant

SPECIFICATIONS

HARDWARE

- Power supply: 120–277 VAC at 50/60 Hz
- Power consumption: 950 mW max. (no load)
- Inputs: LEARN and CLEAR buttons
- Outputs: 2 Tri-Color LED indicators, Learn and Power
- Maximum output load: 0–10 V with 100 mA sinking current

SAFETY STANDARDS MAXIMUM LOAD: TYPE AND RATING

- Electronic ballast or LED driver:
 - 16 A at 120–277 VAC
- Standard/Magnetic ballast:
 - 20 A at 120–277 VAC

COMMUNICATIONS

- 902 MHz (U) radio frequency
- Wireless range of up to 24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line-of-sight
- Integrated whip antenna

ENVIRONMENTAL

- Operating temperature: -5°C to 50°C (23°F to 122°F) ambient
- Relative humidity: 5–93% non-condensing

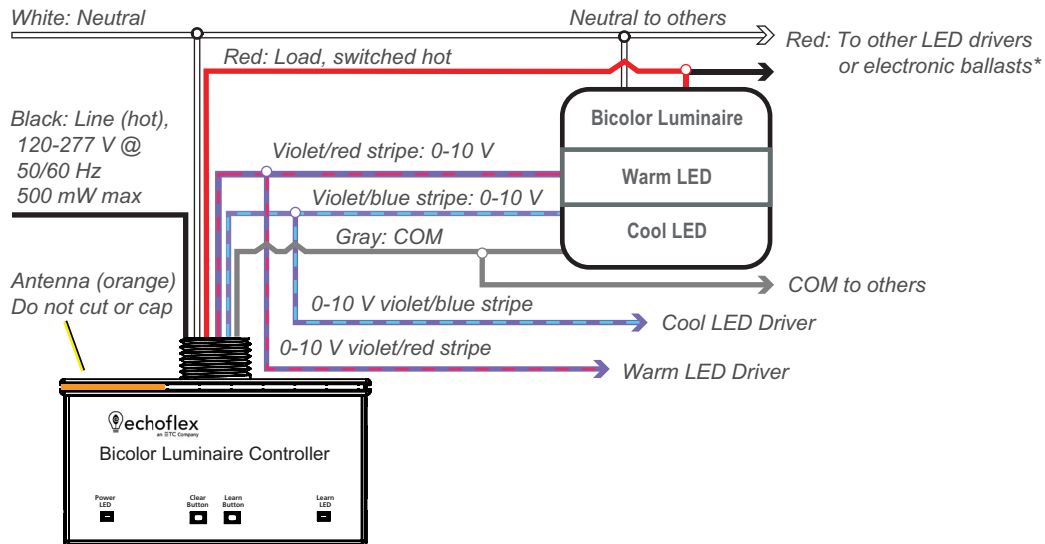
REGULATORY AND COMPLIANCE

- California Energy Commission Title 24 - CEC
- Washington State Energy Code - WSEC
- ANSI / ASHRAE / IES Standard 90.1
- International Energy Conservation Code - IECC
- New York City Energy Conservation Code - NYCECC
- UL Standards: UL 924, UL 60730, UL 2043 Plenum rated
- Certified to CAN/CSA Std. E60730
- FCC Part 15.231 - Remote Control Transmitter
- Industry Canada RSS-210

Remote Devices Supported

MODEL	DESCRIPTION
EEP: F6-02-01/02	Light and Blinds Control - EU and US/Canada applications
EEP: D2-14-25	Light Sensor and Correlated Color Temperature (CCT)
EEP: A5-06- (01-05)	Light Sensor
EEP: A5-07-01	Occupancy Sensor - with supply voltage
EEP: A5-37-01	Energy Management - Demand Response
EEP: A5-38-08	Central Command - switching, dimming, set point types
EEP: D2-14-56	Light, Color Temperature (CCT), and photosynthetic photon flux density (PPFD) Sensor
EEP: D2-15-5E (pending)	Greenhouse multi-sensor
MSC	Structured Command, manufacturer specific, contact Echoflex for details

WIRING DIAGRAM



*Maximum Switching Load	
ELED2-BCL	20 A @ 120-277 V, electronic ballast or LED driver
0-10 V Load	100 mA sinking
Max. Impulse Voltage	4000 V
Internal Relay	Type 1.C
0-10 V Output	Class 1 circuit independently mounted control for panel-mount/surface-mount

Bicolor Luminaire Controller Weight and Dimensions†

MODEL	HEIGHT		WIDTH		DEPTH		WEIGHT	
	mm	in	mm	in	mm	in	g	oz
ELED2-BCL	50	2.0	91	3.6	50	2.0	397	14

†Note: Mounts in typical flush-mount North American style two-gang electrical boxes, minimum depth 51 mm (2.0 in)

