

Streetlight Photocontrols, 20-Year Design Life



1. Scope

This standard covers the requirements for twenty-year design life streetlight photocontrols.

This material standard applies to Seattle City Light (SCL) Stock No. 013129.

Standard-life streetlight photocontrols are outside the scope of this Standard.

2. Application

Photocontrols are used as light-sensing switches to control luminaires. Photocontrols are designed to switch lamps off during the day and switch lamps on at night.

Twenty-year design life photocontrols are intended for use with light-emitting-diode (LED) style streetlight luminaires.

Twenty-year design life photocontrols are technically compatible with standard high-pressure sodium (HPS) luminaires, but due to their relatively high initial material cost and long life, are considered a poor match for that application.

3. Industry Standard

Photocontrols shall meet the applicable requirements of the following industry standard:

ANSI C136.10-2006 - American National Standard for Roadway and Area Lighting Equipment—Locking-type Photocontrol Devices and Mating Receptacles—Physical and Electrical Interchangeability and Testing

4. Requirements

Assembled photocontrols and each of their individual components shall be designed and constructed to have a nominal life of 20 years.

Color code	Black
Plug type	Locking type, three-pole, three-wire
Photosensor type	Silicon
Operating voltage range (Vac)	105 to 305
Load rating, LED, minimum (W)	1,000
Load rating, incandescent lamp, minimum (W)	1,000
Load rating, high-intensity discharge (HID), minimum (VA)	1,800
Operating temperature range, ambient (degrees C)	-40 to +70
Turn on response time range, seconds	0.5 to 5.0
Turn off response time range, seconds	0.5 to 5.0
Turn on light level (fc)	2.8 +/- 0.6
Turn off light level, maximum (fc)	5.1
Turn-off/turn-on ratio, nominal	1.5
Failure mode, nominal	Fail-on

Photocontrol circuit boards shall be constructed of glass epoxy material.

Circuit board components shall be protected from the environment with a thin, transparent coating that does not promote heat build up.

4. Requirements, continued

Each photocontrol shall be provided with a means to conveniently and permanently record date of installation and date of removal.

Each photocontrol shall be provided with an internal, 160 joule minimum, metal-oxide varistor (MOV) type surge arrester.

Photocontrols shall be provided with a means of sealing according to the requirements of ANSI C136.10, Section 4.3.

Photocontrol base gasket shall be fabricated from a neoprene blend.

5. Design Changes

Manufacturer shall inform SCL in writing of all design changes that could affect the product's understood or published capabilities.

6. Testing

Photocontrols shall be tested according to the requirements of ANSI C136.10. Test results shall be provided upon request.

7. Marking

Each individual photocontrol shall be marked with the following information:

- Manufacturer's name
- Model number
- Voltage rating
- Load rating
- North orientation
- Rotation of installation and removal

8. Packaging

Photocontrols shall be individually packaged to prevent damage from storage and handling.

From the outside of each individual package, the manufacturer's name and model number shall be clearly visible.

Each shipping container shall be legibly marked with the following information:

- Manufacturer's identification
- Product description
- Seattle City Light's Purchase Order Number
- Seattle City Light's Stock Number

Shipping container weight shall not exceed 50 pounds.

9. Issuance

Stock Unit: EA

10. Sources

Chao, Yaochiem; SCL Standards Engineer and subject matter expert of 5731.17

SCL Material Standard 5693.10; "Streetlight Photocontrols, 20-Year Design Life" (canceled/renumbered)

SCL Material Standard 5731.12; "Streetlight Photocontrols" [*Standard Life*]"

Shipek, John; SCL Standards Engineer, and subject matter expert and originator of 5693.10

www.acuitybrands.com

www.intermatic.com

www.ripleylightingcontrols.com

www.sun-tech.biz

11. Approved Manufacturers

Manufacturer	Catalog No.
Dark To Light	DLL 127-2.8-BK-JU
Intermatic	LED 4536S35K
Ripley Lighting Controls	6390LL-BK-2.8
Sun-Tech (Sunrise Technologies, Inc.)	TRS-2-8190