

# 12V AC Retrofit Koto™ LED Module

Works with 3" and 4" ELCO 12V AC Housings with 3" and 4" Koto™ Trims as a retrofit option



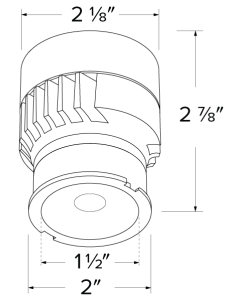
## Features

- 9W, 800 lm, 3000K
- Works with 3" & 4" MR16 Bi-Pin Low Voltage Housings & Koto Trims 2 1/8" O.D. - 2 7/8" H
- Integrated 12V AC Dimmable Driver
- Works with Electronic and Magnetic 12V AC transformers
- Works in 3" and 4" ELCO Low Voltage Housings with GU5.3 Base.
- Excellent color rendering 93+ CRI
- Standard 38° Lens installed, 25° and 60° lens included with each module - Optional Lens: 18° (EP731C)
- Optional: Louver (L45), Linear Lens (L46), Spread Lens (L47), Single Asymmetric Lens (L54), Double Asymmetric Lens (L55)
- Title 24 JA8-2019 Compliant
- Meets Energy Star Requirements
- Covered by U.S. PATENTS and Patents Pending

## Specifications

<b>Wattage</b>	9W
<b>Lumens</b>	800 lm
<b>Voltage</b>	12V AC
<b>Color Temp.</b>	2700K - SunsetK
<b>Lamp Type</b>	LED
<b>Beam Angle</b>	25°, 38°, 60°
<b>CRI</b>	90

## Dimensions



## Technical Details

**Optics:** Frosted polycarbonate module lens diffuses light evenly throughout while reducing glare with LED technology.

**Construction:** Integrated 12V AC driver and light engine. Diecast aluminum body with heat fins allow for efficient cooling.

**Installation:** Twist-lock design for toolless trim installation. Works in 3" and 4" ELCO Low Voltage Housings with GU5.3 Base using 3" and 4" Koto™ Trims.

**Electrical:** Module connects to 12V AC power supply. High efficiency driver with a power factor >0.9. Start time of less than 0.75 seconds.

**LED Technology:** Extremely accurate Color Rendering Index of 90+. Lumen Maintenance of 50,000 hours L70 Life based on LM80 standardized test results. Superior Thermal Management by utilizing integrated heat sink. Instant On to Full Brightness technology. No LED pixilation.

**Sunset:** Sunset color temperature is our dim-to-warm LED technology that allows the color temperature to become warmer as the product is dimmed. Our SUNSET items start at 3000K and go as low as 1800K when dimmed. For Sunset dim technology be sure to order an item with "Sunset" in the Color Temperature (CCT) attribute.

**Dimmability:** Dims down to 10%. For full list of dimmers, refer to the Dimmer Compatibility List. Industry leading dimming.

**Warranty:** ELCO Products are built to last with a 5-year Limited Warranty.

## Product Numbers

Item	Lamp type	Lumens	CCT	Watts	Voltage	Beam Angle
<b>ELK0827-12</b>	LED	800 lm	2700K	9W	12V AC	25°, 38°, 60°
<b>ELK0830-12</b>	LED	800 lm	3000K	9W	12V AC	25°, 38°, 60°
<b>ELK085D-12</b>	LED	800 lm	SunsetK	9W	12V AC	25°, 38°, 60°

**Product Number Builder** Example: **ELK0827-12**

12V AC Retrofit Koto™ LED  
Module

**ELK**

Lumens

**08** 800 (9W)

Color Temp.

**27** 2700K  
**30** 3000K  
**SD** Sunset<sup>1</sup>

Voltage

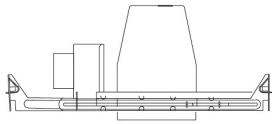
**-12** 12V AC

<sup>1</sup> Sunset, Dim to Warm technology, automatically transitions from 3000K to 1800K when dimmed

# Compatible Products

For use with **Koto™ 12V AC Retrofit LED Light Engine**

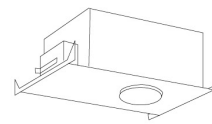
## For Retrofitting 3" Bi-Pin 12V AC GU5.3 Housings



3" Low Voltage Housing  
**New Construction**



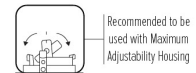
3" Low Voltage Housing  
**Remodel**



3" Low Voltage Housing  
**New Construction**

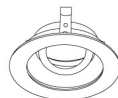
CAT NO.	SPECIFICATIONS	CAT NO.	SPECIFICATIONS	CAT NO.	SPECIFICATIONS
EL2699LDICA	Magnetic Transformer	EL2699LDRICA	Magnetic Transformer	EL2699ICA	Magnetic Transformer, 50W Max.
EL2699LDICEA	Electronic Transformer	EL2699LDRICEA	Electronic Transformer	EL2699ICEA	Electronic Transformer, 50W Max.
EL2699A	120V Magnetic Transformer	EL2699RA	120V Magnetic Transformer		
EL2699-277A	277V Magnetic Transformer	EL2699R-277A	277V Magnetic Transformer		
EL2699EA	120V Electronic Transformer	EL2699REA	120V Electronic Transformer		

## 3" Pex™ Twist-On Trims



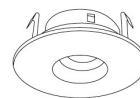
**Round Deep Reflector**

**ELK3618**  
Finishes:  
(W, BB, BZ, B, C, H)



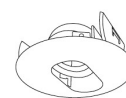
**Round Adjustable Gimbal**

**ELK3629**  
Finishes:  
(W, BB, BZ, B, C, H)



**Round Adjustable Pinhole**

**ELK3627**  
Finishes:  
(B, BB, BZ, B, H)



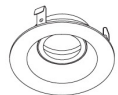
**Round Adj. Slot Aperture**

**ELK3620**  
Finishes:  
(W)



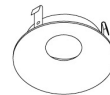
**Round Adj. Wall Wash**

**ELK3622**  
Finishes:  
(W)



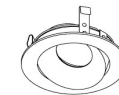
**Round Regressed Eyeball**

**ELK3653**  
Finishes:  
(W, BB, B)



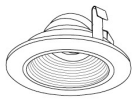
**Round Curved Reflector**

**ELK3672**  
Finishes:  
(W, B)



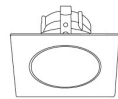
**Round Directional Gimbal**

**ELK3679**  
Finishes:  
(W, BB, B, H)



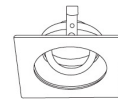
**Round Adjustable Baffle**

**ELK3693**  
Finishes:  
(W)



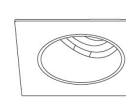
**Square Deep Reflector**

**ELK3318**  
Finishes:  
(W, BB, BZ, B, C, H)



**Square Adjustable Reflector**

**ELK3329**  
Finishes:  
(W, BB, BZ, B, C, H)



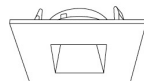
**Square Adj. Wall Wash**

**ELK3322**  
Finishes:  
(W)



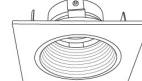
**Square Adjustable Pinhole**

**ELK3327**  
Finishes:  
(W, BB, BZ, B, H)



**Square Reflector**

**ELK3341**  
Finishes:  
(W, BB, BZ, B)



**Square Adjustable Baffle**

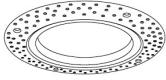
**ELK3393**  
Finishes:  
(W)

\*Finishes: **W** - All White, **BB** - All Black, **BZ** - All Bronze, **B** - Black Reflector w/White Ring, **C** - Chrome Reflector w/White Ring, **H** - Haze Reflector w/White Ring

# Compatible Products

For use with **Koto™ 12V AC Retrofit LED Light Engine**

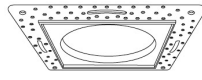
## 3" Pex™ Flush Mount Trim Adaptors



**Round Flush Mount Trim Adaptor**

**EL3FMR**

Compatible 3" Pex™ Round trims:  
ELK3618, ELK3629, ELK3627, ELK3693,  
ELK3620, ELK3622 Series



**Square Flush Mount Trim Adaptor**

**EL3FMS**

Compatible 3" Pex™ Square trims:  
ELK3318, ELK3329, ELK3322, ELK3327,  
ELK3341, ELK3393 Series

## 3" Pex™ Trimless



Recommended to be  
used with Maximum  
Adjustability Housing



**Round Trimless  
Reflector**

**ELK308**

Finishes:  
**(W, B, H)**



**Round Adjustable  
Trimless Reflector**

**ELK315**

Finishes:  
**(W, B, H)**



**Round Trimless  
Spackle Frame**

**EL3SFR**

For use with ELK315



**Round Knife Edge Wood  
Ceiling Trim w/Mounting Clips**

**EL3WCR**

Finishes:  
**(W, B)**



**Square Trimless  
Reflector**

**ELK370**

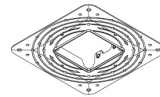
Finishes:  
**(W, B, H)**



**Square Adjustable  
Trimless Reflector**

**ELK381**

Finishes:  
**(W, B, H)**



**Square Trimless  
Spackle Frame**

**EL03SFS**

For use with ELK370 & ELK381

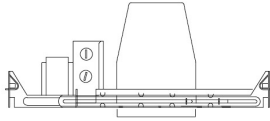
Finishes: **W** - All White, **BB** - All Black, **BZ** - All Bronze, **B** - Black w/White Ring, **C** - Chrome w/White Ring, **H** - Haze w/White Ring, **B\*** - All Black (For ELK315, ELK370, & ELK381)

# Compatible Products



For use with **Koto™ 12V AC Retrofit LED Light Engine**

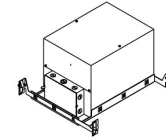
## For Retrofitting 4" Bi-Pin 12V AC GU5.3 Housings



4" Low Voltage Housing  
**New Construction**



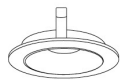
4" Low Voltage Housing  
**Remodel**



4" Low Voltage Housing  
**New Construction**

CAT NO.	SPECIFICATIONS	CAT NO.	SPECIFICATIONS	CAT NO.	SPECIFICATIONS
EL1499LDICA	Magnetic Transformer	EL1499LDRICA	Magnetic Transformer	EL1499ICA	Magnetic Transformer, 50W
EL1499LDICEA	Electronic Transformer	E1499LDRICEA	Electronic Transformer	EL1499ICA-277	Magnetic Transformer, 50W
EL1499A	Magnetic Transformer, 50W	EL1499RA	Magnetic Transformer	EL1499ICA-L	Magnetic Transformer, 50W
EL1499-277A	Magnetic Transformer, 50W	EL1499REA	Electronic Transformer	EL1499ICEA	Electronic Transformer, 50W
EL1499EA	Electronic Transformer, 50W				

## 4" Pex™ Twist-On Trims



**Shallow Reflector**  
**ELK4116**  
Finishes:  
(W, H)



**Deep Reflector**  
**ELK4118**  
Finishes:  
(W, BB, BZ, B, C, H)



**Adjustable Reflector**  
**ELK4129**  
Finishes:  
(W, BB, BZ, B, C, H)



**Adjustable Reflector with Clear Glass**  
**ELK4111**  
Finishes:  
(W, BB, BZ, B, C, H)



**Adjustable Reflector with Frosted Lens**  
**ELK4112**  
Finishes:  
(W, BB, BZ, B, C, H)



**Rotatable Slot Aperture**  
**ELK4120**  
Finishes:  
(W)



**Adjustable Wall Wash**  
**ELK4122**  
Finishes:  
(W)



**Adjustable Pinhole**  
**ELK4127**  
Finishes:  
(W, BB, BZ, B, H)



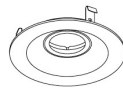
**Adjustable Pinhole with Frosted Glass**  
**ELK4125**  
Finishes:  
(W, BB, BZ, B, H)



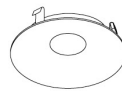
**Slot Aperture**  
**ELK4130**  
Finishes:  
(W)



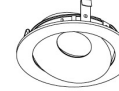
**Adjustable Spot**  
**ELK4188**  
Finishes:  
(W, B, BZ)



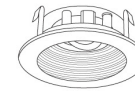
**Regressed Eyeball**  
**ELK4153**  
Finishes:  
(W, BB, B)



**Curved Reflector**  
**ELK4172**  
Finishes:  
(W, B)



**Directional Gimbal**  
**ELK4179**  
Finishes:  
(W, BB, B, H)



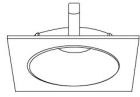
**Adjustable Baffle**  
**ELK4193**  
Finishes:  
(W, BB, B)

\*Finishes: **W** - All White, **BB** - All Black, **BZ** - All Bronze, **B** - Black Reflector w/White Ring, **C** - Chrome Reflector w/White Ring, **H** - Haze Reflector w/White Ring

# Compatible Products

For use with **Koto™ 12V AC Retrofit LED Light Engine**

## 4" Pex™ Twist-On Trims



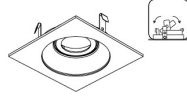
**Shallow Reflector**

**ELK4216**  
Finishes:  
(W, H)



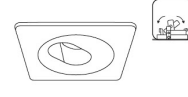
**Deep Reflector**

**ELK4218**  
Finishes:  
(W, BB, BZ, B, C, H)



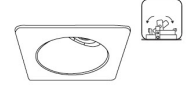
**Adjustable Gimbal**

**ELK4229**  
Finishes:  
(W, BB, BZ, B, C, H)



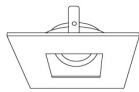
**Adjustable Slot  
Rotatable Aperture**

**ELK4220**  
Finishes:  
(W)



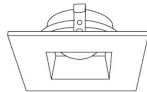
**Adjustable  
Wall Wash**

**ELK4222**  
Finishes:  
(W)



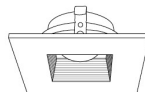
**Adjustable Pinhole**

**ELK4227**  
Finishes:  
(W, BB, BZ, B, C, H)



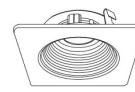
**Adjustable Reflector**

**ELK4282**  
Finishes:  
(W, BZ)



**Adjustable Baffle**

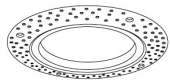
**ELK4284**  
Finishes:  
(W, B, BZ)



**Adj. Phenolic Baffle**

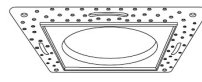
**ELK4293**  
Finishes:  
(W, BB, B)

## 4" Pex™ Flush Mount Trim Adaptors



**Round Flush Mount Trim Adaptor**

**EL4FMR**  
Compatible 3" Pex™ Round trims:  
ELK4116, ELK4118, ELK4127, ELK4129,  
ELK4710, ELK4713, ELK4715 Series



**Square Flush Mount Trim Adaptor**

**EL4FMS**  
Compatible 3" Pex™ Square trims:  
ELK4216, ELK4218, ELK4227,  
ELK4229 Series

## 4" Pex™ Trimless



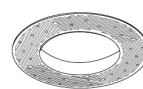
**Round Trimless Reflector**

**ELK408**  
Finishes:  
(W, B, H, BZ)



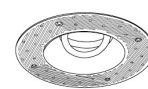
**Round Adj. Trimless Reflector**

**ELK415**  
Finishes:  
(W, B, H, BZ)



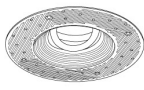
**Round Trimless Spackle Frame**

**EL4SFR**  
For use with ELK408 & ELK415



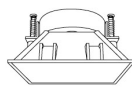
**Smooth Reflector**

**ELK430**  
Finishes:  
(W, B, BZ)



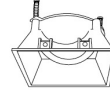
**Baffle**

**ELK434**  
Finishes:  
(W, B, BZ)



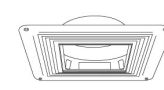
**Square Trimless Reflector**

**ELK445**  
Finishes:  
(W, B, H)



**Square Trimless Adj. Reflector**

**ELK459**  
Finishes:  
(W, B, H)



**Square Trimless Spackle Frame**

**EL4SFS**  
For use with ELK445 & ELK459

\*Finishes: **W** - All White, **BB** - All Black, **BZ** - All Bronze, **B** - Black Reflector w/White Ring, **C** - Chrome Reflector w/White Ring, **H** - Haze Reflector w/White Ring

# Compatible Products



For use with **Koto™ 12V AC Retrofit LED Light Engine**

## 4" Flexa™ Twist-On Trims

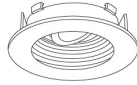


**Round Reflector**

**ELK4721**

Finishes:

(**WW, BB, BZBZ, BW, CW, HW**)

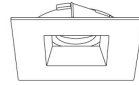


**Round Baffle**

**ELK4723**

Finishes:

(**WW, BB, BZBZ, BW**)



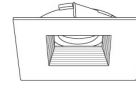
**Square Reflector**

**ELK4741**

Finishes:

(**WW, BB, BZBZ, BW, HW**)

*\*Not for Remodel Housing*



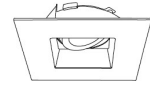
**Square Baffle**

**ELK4743**

Finishes:

(**WW, BB, BZBZ, BW**)

*\*Not for Remodel Housing*



**Square Adj. Reflector**

**ELK4759**

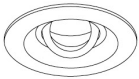
Finishes:

(**WW, BB, B, H**)

*\*Not for Remodel Housing*

Finishes: **W** - All White, **BB** - All Black, **BZ** - All Bronze, **B** - Black w/White Ring, **C** - Chrome w/White Ring, **H** - Haze w/White Ring, **B\*** - All Black (For ELK408, ELK415, ELK434, ELK445, ELK459)

## 4" Unique™ Twist-On Trims

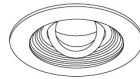


**Round Adjustable Reflector**

**ELK4710**

Finishes:

(**W, B, BZ**)

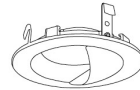


**Round Adjustable Baffle**

**ELK4713**

Finishes:

(**W, BZ**)

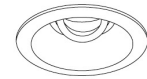


**Round Wall Wash**

**ELK4715**

Finishes:

(**W, BZ**)

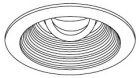


**Round Adj. Deep Reflector**

**ELK4717**

Finishes:

(**W, BZ**)

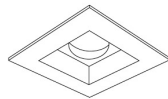


**Round Adj. Deep Baffle**

**ELK4719**

Finishes:

(**W**)



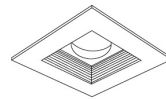
**Square Reflector**

**ELK4714**

Finishes:

(**W, B, BZ**)

*\*Not for Remodel Housing*



**Square Baffle**

**ELK4716**

Finishes:

(**W, BZ**)

*\*Not for Remodel Housing*

Finishes: **W** - All White, **B** - All Black, **BZ** - All Bronze

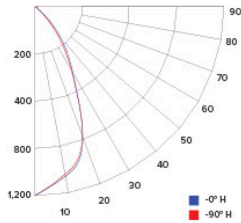


# Photometric Report

## 12V AC Retrofit Koto™ LED Module

### PHOTOMETRIC REPORT

Product #: ELK0830-12  
 Wattage / Lumens: 10W / 971.7 lm  
 Luminaire LPW: 97 lm/W



### CANDLE POWER SUMMARY

Degree Vertical	0°
0	1199
5	1152
15	968
25	540
35	252
45	95
55	31
65	13
75	6
85	2
90	1

### ILLUMINANCE AT A DISTANCE

Distance to Target Plane	Center Beam Footcandles	Beam Diameter
4'	103.3	3.1'
6'	36.4	4.7'
8'	18.7	6.3'
10'	12.6	7.8'

### ZONAL LUMEN SUMMARY

Zone	Lumens	%Luminaire
0-30°	565.3	70.6
0-40°	697.3	87.1
0-60°	780.3	97.5
0-90°	796.0	99.4