

# 1" Square Recessed Oak™ Downlight

Small aperture 12V AC Downlight delivers over 600 lumens. More than a traditional 50W MR16 Halogen Lamp. Requires 12V AC Transformer (daisy chain up to 6). Dimmable ELV, MLV or 0-10V depending on transformer used.



## Features

- Requires 12V AC transformer. Dimmable ELV, MLV or 0-10V depending on transformer used.
- IC Airtight for use with direct contact to insulation
- Height allows for use in ceilings with under 3" depth. Ceiling thickness can be reduced from fixture depth.
- Daisy chain up to 6 fixtures with E1LDRV60
- 38° Standard beam with optional 28° and 50°
- Remodel requires no frame. New construction E1LF1 frame available.
- Wet Location Rated for Indoor and Outdoor Use
- Meets JA8-2016-E requirements, UL Listed
- Life Span 50,000 Hours L70

## Specifications

|                    |        |
|--------------------|--------|
| <b>Wattage</b>     | 6.1W   |
| <b>Lumens</b>      | 650 lm |
| <b>Voltage</b>     | 12V AC |
| <b>Color Temp.</b> | 3500K  |
| <b>Dimmable</b>    | Yes    |
| <b>Lamp Type</b>   | LED    |
| <b>Beam Angle</b>  | 28°    |

## Options



## Technical Details

**Optics:** PC Lens for even lumen distribution. Standard 38° lens. Optional 28° (EP713C) and 50° (EP715C) available.

**Construction:** Diecast construction for lasting quality and greater heat dissipation. High quality powder coat finish prevents rust and paint cracking.

**Installation:** Requires 12V AC transformer. Can be installed on E1LF1 new construction frame. Remodel requires no frame. Hole cutout size: 2" (50 mm). Height allows for use in ceilings with under 3" depth. Ceiling thickness can be reduced from fixture depth.

**LED Technology:** Extremely accurate color rendering with 93+ CRI. Efficacy of up to 110 lumens per watt. Lumen Maintenance of 50,000 hours L70 based on LM80. Superior Thermal Management by utilizing diecast aluminum body as heat sink.

**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 2700K 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.

**Electrical:** Requires 12V AC transformer. Can be daisy chained up to 6 fixtures with E1LDRV60 or can be wired 1 fixture per transformer.

### Delivered Lumens:

**E1L12F27** 600 lm/2700K **E1L12F30** 625 lm/3000K **E1L12F35** 650 lm/3500K **E1L12F40** 675 lm/4000K  
**E1L12FSD** 450 lm/Sunset

**Dimming:** Dims with MLV dimmers when powered by dimmable magnetic 12V AC transformer. Works with ELV dimmers when powered by dimmable electronic 12V AC transformer. Dims with 0-10V systems with 0-10V dimmable 12V AC transformer. Check transformer and dimmer compatibility before installation.

## Dimensions



**Listings:** cUL Listed. UL Listed for WET Location. UL Listed for direct contact with insulation. Airtight per ASTM E-283. Meets California Title 24 (JA8-2016-E) standards.

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

## Product Number Builder Example: **E1L12F27B**

|                   |                  |  |   |  |
|-------------------|------------------|--|---|--|
| 1" Oak™ Downlight | Style            | Beam Angle                                     | Color Temperature   | Finish   |
| <b>E1L</b>        | <b>12</b> Square | <b>F</b> 38°<br><b>NF</b> 28°<br><b>WF</b> 50° | <b>27</b> 2700K<br><b>30</b> 3000K<br><b>35</b> 3500K<br><b>40</b> 4000K<br><b>SD</b> Sunset <sup>1</sup> | <b>W</b> All White<br><b>B</b> Black with White Trim<br><b>BZ</b> Bronze<br><b>H</b> Haze<br><b>BB</b> All Black |

<sup>1</sup> Sunset, Dim to Warm technology, automatically transitions from 2700K to 1800K when dimmed

| Distance from Transformer to 1st Fixture | #12 Gauge          |      |      |      |      |      | #14 Gauge          |      |      |      |      |      | #18 Gauge          |      |      |      |     |     |
|--|--------------------|------|------|------|------|------|--------------------|------|------|------|------|------|--------------------|------|------|------|-----|-----|
|  | Number of Fixtures |      |      |      |      |      | Number of Fixtures |      |      |      |      |      | Number of Fixtures |      |      |      |     |     |
|  | 1                  | 2    | 3    | 4    | 5    | 6    | 1                  | 2    | 3    | 4    | 5    | 6    | 1                  | 2    | 3    | 4    | 5   | 6   |
| 1'                                       | 12.0               | 11.9 | 11.6 | 11.5 | 11.1 | 10.8 | 12.0               | 11.9 | 11.6 | 11.5 | 10.9 | 10.7 | 11.9               | 11.8 | 11.3 | 11.1 | 9.9 | 9.6 |
| 2'                                       | 11.9               | 11.9 | 11.6 | 11.4 | 10.8 | 10.7 | 11.9               | 11.8 | 11.5 | 11.3 | 10.7 | 10.5 | 11.9               | 11.6 | 11.1 | 10.9 | 9.7 | 9.1 |
| 4'                                       | 11.9               | 11.8 | 11.5 | 11.3 | 10.6 | 10.4 | 11.9               | 11.8 | 11.4 | 11.2 | 10.2 | 10.2 | 11.8               | 11.5 | 11.0 | 10.8 | 9.5 | 8.7 |
| 6'                                       | 11.9               | 11.8 | 11.4 | 11.3 | 10.5 | 10.3 | 11.9               | 11.7 | 11.3 | 11.2 | 10.3 | 10.0 | 11.7               | 11.3 | 10.8 | 10.5 | 9.3 | 8.2 |
| 8'                                       | 11.8               | 11.7 | 11.3 | 11.1 | 10.3 | 9.9  | 11.7               | 11.6 | 11.5 | 10.9 | 9.8  | 9.5  | 11.5               | 11.2 | 10.4 | 9.8  | 8.6 | 7.4 |
| 10'                                      | 11.7               | 11.6 | 11.2 | 10.9 | 10.1 | 9.4  | 11.7               | 11.6 | 11.1 | 10.9 | 9.7  | 9.2  | 11.4               | 11.0 | 10.4 | 9.3  | 8.1 | 6.9 |
| 16'                                      | 11.7               | 11.7 | 11.3 | 10.7 | 9.9  | 8.9  | 11.5               | 11.4 | 10.9 | 10.2 | 9.0  | 8.2  | 11.3               | 10.9 | 10.1 | 8.8  | 7.6 | 6.6 |
| 20'                                      | 11.4               | 11.3 | 10.9 | 10.1 | 9.2  | 8.2  | 11.5               | 11.3 | 10.8 | 9.9  | 8.6  | 7.6  | 10.8               | 10.0 | 8.5  | 7.1  | 5.9 | 4.4 |

**Notes:**

1. Max 6 fixtures.
2. For this analysis, 3' of wire was used between fixtures.
3. There will be an additional drop of ~1V if a dimmer is used.
4. Recommended maximum voltage drop is to 10.5V.

# Compatible Products



For use with 1" Oak™ Light Engines

## 1" Oak™ New Construction IC Frames



IC Rated Frame\*  
New Construction



IC Rated Multiple Frame\*  
New Construction

| CAT NO. | SPECIFICATIONS                    |
|---------|-----------------------------------|
| E1LF1   | 2" Cutout for E1L02, E1L12, E111F |

| CAT NO.  | SPECIFICATIONS                |
|----------|-------------------------------|
| E1LF1-M2 | 2 Set for E1L02, E1L12, E111F |
| E1LF1-M3 | 3 Set for E1L02, E1L12, E111F |
| E1LF1-M4 | 4 Set for E1L02, E1L12, E111F |
| E1LF1-M5 | 5 Set for E1L02, E1L12, E111F |

\*Requires 12V AC transformer (not included)

## 1" Oak™ New Construction IC Rated



Specialty R-60  
1" IC Housing - Includes transformer  
New Construction

| CAT NO.   | SPECIFICATIONS                    |
|-----------|-----------------------------------|
| E1LF1ICAJ | 2" Cutout for E1L02, E1L12, E111F |

### PRODUCT NUMBER BUILDER

1" Oak™ IC Rated Housing

E1LF1ICAJ R60 IC New Construction Housing

Dimming

- (blank) 120V Input, ELV Dimmable
- 7 277V Input, Non-Dimmable
- DX 120V Input, 0-10V Dimmable
- DX-7 277V Input, 0-10V Dimmable

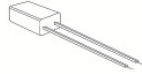
# Compatible Products

For use with 1" Oak™ Light Engines

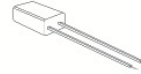
## 1" Oak™ 12V AC Transformers



**Enclosed Electronic Transformer**



**Electronic Transformer**



**0-10V Dimmable Electronic Transformer**



**Magnetic Transformer**

| CAT NO.  | SPECIFICATIONS |
|----------|----------------|
| E1LDRV60 | ELV Dimmable   |

| CAT NO.    | SPECIFICATIONS    |
|------------|-------------------|
| LET-60     | 120V Input        |
| LET-60H    | 120V Input, Hatch |
| LET-60-277 | 277V Input        |

| CAT NO.      | SPECIFICATIONS |
|--------------|----------------|
| LET-60DX     | 120V Input     |
| LET-60DX-277 | 277V Input     |

| CAT NO.  | SPECIFICATIONS       |
|----------|----------------------|
| ETR12    | 50W, Daisy Chain 2-6 |
| ETR12-20 | 20W, Daisy Chain 1-3 |

## 1" Oak™ Accessories



**Downlight Trims For E1L02 & E1L12**



**Downlight Trims For E1L02 & E1L12**



**Optional Lenses for E1L02, E1L12, & E1L32**

| CAT NO. | SPECIFICATIONS      |
|---------|---------------------|
| RM1W    | All White           |
| RM1B    | Black w/ White Ring |
| RM1BZ   | All Bronze          |
| RM1H    | Haze w/ White Ring  |
| RM1BB   | All Black           |

| CAT NO. | SPECIFICATIONS      |
|---------|---------------------|
| RM11W   | All White           |
| RM11B   | Black w/ White Ring |
| RM11BZ  | All Bronze          |
| RM11H   | Haze w/ White Ring  |
| RM11BB  | All Black           |

| CAT NO. | SPECIFICATIONS |
|---------|----------------|
| EP713C  | 28°            |
| EP715C  | 50°            |

# Photometric Report

## Oak™ LED Light Engine

### PHOTOMETRIC REPORT

Product #: E1L12F30  
 Wattage / Lumens: 6W / 600 lm  
 Luminaire LPW: 100 lm/W



### CANDLE POWER SUMMARY

| Degree Vertical | 0°   |
|-----------------|------|
| 0               | 1269 |
| 5               | 1235 |
| 15              | 846  |
| 25              | 322  |
| 35              | 93   |
| 45              | 31   |
| 55              | 18   |
| 65              | 10   |
| 75              | 5    |
| 85              | 0    |
| 90              | 0    |

### ILLUMINANCE AT A DISTANCE

| Distance to Target Plane | Center Beam Footcandles | Beam Diameter |
|--------------------------|-------------------------|---------------|
| 4'                       | 79.3                    | 2.7'          |
| 6'                       | 35.3                    | 4.0'          |
| 8'                       | 19.8                    | 5.3'          |
| 10'                      | 12.7                    | 6.7'          |

### ZONAL LUMEN SUMMARY

| Zone  | Lumens | %Luminaire |
|-------|--------|------------|
| 0-30° | 504.7  | 79.8       |
| 0-40° | 570.7  | 90.3       |
| 0-60° | 615.6  | 97.3       |
| 0-90° | 632.4  | 100        |

# 1" Square Recessed Downlight

Multiplier: 4000K (x 1.08)

## PHOTOMETRIC REPORT

Product #: E1L12NF30  
 Wattage/Lumens: 6.3W/ 639 lm  
 Luminaire LPW: 101 Lm/W



## CANDLE POWER SUMMARY

| Degrees Vertical | 0°   |
|------------------|------|
| 0                | 2370 |
| 5                | 2099 |
| 15               | 926  |
| 25               | 257  |
| 35               | 62   |
| 45               | 17   |
| 55               | 9    |
| 65               | 5    |
| 75               | 3    |
| 85               | 0    |
| 90               | 0    |

## ILLUMINANCE AT A DISTANCE

| Distance to Target Plane | Footcandles Beam Center | Beam Diameter |
|--------------------------|-------------------------|---------------|
| 4'                       | 148                     | 1.8'          |
| 6'                       | 65.8                    | 2.7'          |
| 8'                       | 37.0                    | 3.6'          |
| 10'                      | 23.7                    | 4.5'          |

## ZONAL LUMEN SUMMARY

| Zone  | Lumens | % Luminaire |
|-------|--------|-------------|
| 0-30° | 563.92 | 88.30       |
| 0-40° | 606.28 | 94.90       |
| 0-60° | 630.29 | 98.70       |
| 0-90° | 638.89 | 100.00      |



# Dimmer Compatibility Chart

## Oak™ System

# ELCO Lighting

With Electronic Low Voltage Transformers

### For Reference Only

Testing conducted by ELCO Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards. Consult the dimmer manufacturer prior to installation to ensure compatibility.

| Manufacturer       | Product   | Part Number | Dimmed Light Output Range |
|--------------------|---|-------------|---------------------------|
| <b>ELV Dimming</b> |   |             |                           |
| Lutron             | Diva® 300W Single-Pole Electronic Low Voltage Dimmer  | DVELV-300P  | 10% - 100%                |
|                    | Diva® 300W 3-Way Electronic Low Voltage Dimmer  | DVELV-303P  | 10% - 100%                |
|                    | Skylark® 300W Single-Pole Electronic Low Voltage Dimmer                                       | SELV-300P   | 10% - 100%                |
|                    | Skylark® 300W 3-Way Electronic Low Voltage Dimmer   | SELV-303P   | 10% - 100%                |
|                    | Maestro® 600W Single-Pole/Multi-Location Electronic Low Voltage Dimmer                        | MAELV-600   | 10% - 100%                |
| Leviton            | SureSlide® 300W 3-Way Electronic Low Voltage Dimmer   | 6615-P0     | 10% - 100%                |
|                    | Decora® 450W Single-Pole/3-Way Electronic Low Voltage Dimmer                                  | DSE06-10Z   | 10% - 100%                |
|                    | IllumaTech® 300W Single-Pole/3-Way Electronic Low Voltage Dimmer                              | IPE04-1LZ   | 10% - 100%                |
|                    | Vizia® RF + 600W Single-Pole/3-Way/Multi-Location Electronic Low Voltage Dimmer               | VRE06-1LZ   | 10% - 100%                |
|                    | Vizia® 600W Single-Pole/3-Way/Multi-Location Electronic Low Voltage Dimmer                    | VZE06-1LX   | 10% - 100%                |
|                    | Decora® Digital Bluetooth 600W Single-Pole/3-Way/Multi-Location Electronic Low Voltage Dimmer | DDE06-BLZ   | 10% - 100%                |

**\*NOTE: Refer to dimmer manufacturer’s documentation for installation instructions and circuit details**

Disclaimer: Minimum and maximum loads for LEDs and CFLs are given in number of lamps and may vary depending on the lamp being used. Testing conducted by ELCO Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards.

Integrating our lighting with your Smart Home System is a breeze. Simply check your Smart Home system for compatible smart switches and cross reference that with our Dimming Compatibility Chart. Once the switches are integrated with your Smart Home system your lights will be ready to go.



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