ELCO Lighting

Project Name:

Fixture Type:

Date:

1″ KOTO™ MINI DOWNLIGHTING SYSTEM

10.5W-12.5W, 2700K-3000K or Sunset, Up to 1000 lm, 120V

THE KOTO™ MINI SYSTEM

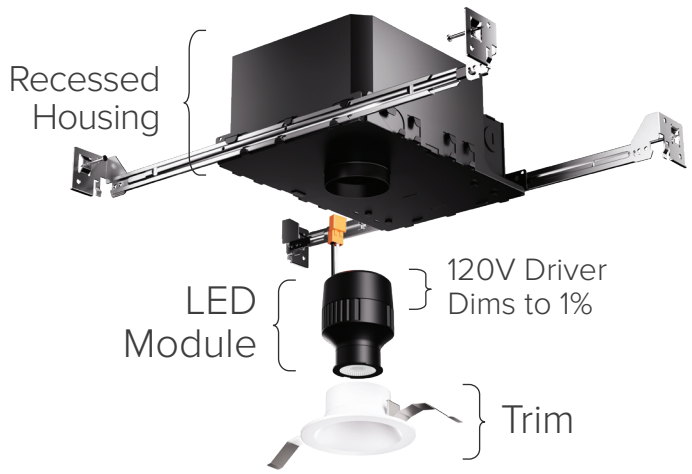
1″ modular Downlight. Up to 1000 lumens. A compact and powerful LED lighting solution featuring a premium high-end light engine. Easy to install maintain and upgrade, all from below the ceiling.

FEATURES

- Integral 120V, Triac/ELV dimmable driver (dims to 1%) on module for easy maintenance and upgrades
- 25°, 35° and 45° beam angle options
- Excellent color rendering 93+ CRI
- Title 24 JA8-2022 E Listed
- ENERGY STAR Compliant
- Covered by U.S. PATENTS and Patents Pending

SET UP

1. Select a Koto™ Mini Housing
2. Select a Koto™ Mini LED Module.
3. Select a Koto™ Mini Trim.



SPECIFICATIONS

Lumens/Wattage	850 lm (10.5W), 1000 lm (12.5W)
Voltage	120V
Color Temp.	2700K, 3000K & Sunset Dim to Warm
CRI	93+
Damp Location	UL Listed With Adjustable Trims
Wet Location	UL Listed With Fixed Trims
Dimming	Triac/ELV (1%)
Beam Angle	25°, 35° & 45°

Finishes

All White

All Black

2042 E. Vernon Ave., Vernon, CA 90058 • Tel (323) 231-2600 Fax (323) 231-3200 • elcolighting.com
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PRODUCT NUMBER BUILDER

STEP 1. Specify Housing part number (Select one) Example: EMN175DH2ICA

1" IC AIRTIGHT NEW CONSTRUCTION HOUSINGS

ITEM	STYLE	ICA
EMN175		
EMN175	IC Airtight New Construction Housings	
	(Blank) Standard Single Head (3 ½" Height) **DH2** Double Head (3 ½" Height) **JB** Single Head (4 ⅛" Height) for 2-Hour Fire Rated Ceilings	**ICA** IC Airtight **AJICA**[1] IC Airtight for R60 & Chicago Plenum Insulation
		[1]Only available for Standard Single Head option.

STEP 2. Specify Koto™ LED Module part number (Select one) Example: EMN1027

ITEM	LUMENS/WATTAGE	COLOR TEMPERATURE	BEAM ANGLE
EMN			
EMN	Standard Koto™ Mini LED Module		
	10 1000 lm (12.5W) **08** 850 lm (10.5W)	**27*** 2700K **30*** 3000K **SD**[1] Sunset	**(Blank)**[2] 35° **-N** 25° **-W** 45°
		[1]Sunset, Dim to Warm technology, dims from 3000K to 1800K. Available with EMN08 only. *27K & 30K available with EMN10, 1000 lm only.	[2]35° installed on module with 25° & 45° included in the box.

Field Changeable Secondary Module Optics		
L60 Frosted Diffuser	**L61** Black Hex Louver	**L62** White Hex Louver

Koto Modules - Lumen Value Multiplier			
CCT	Multiplier	Beam Angle	Multiplier
2700K	0.96	**25˚**	0.98
3000K	1	**35˚**	1
SD	0.80	**45˚**	1.02

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PRODUCT NUMBER BUILDER

STEP 3. Specify Trim part number (Select one)

1″ KOTO™ MINI ROUND TRIMS

Style: **Mini Downlight**
Item: **EMN1RD18W** (All White)
EMN1RD18BB (All Black)

Style: **Mini Adjustable**
Item: **EMN1RD29W** (All White)
EMN1RD29BB (All Black)

Style: **Mini Pinhole Adjustable**
Item: **EMN1RD27W** (All White)
EMN1RD27BB (All Black)

1″ KOTO™ MINI SQUARE TRIMS

Style: **Mini Downlight**
Item: **EMN1SQ18W** (All White)
EMN1SQ18BB (All Black)

Style: **Mini Pinhole Adjustable**
Item: **EMN1RD27W** (All White)
EMN1RD27BB (All Black)

1″ KOTO™ MINI TRIMLESS

Style: **Mini Downlight**
Item: **EMN1RD18TLW** (All White)
EMN1RD18TLBB (All Black)
Requires EMN1RDSFR (sold separately)

Style: **Mini Adjustable**
Item: **EMN1RD29TLW** (All White)
EMN1RD29TLBB (All Black)
Requires EMN1RDSFR (sold separately)

Style: **Mini Pinhole Adjustable**
Item: **EMN1RD27TLW** (All White)
EMN1RD27TLBB (All Black)
Requires EMN1RDSFR (sold separately)

Style: **Mini Spackle Frame**
Item: **EMN1RDSFR**
For use with EMN1RD18TL, EMN1RD29TL and EMN1RD27TL

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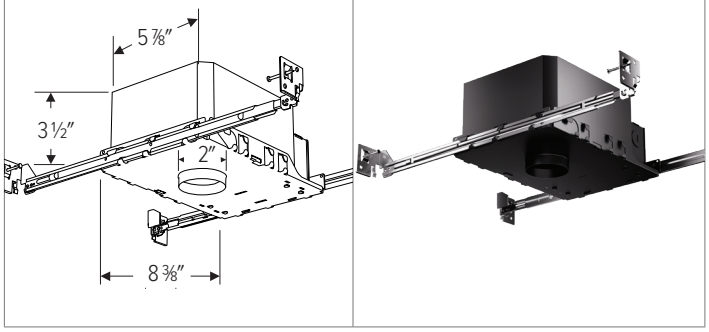
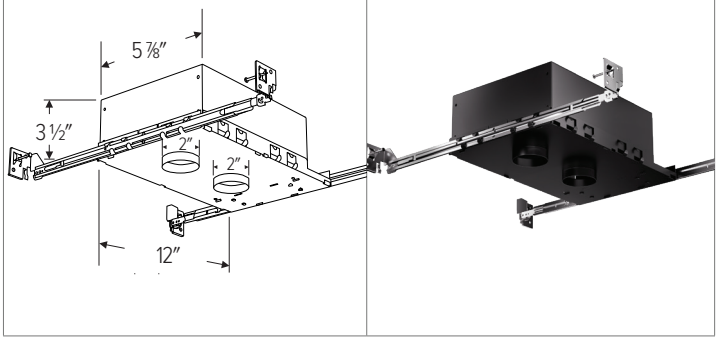
PRODUCT DIMENSIONS

KOTO™ MINI IC AIRTIGHT HOUSINGS

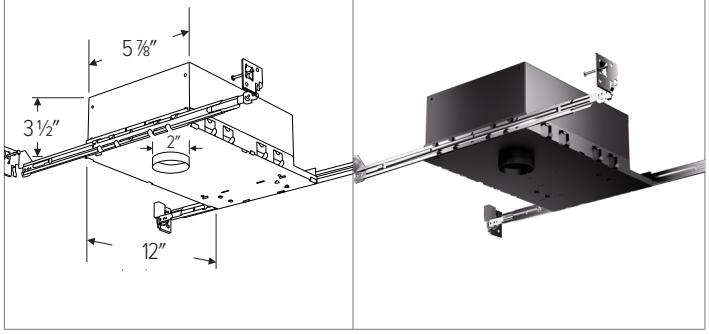
EMN175ICA
SINGLE HEAD IC AIRTIGHT HOUSING



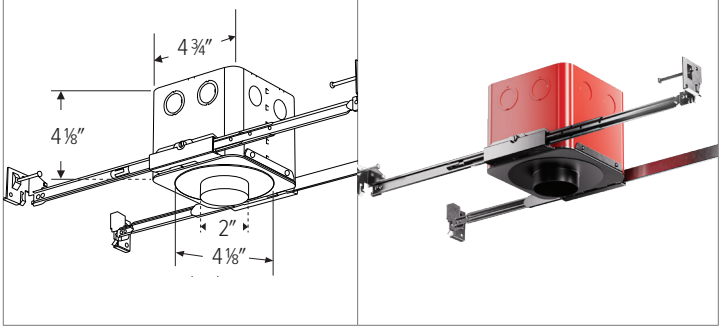
EMN175DH2ICA
DOUBLE HEAD IC AIRTIGHT HOUSING



EMN175AJICA
SINGLE HEAD IC AIRTIGHT R60 & CHICAGO PLENUM HOUSING

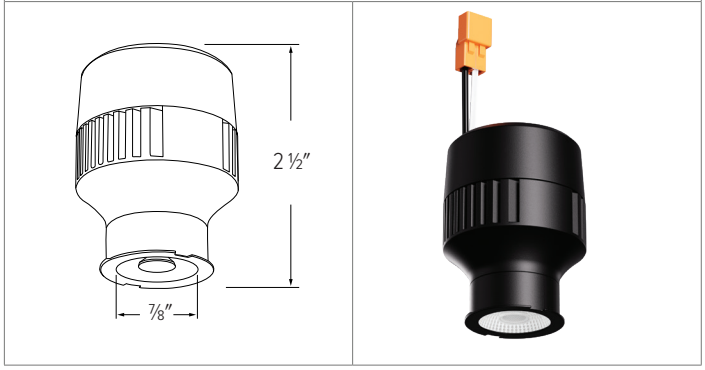


EMN175JBICA
SINGLE HEAD 2-HOUR FIRE RATED IC AIRTIGHT HOUSING



KOTO™ MINI LED MODULE

EMN08/ EMN10
KOTO™ MINI LED MODULE



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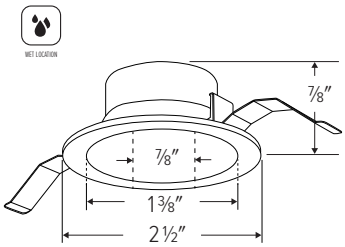
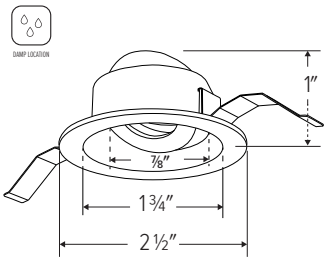
PRODUCT DIMENSIONS

KOTO™ MINI TRIMS

EMN1RD18 - 1″ MINI ROUND DOWNLIGHT

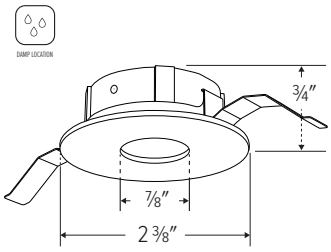


EMN1RD29 - 1″ MINI ROUND ADJUSTABLE



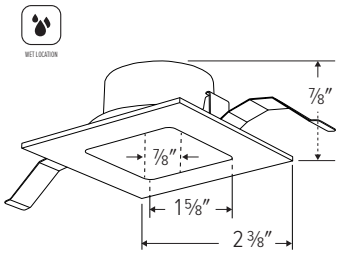
30° Tilt

EMN1RD27 - 1″ MINI ROUND PINHOLE ADJUSTABLE

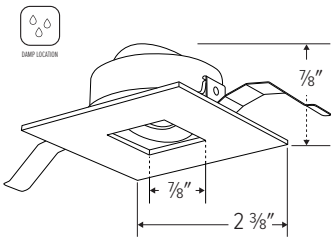


30° Tilt

EMN1SQ18 - 1″ MINI SQUARE DOWNLIGHT



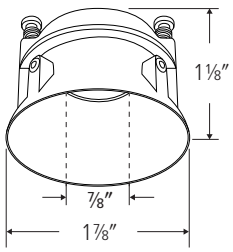
EMN1SQ27 - 1″ MINI SQUARE PINHOLE ADJUSTABLE



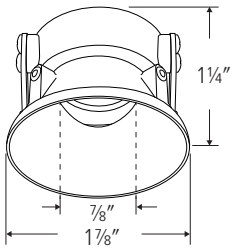
30° Tilt

KOTO™ MINI TRIMLESS

EMN1RD18TL - 1″ MINI ROUND DOWNLIGHT



EMN1RD29TL - 1″ MINI ROUND ADJUSTABLE



30° Tilt

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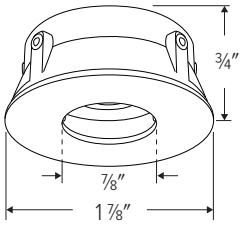
PRODUCT DIMENSIONS

KOTO™ MINI TRIMLESS

EMN1RD27TL - 1″ MINI ROUND PINHOLE ADJUSTABLE

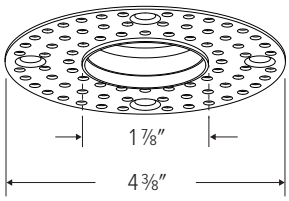


25° Tilt

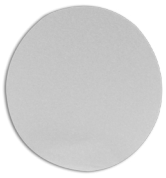
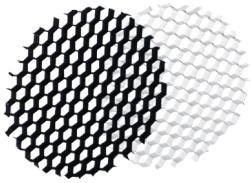
W (All White)

BB (All Black)

EMN1RDSFR - MINI ROUND SPACKLE FRAME



ACCESSORIES

FROSTED DIFFUSER	HEX LOUVER
	
L60 For a softer light	**L61** (White) **L62** (Black) For a better glare shield

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TECHNICAL DETAILS

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

Construction (Light Engine): Diecast aluminum body with heat fins allow for efficient cooling

Installation (Light Engine): Twist-on design for toolless trim installation. For use with standard Koto™ Mini trims only. Can be use in 1″ Koto™ Mini housings with quick connect.

Hanger Bars: Pre-installed hanger bars with True Nail easy installation in regular lumber, engineered lumber, and laminated beams. Integral T-bar slots for easy installation in T-bars. Spans up 24″ and can be repositioned 90º. Score lines allow for tool-free hanger bar size reduction. Integral leveling flange allows for single-person installation while easily aligning the housings with the joists.

LED Technology: Extremely accurate Color Rendering Index of 93+. 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.

Electrical: Module connects to 120V power supply. High efficiency driver with a power factor >0.9. Start time of less than 0.75 seconds.

Dimming: Works with 120V, Triac/ELV type dimmers. Dims down to 1%. For full list of dimmers, refer to the Dimmer Compatibility List. Industry leading dimming that dims smoothly with no hot spots or flickering

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.

Listings: UL and cUL Listed for Damp Locations. UL and cUL Listed for Wet Location with Wet location trims. RoHS Compliant. Meets Energy Star & California Title 24 JA8-2022-E standards.

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

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DIMMER COMPATIBILITY CHART

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
Lutron	Caséta Wireless In-Wall Dimmer (PD-6WCL)	PD-6WCL	1% - 100%
	Maestro PRO LED + Tap Dimme, 250 Watts of dimmable LED/CFL, 500 Watts of incandescent/halogen/ELV, or 400VA MLV lighting loads	MA-PRO	1% - 100%
	Maestro LED+ Dimmer Switch 150 W LED/CFL, 150W of dimmable LEDs, 600W of incandescent or halogen lighting	MACL-153M	1% - 100%
	Skylark Contour LED+ Preset Dimmer, Incandescent / Halogen, 600 W, 120 V, LED / CFL, 150 W, 120 V	CTCL-153P	1% - 100%
	Diva LED, Single Pole, 3-Way, LED+ Preset Dimmer, Incandescent / Halogen, 120 V, LED / CFL, 120 V	DVCL-153P	1% - 100%
	Skylark LED+, Single Pole, 3-Way, LED+ Dimmer, Incandescent / Halogen, 600 W, 120 V, LED / CFL, 150 W, 120 V	SCL-153P	1% - 100%
	Maestro, 600 W/600 VA Neutral Wire Dimmer, 120 V - 50/60 Hz	RRD-6ND	1% - 100%
	Preset Dimmers, Single Pole, Magnetic Low Voltage, 120 V	DVLV-600P	1% - 100%
	Ariadni® / Toggler® 600 W Incandescent/Halogen Preset Dimmer (3-Way)	AY-603P	1% - 100%
	RadioRa 3 250 W (LED/CFL)* or 500 W Incandescent/Halogen/ELV or 400 VA MLV Phase Selectable Neutral Dimmer	RRST-PRO-N	1% - 100%
Leviton	Decora Digital Dimmer Switch, Low Voltage/LED/CFL/Incandescent dimmer with Bluetooth & timer	DDE06-BLZ	1% - 100%
	Trimatron Rotary Dimmer Switch Universal Dimmer, Single pole, 600W Incandescent, 150W LED, CFL	RNL06	1% - 100%
	Decora SureSlide Dimmer Switch for Dimmable LED, Halogen, and Incandescent Bulbs	6672	5% - 100%
	Decora SureSlide Dimmer Switch for Dimmable LED, Halogen, and Incandescent Bulbs	6674	5% - 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 refrence that with our Dimming Compatibility Chart. Once the switches are integrated with your Smart Home system your lights will be ready to go.

amazon alexa | Google Assistant | Apple HomeKit | INSTEON | LUTRON | wemo

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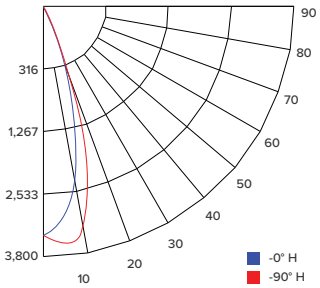
PHOTOMETRIC REPORT

Product #: EMN1030 (25°)
Wattage / Lumens: 9.8W / 988.8 lm
Luminaire LPW: 100.8 lm/W



CANDLE POWER SUMMARY

Degress Vertical	0°
0	3560
5	3109
15	1165
25	270
35	57
45	23
55	14
65	9
75	6
85	0
90	0

ILLUMINANCE AT A DISTANCE

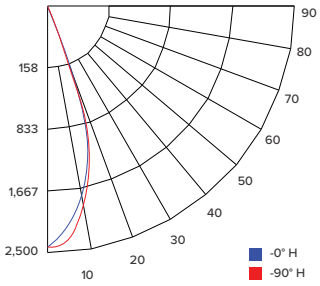
Distance to Target Plane	Center Beam Footcandles	Beam Diemeter
4′	222	1.9′
6′	98.9	2.8′
8′	55.6	3.7′
10′	35.6	4.7′

ZONAL LUMEN SUMMARY

Zone	Lumens	%Luminaire
0-30°	884.0	89.5
0-40°	942.4	95.4
0-60°	976.4	98.8
0-90°	988.0	100

PHOTOMETRIC REPORT

Product #: EMN1030 (35°)
Wattage / Lumens: 9.8W / 992.8 lm
Luminaire LPW: 101.3 lm/W



CANDLE POWER SUMMARY

Degress Vertical	0°
0	2450
5	2302
15	1634
25	433
35	51
45	23
55	17
65	12
75	7
85	0
90	0

ILLUMINANCE AT A DISTANCE

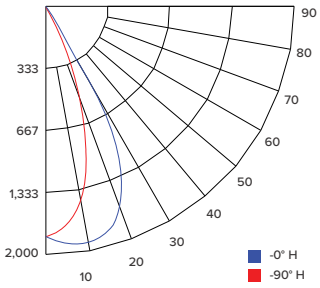
Distance to Target Plane	Center Beam Footcandles	Beam Diemeter
4′	153	2.7′
6′	68.0	4.1′
8′	38.3	5.5′
10′	24.5	6.8′

ZONAL LUMEN SUMMARY

Zone	Lumens	%Luminaire
0-30°	904.1	91.1
0-40°	943.9	95.1
0-60°	974.8	98.2
0-90°	992.3	100

PHOTOMETRIC REPORT

Product #: EMN1030 (45°)
Wattage / Lumens: 9.69W / 960 lm
Luminaire LPW: 99 lm/W



CANDLE POWER SUMMARY

Degress Vertical	0°
0	1892
5	1955
15	1724
25	976
35	301
45	62
55	27
65	18
75	12
85	6
90	3

ILLUMINANCE AT A DISTANCE

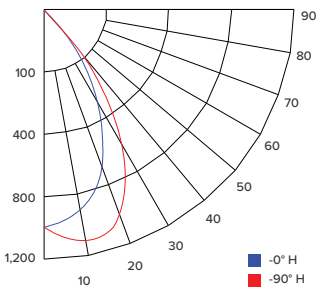
Distance to Target Plane	Center Beam Footcandles	Beam Diemeter
4′	118	2.8′
6′	52.6	4.1′
8′	29.6	5.5′
10′	18.9	6.9′

ZONAL LUMEN SUMMARY

Zone	Lumens	%Luminaire
0-30°	787.9	82.1
0-40°	883.4	92
0-60°	933.5	97.2
0-90°	959.7	100

PHOTOMETRIC REPORT

Product #: EMN1030 (55°)
Wattage / Lumens: 9.8W / 1021.3 lm
Luminaire LPW: 104.2 lm/W



CANDLE POWER SUMMARY

Degress Vertical	0°
0	1025
5	999
15	867
25	563
35	263
45	78
55	16
65	9
75	3
85	1
90	0

ILLUMINANCE AT A DISTANCE

Distance to Target Plane	Center Beam Footcandles	Beam Diemeter
4′	64.1	4.3′
6′	28.5	6.4′
8′	16.0	8.6′
10′	10.3	10.7′

ZONAL LUMEN SUMMARY

Zone	Lumens	%Luminaire
0-30°	694.9	68.1
0-40°	910.2	89.1
0-60°	1,005.6	98.5
0-90°	1,021.0	100

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