

L4R Linear Recessed

The Ketra Difference:

High Def Palette—covers a wide range of 16.7 million colors, including pastels, saturated colors and high CRI whites spanning from 1,400K to 10,000K.

Dynamic Spectrum—precisely tunes the amount of energy across the visible spectrum to produce Natural Light, Natural Dimming and Vibrancy.

TruBeam—produces uniform color across any available beam angle.

Color Lock—maintains your desired color point at a one-step MacAdam Ellipse across all Ketra product families and over each product's lifetime.



ORDERING GUIDE

Please download this PDF to use the full functionality of the ordering guide.

CM	L4R		BT	FO					
Product Line	Model	Lumens/ft	Platform / Control	Lens Option	Region / Voltage	Hanging Style	Housing Color	Configuration	Length
Order code: _____									
Product Line	Code		Region / Voltage	Code				Configuration	Code
Commercial (Athena compatible)	CM-		North America, 120 V~ 60 Hz	11				Standalone	PR1
			North America, 277 V~ 60 Hz	12				Segment Start	SS1
								Segment End	SEN
								Segment MID	SMN
Model			Hanging Style						
Linear 4 in (101.6 mm) Wide Recessed	L4R		Flanged, T-Grid	FTG				Length	
			Flanged, Threaded Rod	FTR				Continuous Length Available, in 1 ft increments >6 ft (1.83 m)	--
			Flangeless, Aircraft Cable	NAC				2 ft (0.305 m) NOM	0002
			Flangeless, Threaded Rod	NTR				3 ft (0.609 m) NOM	0003
			Flangeless, External Mounting Bracket	NEB				4 ft (1.219 m) NOM	0004
								6 ft (1.828 m) NOM	0006
								8 ft (2.438 m) NOM	0008
								10 ft (3.048 m) NOM	0010
								12 ft (3.657 m) NOM	0012
System			Housing Color						
KetraNet/CCX ¹	BT		White	WH					
			Black	BK					
Lens Option									
Flush Opal Lens	FO								

¹ CCX stands for Clear Connect-Type X.



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P/N 3662377 Rev C

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SPECIFICATIONS¹

Optical & Electrical Performance

Delivered Lumen Output ²	L4R.04	400 lm/ft
	L4R.06	600 lm/ft
	L4R.08	800 lm/ft
	L4R.10	1000 lm/ft
CRI (Ra) ³	>90 (R9 >90)	
Lumen Maintenance ³	50,000 hours to L70 @ 25 °C Ambient	
Color Spatial Uniformity	One-step MacAdam Ellipse over product lifetime	
Dimming Range	0.1-100%	
Power Consumption	L4R.04	7.7 W/ft
	L4R.06	10 W/ft
	L4R.08	12.4 W/ft
	L4R.10	15.5 W/ft
Voltage	120 V~ 60 Hz, 277 V~ 60 Hz	
Power Factor	>0.9	
Current	82 mA Max	
Delivered Efficacy	L4R.04	51.9 lm/W
	L4R.06	60 lm/W
	L4R.08	64.5 lm/W
	L4R.10	64.5 lm/W
Surge Protection	2.5 KV	
Emergency Lighting	Evaluated by UL® for use in emergency lighting systems in accordance with standard UL® 924 and CSA C22.2 No. 141 when paired with the LVS™ model LUT-SHUNT-A-TD (UL® file E206507) and Ketra N3 Satellite. See Lutron Application Note 106 (P/N 048106) at www.lutron.com for wiring details. This is only applicable to CCX fixtures used in an Athena system.	

Environmental

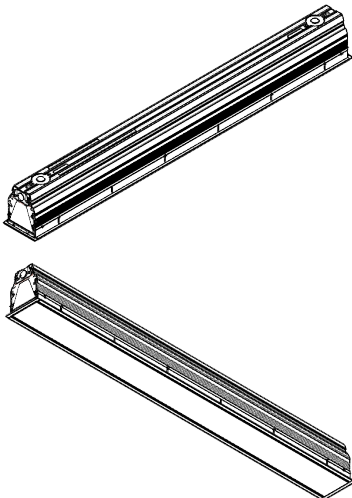
Operating Temperature	0 to 50 °C
Storage Temperature	-20 - 80 °C
Humidity	0 - 95%, Non-condensing
Certification	UL, cUL, RoHS, FCC Class B
Location	UL Damp Location, IP20, IC Rated

Mechanical

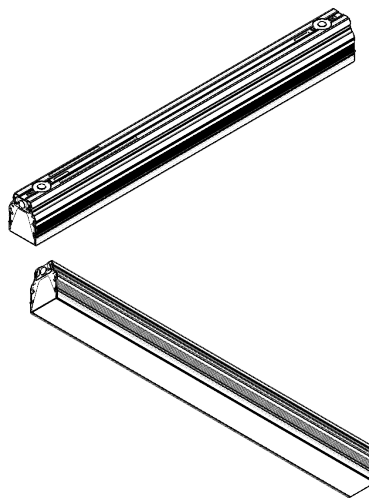
Weight	3.7 lbs/ft, 1.7 kg/ft
Housing Material	Powder Coated Aluminum, Corrosion Protected Steel
Lens Material	UL F1 outdoor rating for UV and water contact PMMA

PRODUCT DRAWINGS

Flanged Housing



Flangeless Housing



¹ All performance measurements taken at 3000 K, 25 °C ambient, 100% power input, unless otherwise stated, within CCT range of 2700 - 5000 K.

² Lumen measurement complies with IES LM-79-08 testing procedures.

³ Lumen maintenance values calculated in accordance to TM-21 procedures based on LM-80 compliant measurement data.



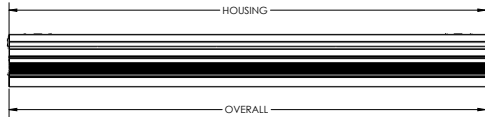
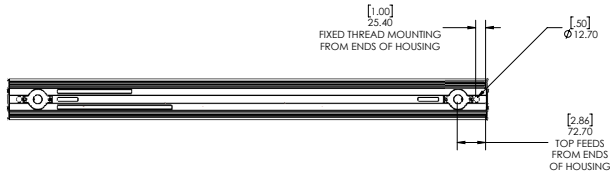
L4R LINEAR RECESSED

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PRODUCT DIMENSIONS - FLANGELESS

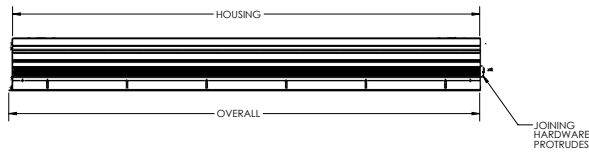
Standalone



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.42	620.27
3 ft Nom	36.00	914.40	36.42	925.07
4 ft Nom	48.00	1219.20	48.42	1229.87
6 ft Nom	72.00	1828.80	72.42	1839.47
8 ft Nom	96.00	2438.40	72.42	2449.07
10 ft Nom	120.00	3048.00	96.42	3058.67
12 ft Nom	144.00	3657.60	144.42	3668.27

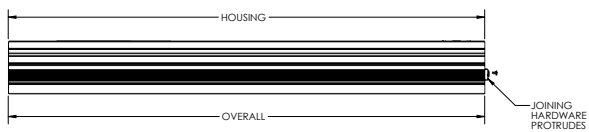
Continuous Runs

Starter



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.21	614.93
3 ft Nom	36.00	914.40	36.21	919.73
4 ft Nom	48.00	1219.20	48.21	1224.53
6 ft Nom	72.00	1828.80	72.21	1846.83
8 ft Nom	96.00	2438.40	96.21	2443.73
10 ft Nom	120.00	3048.00	120.21	3053.33
12 ft Nom	144.00	3657.60	144.21	3662.93

Joiner



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.00	609.60
3 ft Nom	36.00	914.40	36.00	914.40
4 ft Nom	48.00	1219.20	48.00	1219.20
6 ft Nom	72.00	1828.80	72.00	1828.80
8 ft Nom	96.00	2438.40	96.00	2438.40
10 ft Nom	120.00	3048.00	120.00	3048.00
12 ft Nom	144.00	3657.60	144.00	3657.60

Ender



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.21	614.93
3 ft Nom	36.00	914.40	36.21	919.73
4 ft Nom	48.00	1219.20	48.21	1224.53
6 ft Nom	72.00	1828.80	72.21	1846.83
8 ft Nom	96.00	2438.40	96.21	2443.73
10 ft Nom	120.00	3048.00	120.21	3053.33
12 ft Nom	144.00	3657.60	144.21	3662.93

CAD files available upon request



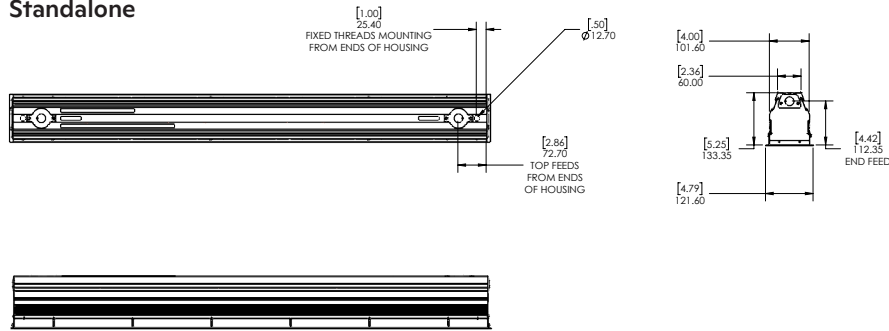
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PRODUCT DIMENSIONS - FLANGED

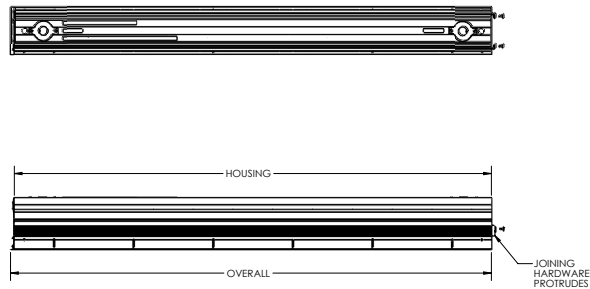
Standalone



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.79	629.67
3 ft Nom	36.00	914.40	36.79	934.47
4 ft Nom	48.00	1219.20	48.79	1239.27
6 ft Nom	72.00	1828.80	72.79	1848.87
8 ft Nom	96.00	2438.40	96.79	2458.47
10 ft Nom	120.00	3048.00	120.79	3068.07
12 ft Nom	144.00	3657.60	144.79	3677.67

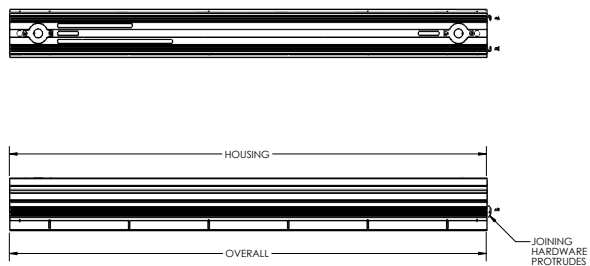
Continuous Runs

Starter



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.39	619.51
3 ft Nom	36.00	914.40	36.39	924.31
4 ft Nom	48.00	1219.20	48.39	1229.11
6 ft Nom	72.00	1828.80	72.39	1838.71
8 ft Nom	96.00	2438.40	96.39	2448.31
10 ft Nom	120.00	3048.00	120.39	3057.91
12 ft Nom	144.00	3657.60	144.39	3667.51

Joiner



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.00	609.60
3 ft Nom	36.00	914.40	36.00	914.40
4 ft Nom	48.00	1219.20	48.00	1219.20
6 ft Nom	72.00	1828.80	72.00	1828.80
8 ft Nom	96.00	2438.40	96.00	2438.40
10 ft Nom	120.00	3048.00	120.00	3048.00
12 ft Nom	144.00	3657.60	144.00	3657.60

Ender



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	24.00	609.60	24.00	609.60
3 ft Nom	36.00	914.40	36.00	914.40
4 ft Nom	48.00	1219.20	48.00	1219.20
6 ft Nom	72.00	1828.80	72.00	1828.80
8 ft Nom	96.00	2438.40	96.00	2438.40
10 ft Nom	120.00	3048.00	120.00	3048.00
12 ft Nom	144.00	3657.60	144.00	3657.60

CAD files available upon request



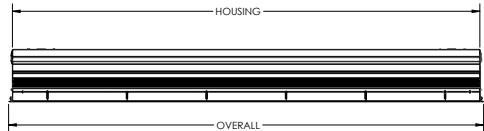
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PRODUCT DIMENSIONS - FLANGED, T-GRID

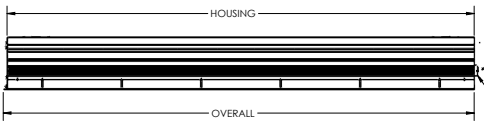
Standalone



Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	23.00	584.20	23.79	604.20
4 ft Nom	47.00	1193.80	47.79	1213.80
6 ft Nom	71.00	1803.40	71.79	1823.47
8 ft Nom	95.00	2413.00	95.79	2433.00
10 ft Nom	119.00	3022.60	119.79	3042.67
12 ft Nom	143.00	3632.20	143.79	3652.20

Continuous Runs

Starter



JOINING
HARDWARE
PROTRUDES

Variant	Housing		Overall	
	IN	MM	IN	MM
2 ft Nom	23.00	584.20	23.79	604.20
4 ft Nom	47.00	1193.80	47.79	1213.80
6 ft Nom	71.00	1803.40	71.79	1823.47
8 ft Nom	95.00	2413.00	95.79	2433.00
10 ft Nom	119.00	3022.60	119.79	3042.67
12 ft Nom	143.00	3632.20	143.79	3652.20

CAD files available upon request

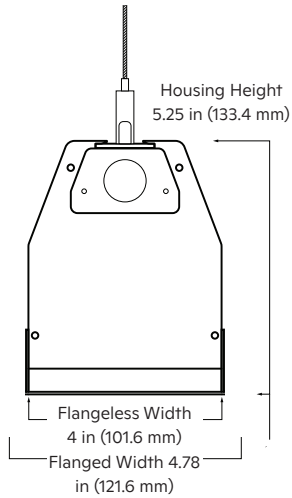


L4R LINEAR RECESSED

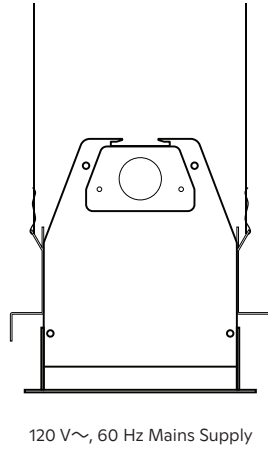
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MOUNTING OPTIONS

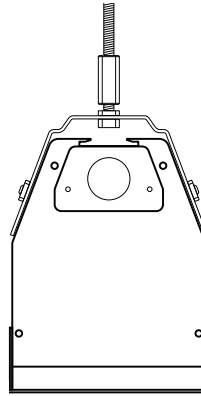
Aircraft Cable Mounting Bracket



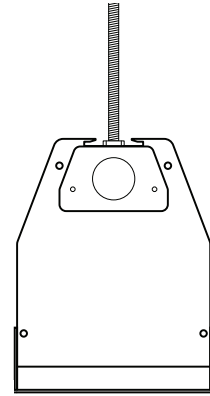
Adjustable T-Grid Mounting Brackets



External Mounting Brackets

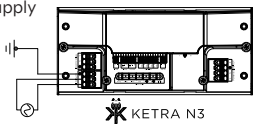


Thread Mount Stud



WIRING DIAGRAMS

Continuous
120/277 V~,
60 Hz
Mains Supply



N3 Power &
Signal Output

L4

L4R

L4R

KEY

L4 16 AWG (1 mm²), 4 wire

Wireless Network

Per N3:

Max. Fixture Qty: 40 ft (12.192 m) of L4R

Max Run Length: 100 ft (30.48 m)



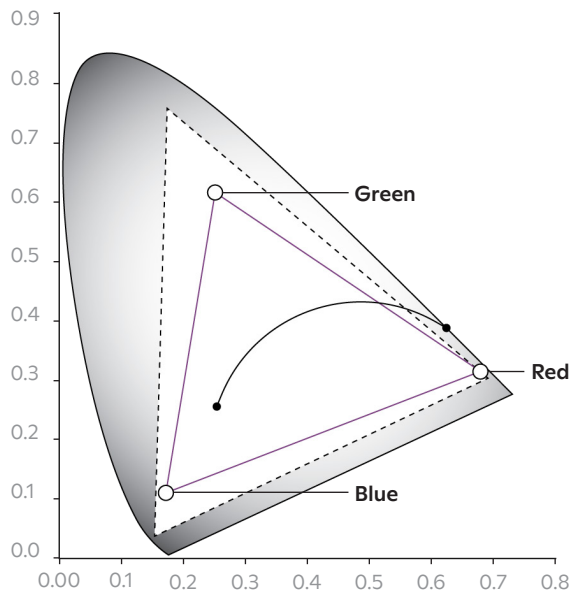
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WIDE GAMUT

CIE 1931 Color Chart



Ketra's L4R Linear Recessed can easily be commissioned into Lutron HomeWorks or Athena systems. The product can reproduce any color point within the triangle shaped gamut indicated in the chart to the left. With Ketra's Color Lock tool, the color point is maintained to an accuracy of one-step MacAdam Ellipse over the lifetime of the product and across operating temperature range.

— **Color Lock**—Color point is maintained to an accuracy of one-step MacAdam Ellipse over the lifetime of the product and across operating temperature range.

----- **Expanded Gamut**—Color calibration is relaxed such that each product produces the most saturated color it is capable of.

General Specifications

Color Point Maintenance: Employ closed loop optical and thermal feedback capable of maintaining color point accuracy at a one-step MacAdam ellipse over product lifetime.

Wireless Capability: LED light source shall have an integrated wireless control on board.

Color Rendering Index (CRI): Capable of CRI greater than 90 at any point along the Black Body Curve from 2,700K to 5,000K.

Single Source Multi-Dye Emitter Design: Employ a single source multi-dye emitter consisting of both monochromatic and phosphor converted blue LED dye.

LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

Warranty: Ketra's light source is warrantied to be free from material defects in material and workmanship for five (5) years or 25,000 hours from date of shipment, whichever is less.

Lighting System Capable of the Following Dimming Functionality:

1. Automatically mimicking natural daylight by shifting Correlated Color Temperature (CCT) and intensity based on time-of-day.
2. Shifting from high CCT at high intensity to low CCT at low intensity, mimicking dimming curve of an incandescent lamp.
3. Changing intensity while maintaining full color spectrum or CCT.
4. Changing full color spectrum or CCT while maintaining intensity.

Spectral Power Distribution Manipulation: Light system capable of manipulating the Spectral Power Distribution (SPD) by automatically adjusting distributions of color intensity while maintaining the same Correlated Color Temperature (CCT).

Dimming Range: Dimmable from 100 to 0.1 percent measured luminous flux.

Color Point Range: Single light source capable of producing 16.7 million colors and white from 1,400K to 10,000K Correlated Color Temperature (CCT).

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