

L4R Linear Recessed

PRODUCT DESCRIPTION

Ketra's L4R recessed linear enables continuous lines of light with seamless end-to-end connections.

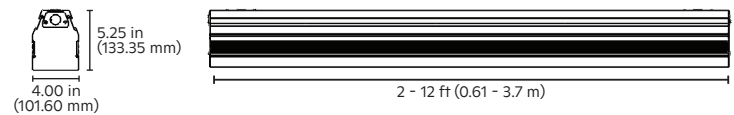
FEATURES

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.

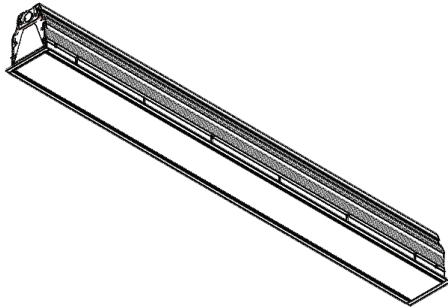
TruBeam—produces uniform color across any available beam angle.

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

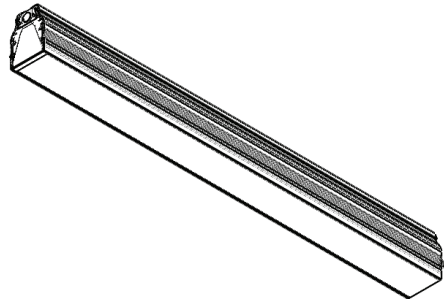


Options

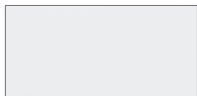
Flanged Housing



Flangeless Housing



Finish



White



Black

SPECIFICATIONS¹

Optical Performance

Delivered Lumens 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%	
Current	82 mA Max	

Environmental

Ambient Temperature	0 to 50 °C
Humidity	0 - 95%, Non-condensing
Certification	UL, cUL, RoHS, FCC Class B
Location	UL Damp Location, IP20, IC Rated UL2043 rated for use in air handling plenums
Outdoor/Indoor	Not for use in outdoor applications
Warranty	5 year fixture, LED, and dimming warranty

Mechanical

Fixture 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

Electrical

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
Power Factor	>0.9	
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	
Voltage	120 V~ 60 Hz, 277 V~ 60 Hz	
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 ⁴ .	
Max. Qty of Fixtures Per N3	40 ⁵	
Max Total Run Length, including cable, Per N3	100 ft (30.48 m) ⁵	

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.

⁴ 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.

⁵ The maximum number of N3 systems within a 20 ft (6.1 m) radius is four systems. For additional limitations when multiple N3 links are in close proximity, please see the "Lutron Residential and Commercial Systems Rules" spec (P/N 369821) at www.lutron.com. Wiring within an N3 system requires either the Lutron provided cables or wiring should be installed in a metal armored cable or metal conduit.

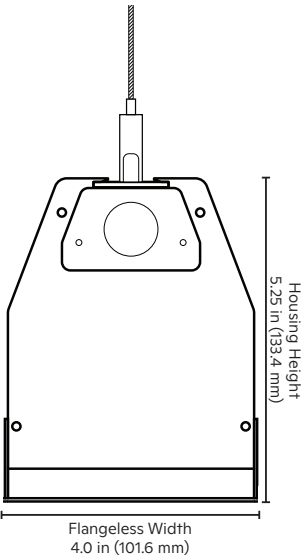
ORDERING GUIDE

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

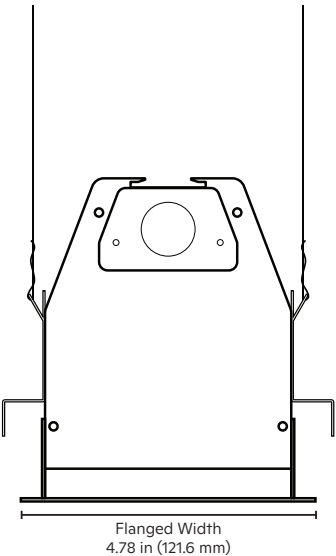
L4R		GT		FO								
Product Line	Model	Lumens/ft	Control System	Lens Option	Region / Voltage	Mounting	Finish	Configuration	Fixture Length			
Order code: _____												
Product Line		Code	Region / Voltage		Code	Configuration		Code				
Commercial (Athena compatible)		CM	North America, 120 V~ 60 Hz		11	Standalone		PR1				
		HW-	North America, 277 V~ 60 Hz		12	Segment Start		SS1				
Residential (HomeWorks compatible)			Mounting		Segment End		SEN					
					Segment MID		SMN					
					Model		Flanged, T-Grid		FTG			
Linear 4 in (101.6 mm) Wide Recessed		L4R	Flanged, Threaded Rod		FTR	Fixture Length						
			Flangeless, Aircraft Cable		NAC	Continuous Length Available, in 1 ft increments >6 ft (1.83 m)		--				
			Flangeless, Threaded Rod		NTR							
Lumens/ft			Flangeless, External Mounting Bracket		NEB	2 ft (0.305 m) NOM		0002				
			Finish		3 ft (0.609 m) NOM		0003					
					4 ft (1.219 m) NOM		0004					
					6 ft (1.828 m) NOM		0006					
800 Lumens		08			8 ft (2.438 m) NOM		0008					
1000 Lumens		10	Black		BK	10 ft (3.048 m) NOM		0010				
Control System						12 ft (3.657 m) NOM		0012				
CCX (Clear Connect-Type X)		GT										
Lens Option												
Flush Opal Lens		FO										

MOUNTING OPTIONS

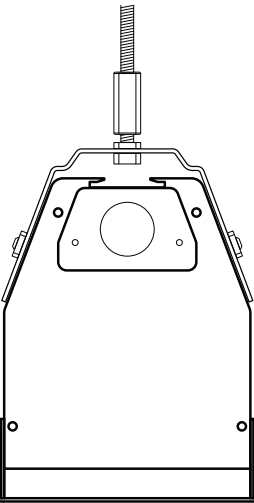
Aircraft Cable Mounting Bracket



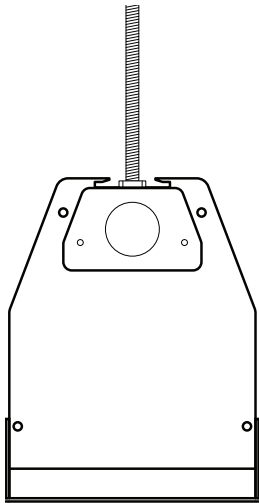
Adjustable T-Grid Mounting Brackets



External Mounting Brackets

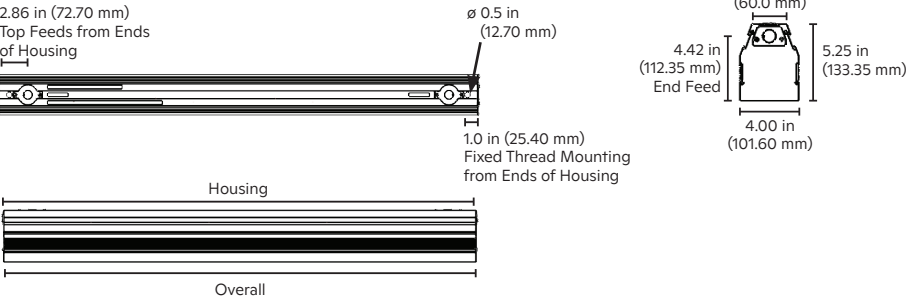


Thread Mount Stud



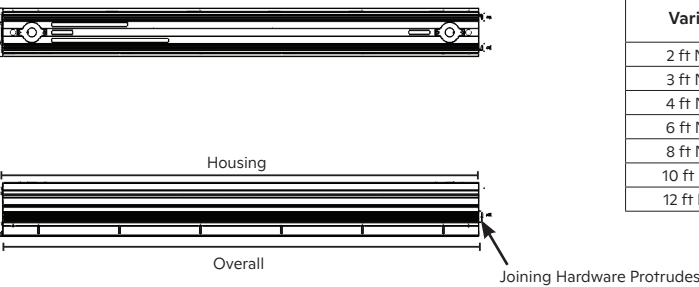
PRODUCT DIMENSIONS¹
Flangeless Housing

Standalone



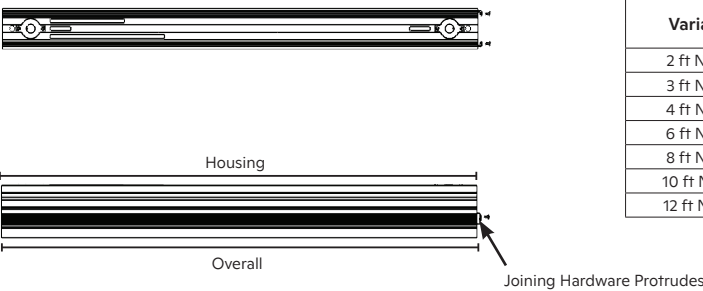
Variant	Housing		Overall	
	in	mm	in	mm
2 ft Nom	24.00	609.60	24.42	620.27
3 ft Nom	36.00	914.40	36.42	925.07
4 ft Nom	48.00	1219.20	48.42	1229.87
6 ft Nom	72.00	1828.80	72.42	1839.47
8 ft Nom	96.00	2438.40	72.42	2449.07
10 ft Nom	120.00	3048.00	96.42	3058.67
12 ft Nom	144.00	3657.60	144.42	3668.27

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



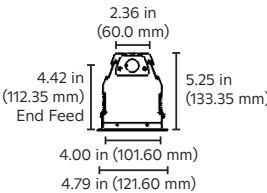
Variant	Housing		Overall	
	in	mm	in	mm
2 ft Nom	24.00	609.60	24.21	614.93
3 ft Nom	36.00	914.40	36.21	919.73
4 ft Nom	48.00	1219.20	48.21	1224.53
6 ft Nom	72.00	1828.80	72.21	1846.83
8 ft Nom	96.00	2438.40	96.21	2443.73
10 ft Nom	120.00	3048.00	120.21	3053.33
12 ft Nom	144.00	3657.60	144.21	3662.93

¹ CAD files available upon request

PRODUCT DIMENSIONS¹
Flanged Housing

Standalone

2.86 in (72.70 mm)
Top Feeds from Ends
of Housing



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

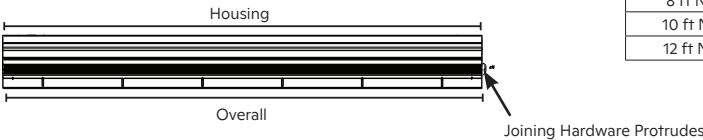


Continuous Runs
Starter



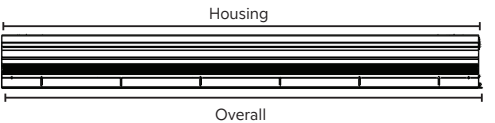
Variant	Housing		Overall	
	in	mm	in	mm
2 ft Nom	24.00	609.60	24.39	619.51
3 ft Nom	36.00	914.40	36.39	924.31
4 ft Nom	48.00	1219.20	48.39	1229.11
6 ft Nom	72.00	1828.80	72.39	1838.71
8 ft Nom	96.00	2438.40	96.39	2448.31
10 ft Nom	120.00	3048.00	120.39	3057.91
12 ft Nom	144.00	3657.60	144.39	3667.51

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



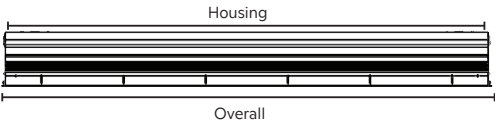
Variant	Housing		Overall	
	in	mm	in	mm
2 ft Nom	24.00	609.60	24.00	609.60
3 ft Nom	36.00	914.40	36.00	914.40
4 ft Nom	48.00	1219.20	48.00	1219.20
6 ft Nom	72.00	1828.80	72.00	1828.80
8 ft Nom	96.00	2438.40	96.00	2438.40
10 ft Nom	120.00	3048.00	120.00	3048.00
12 ft Nom	144.00	3657.60	144.00	3657.60

¹ CAD files available upon request

PRODUCT DIMENSIONS¹

Flanged Housing T-Grid

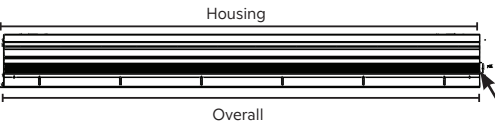
Standalone



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

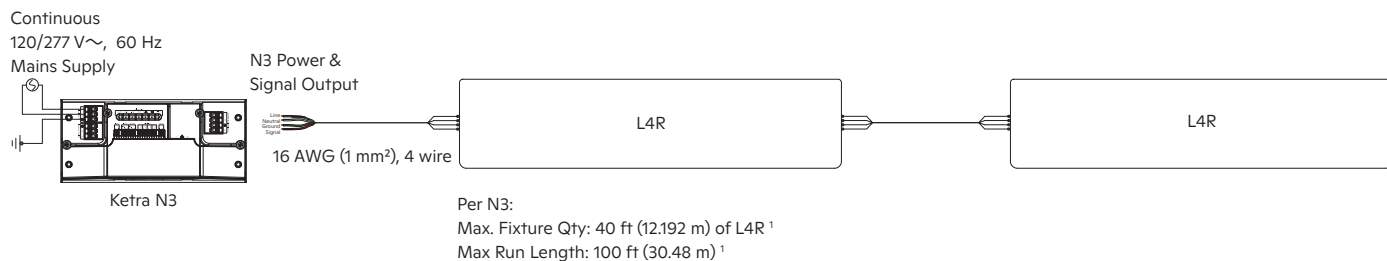


Joining Hardware Protrudes

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

¹ CAD files available upon request

WIRING DIAGRAM

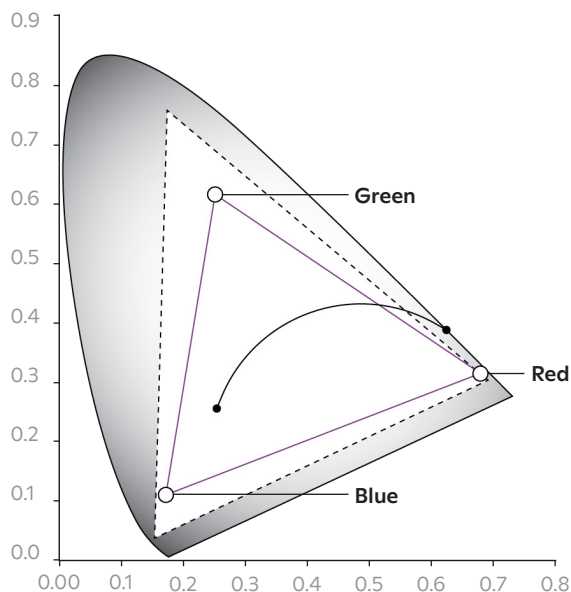


Install in accordance with all local and national electrical codes. If the Lutron provided cable is not used, wiring should be installed in a metal armored cable or metal conduit.

¹ For additional limitations when multiple N3 links are in close proximity, please see the "Lutron Residential and Commercial Systems Rules" spec (P/N 369821) at www.lutron.com

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 lock not guaranteed such that each product produces the most saturated color of which it is capable.

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 lifetime¹.

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 Modular Emitter/LED Module Design: Employ a single source multi-dye modular emitter/LED module 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.

Diagnostic reporting capability²: Clear Connect-Type X (CCX) light sources provide diagnostics and built-in technology to check input voltage and wireless connectivity.

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).

¹ Color point maintenance not guaranteed in the expanded gamut or while operating at ambient temperatures between -13 to 32 °F (-25 to 0 °C).

² For diagnostics support or more information, please contact Lighting Technical Support at lightingsupport@lutron.com or 1.844.LUTRON1 (1.844.588.7661).