

# KETRA

## L3I LINEAR PENDANT

Type: \_\_\_\_\_  
 Project: \_\_\_\_\_  
 Comments: \_\_\_\_\_  
 Prepared By: \_\_\_\_\_



High performance 3" wide linear indirect pendant

End to end connections allowing for straight continuous lines of light

Tunable spectrum single point source produces wide range of white, pastels & saturated colors

Programmable digital dimming to 0.1%

Closed-loop color point maintenance to <1 MacAdam ellipse over lifetime and temperature

Connects with Ketra's N3 Satellite for power, wireless control and connection to Ketra's library of light content

Ketra's technology ensures consistent appearance and guaranteed compatibility over LED technology generations

### HARDWARE ORDERING GUIDE

Product Line	Model	Lumens/ft	Platform & Control	Lens Option	Region & Voltage	Mounting	Fixture Color	Configuration	Length
Commercial	L3I	400	BT	DL	North America, 120VAC 60Hz	Hard Ceiling	White	Power Input Only	Continuous length, available in 1' increments >6'
Residential (Homeworks compatible)		600			North America, 277VAC 60Hz	T-Bar	Black	Power input and Output	3'
		800					Metallic Silver (White Cable)	Segment Start Power Input	4'
		1000					Metallic Silver (Black Cable)	Segment End Power Output	6'
							White Fixt, White Cable, Black Can	Segment End	8'
							White Fixt, Black Cable, Black Can	Segment Middle Power Input	10'
							Black Fixt, Black Cable, White Can	Segment Middle	12'
							Black Fixt, White Cable, White Can		

Order Code:

Product Line	Code	Region & Voltage	Code	Configuration	Code
Commercial	<b>CM-</b>	North America, 120VAC 60Hz	<b>11</b>	Power Input Only	<b>PR1</b>
Residential (Homeworks compatible)	<b>HW-</b>	North America, 277VAC 60Hz	<b>12</b>	Power input and Output	<b>PR2</b>
Model		Mounting (see page 4)		Segment Start Power Input	<b>SS1</b>
Linear 3" Wide Indirect Pendant	<b>L3I</b>	Hard Ceiling	<b>C1</b>	Segment End Power Output	<b>SE2</b>
		T-Bar	<b>C2</b>	Segment End	<b>SEN</b>
Lumens/ft		Fixture Color		Segment Middle Power Input	<b>SM1</b>
400	<b>04</b>	White	<b>WWW</b>	Segment Middle	<b>SMN</b>
600	<b>06</b>	Black	<b>BBB</b>		
800	<b>08</b>	Metallic Silver (White Cable)	<b>SWS</b>		
1000	<b>10</b>	Metallic Silver (Black Cable)	<b>SBS</b>		
Platform & Control (see page 4 color chart)		White Fixt, White Cable, Black Can	<b>WWB</b>		
Wide Gamut, Tunable	<b>BT</b>	White Fixt, Black Cable, Black Can	<b>WBB</b>		
Lens Options		Black Fixt, Black Cable, White Can	<b>BBW</b>		
Dust Lens	<b>DL</b>	Black Fixt, White Cable, White Can	<b>BWW</b>		

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## SPECIFICATIONS<sup>1</sup>

### OPTICAL & ELECTRICAL PERFORMANCE

Delivered Lumen Output <sup>2</sup>	L3I.04	400lm/ft
	L3I.06	600lm/ft
	L3I.08	800lm/ft
	L3I.10	1000lm/ft
CRI (Ra) <sup>3</sup>	>90 (R9 >90)	
Lumen Maintenance <sup>3</sup>	50,000 hours to L70 @ 25°C TA	
Color Spatial Uniformity	<2 MacAdam ellipses across field angle	
Color Point Range <sup>4</sup>	1400-10000K, Pastel and Saturate colors	
Dimming Range <sup>4</sup>	0.1-100% lm	
Power Consumption	L3I.04	7.7W/ft
	L3I.06	10W/ft
	L3I.08	12.4W/ft
	L3I.10	15.5W/ft
Voltage	120VAC 60Hz, 277VAC 60Hz	
Power Factor	>0.9	
Current	82 mA Max	
Delivered Efficacy	L3I.04	51.9lm/W
	L3I.06	60lm/W
	L3I.08	64.5lm/W
	L3I.10	64.5lm/W
Surge Protection	2.5KV	
Control Protocol	KetraNet PLC via N3	
Max. qty of fixture length per N3 power feed	40ft (12.19m)	
Max total run length, including cable, per N3	100ft (30.48m)	

### ENVIRONMENTAL

Operating Temperature <sup>5</sup>	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

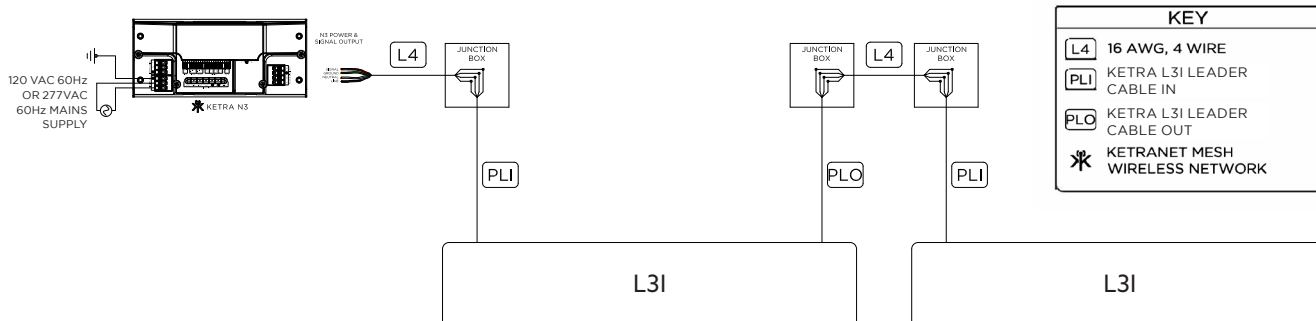
### MECHANICAL

Weight	2.5lbs/ft, 1.13kg/ft
Housing Material	Powder Coated Aluminum, Corrosion Protected Steel
Lens Material	UL F1 outdoor rating for UV and water contact PMMA

### DIMENSIONS

Length	See Length Charts on page 3
Width	3" (76.2mm)
Height	3" (76.2mm) 4.5" (114.3mm) with mounting points
Default Aircraft Cable Length	36" (91.44cm)
Default Canopy Size	5" (12.7cm)

## WIRING DIAGRAM



PER N3:  
MAX. FIXTURE QTY: 40 FT OF P4  
MAX. RUN LENGTH: 100 FT

50 KETRANET MESH NODES PER  
INSTALLATION NETWORK

<sup>1</sup> All performance measurements taken at 3000K, 25°C ambient, 100% power input, unless otherwise stated.

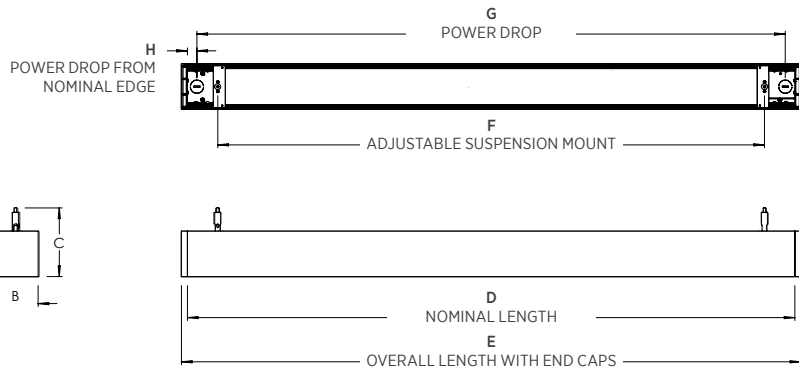
<sup>2</sup> Lumen measurement complies with IES LM-79-08 testing procedures.

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

<sup>4</sup> Intensity and color point controlled via Ketra's wireless network

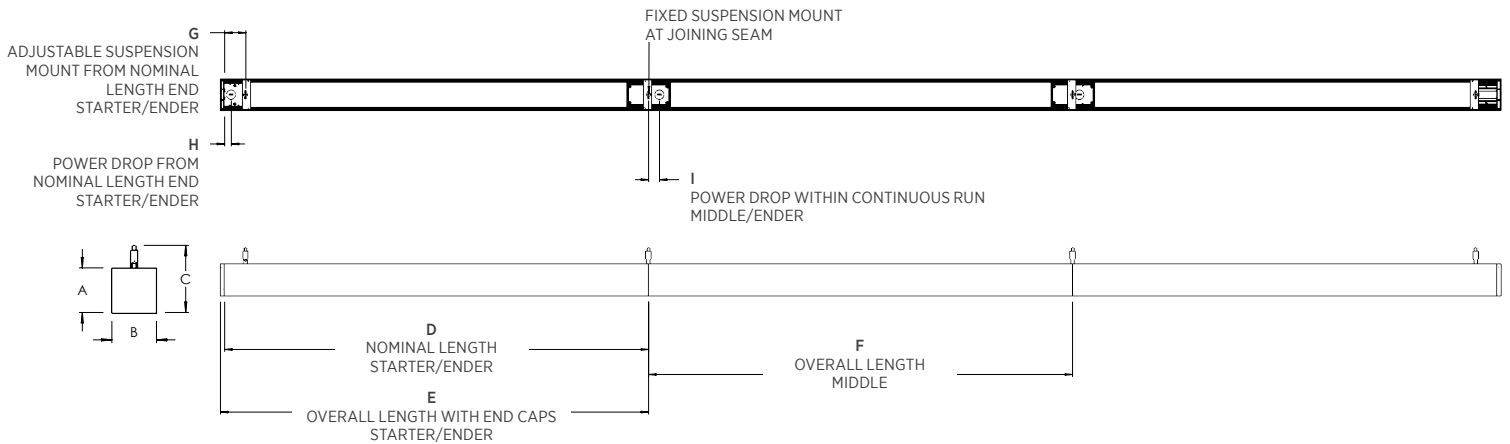
## PRODUCT DIMENSIONS

### STANDALONE



FIXTURE LENGTH	A		B		C		D		E		F				G				H				
	FT	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	MAX		MIN		MAX		MIN		MAX		MIN	
												IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
3	3	76.2	3.0	76.2	4.5	114.3	40	1016	40.8	1036	40	1016	20	508	37.5	953	38.75	984	1.25	31.9	0.625	15.9	
4							52	1321	52.8	1341	52	1321	26	660	52	1321	52	1321					
6							76	1930	76.8	1950	76	1930	38	965	76	1930	76	1930					
8							96	2438	96.8	2458	96	2438	48	1219	96	2438	96	2438					
10							120	3048	120.8	3068	120	3048	60	1524	120	3048	120	3048					
12	144	3658	144.8	3678	144	3658	72	1829	144	3658	144	3658											

### CONTINUOUS RUNS





FIXTURE LENGTH	A		B		C		D		E		F		G				H				I	
	FT	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	MAX		MIN		MAX		MIN		IN	MM	
												IN	MM	IN	MM	IN	MM	IN	MM			
3	3	76.2	3.0	76.2	4.5	114.3	40	1016	40.4	1026	40	1016	10	1016	0	0	1.25	31.9	0.625	15.9	1	26
4							52	1321	52.4	1331	52	1321	13	1321	0	0						
6							76	1930	76.4	1940	76	1930	19	1930	0	0						
8							96	2438	96.4	2448	96	2438	24	2438	0	0						
10							120	3048	120.4	3058	120	3048	30	3048	0	0						
12	144	3658	144.4	3668	144	3658	36	3658	0	0												

CAD files available upon request




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## OPTIONAL HARDWARE ORDERING GUIDE

### REPLACEMENT CANOPY<sup>1</sup>

UN- Product Line	PC Part	 Canopy Type	 Color
Order Code:			
			Code
Product Line			
Universal			<b>UN-</b>
Part			
Pendant Canopy			<b>PC</b>
Canopy Type			
5" Power Feed (Ships Default)			<b>5P</b>
5" non-powered point (Ships Default)			<b>5N</b>
2" (non-powered point)			<b>2N</b>
Color			
White			<b>WHT</b>
Black			<b>BLK</b>
Metallic Silver			<b>MSL</b>

### REPLACEMENT MOUNTING HARDWARE<sup>2</sup>

UN- Product Line	PM Part	 Mounting Type	 Point Type	 AC Length
Order Code:				
				Code
Product Line				
Universal				<b>UN-</b>
Part				
Pendant Mounting				<b>PM</b>
Mounting Type				
Hard Ceiling				<b>C1</b>
T-Bar				<b>C2</b>
Point Type				
Powered Point				<b>PWR</b>
Non-Powered Point				<b>NPR</b>
Aircraft Cable Length				
36" (91.44cm) (Ships Default)				<b>036</b>
72" (182.88cm)				<b>072</b>

<sup>1</sup> 5" Canopy ships default with pendant, Replacement order code allows for replacement canopies, or 2" non-standard canopies for non-powered points

<sup>2</sup> 36" Aircraft Cable ships default with pendant.

## DIAGNOSTIC REPORTING

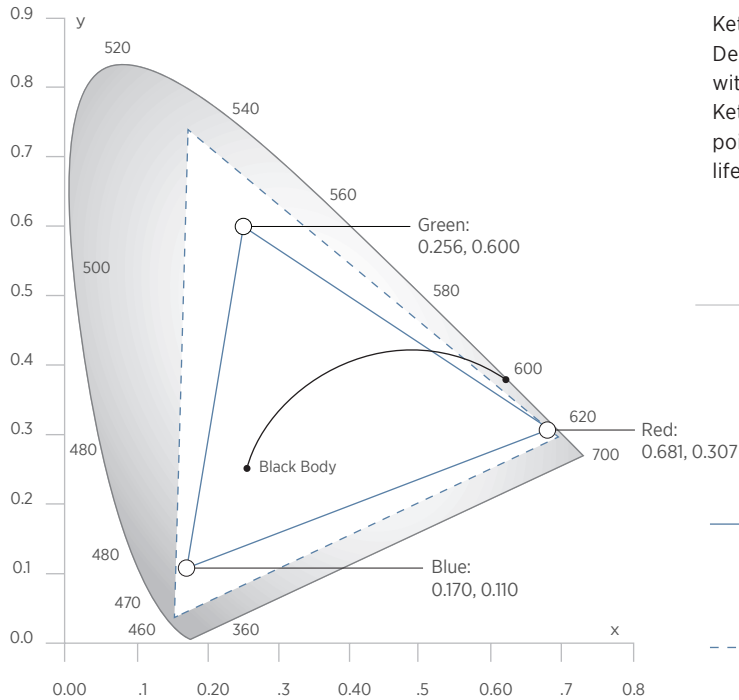
Prior to commissioning in Design Studio, Ketra's P4 Linear should power on to a default white state. If it powers on to some other color, that means there is a problem in the installation conditions. See the table below for each color's meaning.

Color	Condition	Correction
Red	Low input voltage on the power line	Ensure that the input voltage is 120V or 277V, + or - 10%
Magenta	Signaling wire connection not detected	Cut power and reconnect the red conductor of the leader cable to the N3's "S" port
Red-Green-Blue Pattern	Line and neutral wiring switched	Cut power, and reverse line and neutral wiring
Red-Green Pattern*	Line and neutral wiring switched	Cut power, and reverse line and neutral wiring
Yellow	Multiple runs of G2 detected	Cut power and disconnect all but one run of G2. Only one run can be connected to a satellite
Turquoise	More than 40 G2 detected	Remove the turquoise linears and reboot the satellite
Green	More than 100ft run length detected (including cables and fixtures)	Remove excess cabling and/or fixtures, and reboot the satellite
Dark Blue		

\* for product ordered in 2019

## WIDE GAMUT

CIE 1931 Color Chart



Ketra's L3I Linear pendant can easily be configured via Ketra's intuitive Design Studio software. The product can reproduce any color point within the triangle shaped gamut indicated in the chart below. With Ketra's innovative optical and thermal feedback system, the color point is maintained to an accuracy of <1 MacAdam ellipse over the lifetime of the product and across operating temperature range.

- **Calibrated Gamut:** Color point is maintained to an accuracy of <1 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

LED linear shall employ closed loop optical and thermal feedback capable of maintaining color point accuracy of <1 MacAdam ellipse.

LED linear shall have color spatial uniformity of <2 MacAdam ellipses over full field angle.

LED linear shall have an integrated wireless control onboard.

LED linear shall be capable of a CRI >90 at any point along the Black Body Curve from 2700 - 5000K.

LED linear shall be a single source multi-die emitter consisting of both monochromatic and phosphor converted blue LED dye.

LED linear shall be sealed, meeting UL damp location requirements.

LED linear shall be dimmable to 0.1% of measured luminous flux with wireless dimming.

LED linear shall be UL listed and RoHS compliant.

LED linear shall be capable of in situ firmware and software upgrades.

Ketra's LED L3I linear is warranted 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.

LED Linear shall be # \_\_\_\_\_