



# MARKLINE 101

TUNABLE WHITE & WARM DIMMING

## HIGHLIGHTS

- Small and versatile
- Extruded aluminum construction
- Lumen outputs: 250, 400, 600 or 800 lumens per foot
- Tunable White: Rhythm Range (2700 - 6500K) or Productivity Range (3000-5000K)
- Warm Dimming: Halogen Range (3000 - 1800K)
- 6 precise optical distributions: 9x9, 15x30, 10x60, 30x60, 40x60, 60x60 or Wall Wash
- 0-10V, nLight or nLightAIR2
- Flicker free dimming to DARK (0.01%)
- Shielding options: frosted lens, partially frosted lens, linear cross baffle, hex cell louver, glare visor
- Mounting: surface fixed, surface adjustable, cantilever, suspended

## TUNABLE WHITE FIXTURE PERFORMANCE

Distribution	PROR (@40K)			RHYR (@46K)		
	WW	9x9	15x30	WW	9x9	15x30
Delivered Lumens/Foot	552	581	587	613	645	652
Input Watts/Foot	6	6	6	6.4	6.4	6.4
Lumens/Watt	92	97	98	96	101	102

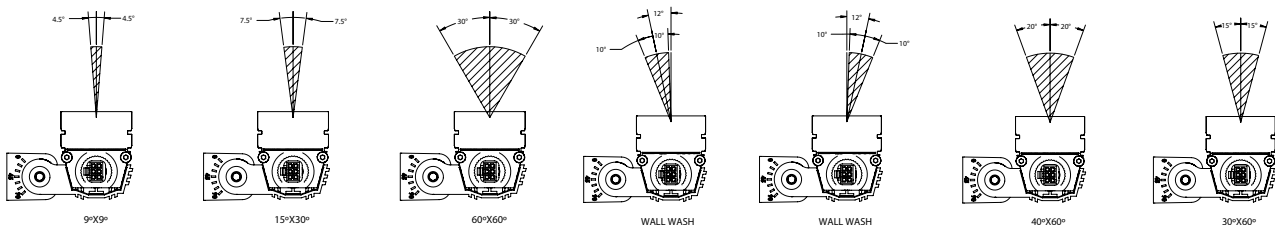
\*Based on a 4ft, 90CRI, 700 LMF.

## WARM DIMMING FIXTURE PERFORMANCE

Distribution	9x9	15x30	WW
Delivered Lumens/Foot	625	684	642
Input Watts/Foot	9.3	9.3	9.3
Lumens/Watt	67	74	69

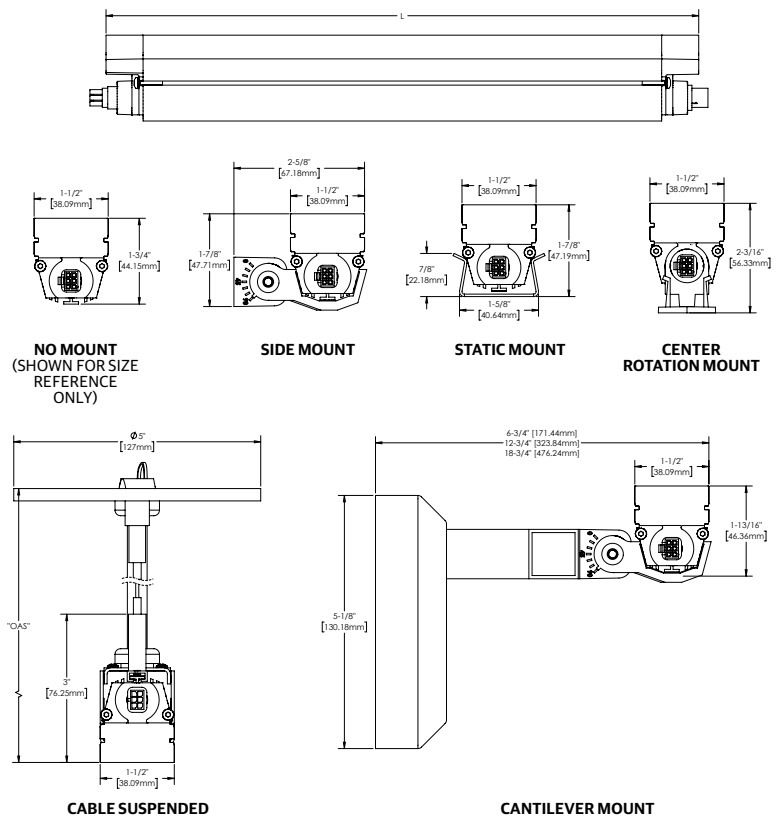
\*Based on a 4ft, 90CRI, @30K, 700 LMF.

## STANDARD DISTRIBUTION



## DIMENSIONS

Types of Mount with Optic



MARK

ARCHITECTURAL  
LIGHTING

MARKLINE 101

Tunable White &  
Warm Dimming

ORDERING

Example: MKS101 LLP 24FT MSL4 M100FMC 80CRI TUWH RHYR 700LMF 60X60DEG DARK MVOLT WTP NLTW MVCL10TL  
Example: MKS101 LLP 24FT MSL4 M100FMC 80CRI WDIM HALR 700LMF 40X60DEG DARK MVOLT WTP NLIGHT MVCL10TL

Series		Linear Plan		Total Run Length		Max Section Length		Mounting		Mounting Option	
MKS101	MARKLINE 101	LLP	Linear Longest Possible	_FT	Specify continuous linear feet in 1' increments starting at 1' (Example: 24FT)	MSL1	1'	(blank)	Cable Suspended Mount	(blank)	No Cantilever Option
		LSL	Linear Same Length			MSL4	4'	M100ADJCI	Adjustable Mount Center Axis	MCLB6	Cantilever Bracket 6" Projection
		LCB	Linear Center Balance					M100ADJH2	Adjustable Mount Side Hinge	MCLB12	Cantilever Bracket 12" Projection
								M100FMC	Fixed Mount	MCLB18	Cantilever Bracket 18" Projection
								M100CVE*	Cove Mount		
								*MCVE cove housing must be ordered separately.			
Light Source Color Rendering		Dynamic Feature		Dynamic Range		LED Light Output		Distribution		Minimum Dimming Level	
80CRI*	80CRI	TUWH	Tunable White	HALR*	Halogen Range (3000K-1800K)	250LMF	250 Nominal Lumens Per Foot	9X9DEG	9 x 9 Degrees	DARK	Constant Current, Dimming to <1%
90CRI	90CRI	WDIM	Warm Dimming	PROR**	Productivity Range (3000K-5000K)	400LMF	400 Nominal Lumens Per Foot	10X60DEG	10 x 60 Degrees		
* 80CRI not available with RHYR.				RHYR**	Rhythm Range (2700K-6500K)	500LMF	500 Nominal Lumens Per Foot	15X30DEG	15 x 30 Degrees		
					*HALR is only available with WDIM.	600LMF	600 Nominal Lumens Per Foot	30X60DEG	30 x 60 Degrees		
					**PROR & RHYR are only available with TUWH	700LMF	700 Nominal Lumens Per Foot	40X60DEG	40 x 60 Degrees		
								60X60DEG	60 x 60 Degrees		
								WW	Wall Wash		
Optional Shielding		Voltage		Shielding		Finish		Control Input		Mounting	
(blank)	No Optional Shielding	MVOLT	120 - 277 Volt	(blank)	Frosted Acrylic	WTP	White Textured	ZT*	0-10V	(blank)	No Cable Suspension Mount
MBFB	Baffle Linear Surface, Black	347*	347 Volt	PFCA	Partial Frost Clear Acrylic	BKT	Black Textured	NLIGHT**	nLight Enabled	F1/	T-bar ceiling (universal mounting bracket)
MGVB	Glare Visor Linear Surface, Black	*347 comes with a remote driver kit.				SIT	Silver Textured	NLTAIR2**	nLight AIR (wireless) Enabled	F1A/	T-bar ceiling (UMB with integrated j-box)
MHCB	Hexagonal Cell Louver, Black					RALTBD	RAL Color TBD	NLT***	nLight Enabled Interface		
MFCA	Frosted Clear Acrylic					*ZT is only available with WDIM. **NLGHT and NLTAIR2 are only available with WDIM and come with a remote driver kit. ***NLT is only available with TUWH.					
Overall Suspension		Power Feed		Canopy Form		Canopy Color		Options			
(blank)	No Cable Suspension Mount	MFCL10TL	Left 10FT Feed Cable (Female)	(blank)	No Cable Suspension Mount	(blank)	No Cable Suspension Mount	(blank)	No options		
96A	96 in adjustable	MFCL10TR	Right 10FT Feed Cable (Male)	RDCY	Round canopy	BKTCY	Black canopy	MCS*	5" Support Canopy to Match Feed		
120A	120 in adjustable	MFCL25TL	Left 25FT Feed Cable (Female)	SQCY	Square canopy	SITCY	Silver painted canopy	CP	Chicago Plenum		
		MFCL25TR	Right 25FT Feed Cable (Male)			WTPCY	White canopy	*MCS is only available with cable suspension mount.			
		MFCL50TL	Left 50FT Feed Cable (Female)								
		MFCL50TR	Right 50FT Feed Cable (Male)								
		MFCL100TL	Left 100FT Feed Cable (Female)								
		MFCL100TR	Right 100FT Feed Cable (Male)								
		NOFCL	No Power Feed Cable								
		M100BL*	M550 Wire Splice Box Left								
		M100BR*	M550 Wire Splice Box Right								
		M100W*	M100 Whip Box								
		*M100W is required for M100CVE Mounting. *If selecting CP, must select M100BL or M100BR.									

MODEL	SECTION	LENGTH	WEIGHT
MKS101	U1	12" (305 mm)	1 lb.
	U4	48" (1219 mm)	3.05 lb.

PERFORMANCE DATA

Tunable White PROR Range

Based on a 4ft, 90CRI, @40K

Lumens Per Foot	Distribution	Delivered Lumens	Input Watts	"Lumens/Watt"	Delivered Lumens/Ft	Input Watts per Foot
250	9x9	656	10.92	60.07	164	2.73
	15x30	631	10.92	57.78	158	2.73
	WW	601	10.92	55.04	150	2.73
400	9x9	1190	14.96	79.55	298	3.74
	15x30	1146	14.96	76.60	287	3.74
	WW	1091	14.96	72.93	273	3.74
500	9x9	1607	17.96	89.48	402	4.49
	15x30	1546	17.96	86.08	387	4.49
	WW	1472	17.96	81.96	368	4.49
600	9x9	2018	21	96.10	505	5.25
	15x30	1942	21	92.48	486	5.25
	WW	1849	21	88.05	462	5.25
700	9x9	2323	24.05	96.59	581	6.01
	15x30	2236	24.05	92.97	559	6.01
	WW	2129	24.05	88.52	532	6.01

Tunable White RHYR Range

Based on a 4ft, 90CRI, @46K

Lumens Per Foot	Distribution	Delivered Lumens	Input Watts	"Lumens/Watt"	Delivered Lumens/Ft	Input Watts per Foot
250	9x9	728	11.54	63.08	182	2.89
	15x30	701	11.54	60.75	175	2.89
	WW	667	11.54	57.80	167	2.89
400	9x9	1321	15.8	83.61	330	3.95
	15x30	1272	15.8	80.51	318	3.95
	WW	1211	15.8	76.65	303	3.95
500	9x9	1783	18.97	93.99	446	4.74
	15x30	1717	18.97	90.51	429	4.74
	WW	1634	18.97	86.14	409	4.74
600	9x9	2240	22.18	100.99	560	5.55
	15x30	2156	22.18	97.20	539	5.55
	WW	2052	22.18	92.52	513	5.55
700	9x9	2579	25.41	101.50	645	6.35
	15x30	2483	25.41	97.72	621	6.35
	WW	2363	25.41	92.99	591	6.35

Lumen Values are from photometric test performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configuration shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of en-user environment and application. Consult [www.marklighting.com](http://www.marklighting.com) for performance data on any configurations not shown here.

SCALING CHARTS

Tunable White PROR Range

CRI	CCT	Multiplier
80CRI	27K	1.08
80CRI	30K	1.12
80CRI	40K	1.25
80CRI	50K	1.29
90CRI	27K	0.85
90CRI	30K	0.94
90CRI	35K	1
90CRI	40K	1.08
90CRI	50K	1.11

Shielding	Multiplier
MBFB	0.64
MHCB	0.32
MFCA	0.73
MGVB	0.68

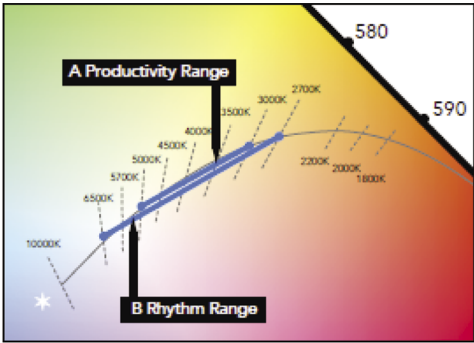
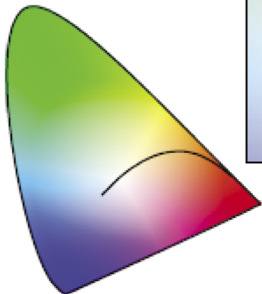
These tables can be used to approximate the lumen values at different Kelvin temperatures and Color Rendering Index. Power consumption would stay the same.

MAINSTREAM DYNAMIC TUNABLE WHITE WITH NTUNE TECHNOLOGY

Tunable white nTune™ is an all-digital light color temperature control within an nLight enabled luminaire. This brings tunable white lighting control into the mainstream with repeatable, consistent results in an economical luminaire form and system already familiar to schools. Designers and facility operators are granted the freedom to tie scenes to specific activities or to complement colors or materials within a visual environment. nTune™ allows color temperature settings through the Rhythm Range of 2700K to 6500K. Refer to the nLight Programming User's Guide for instructions on customizing to your application with SensorView™.

Tunable White GPHD

- **Gamut:** One dimensional warm-Cool
- **Path:** Direct 2700K to 6500K (Rhythm Range)
- **Handle:** Two Natural Language Handles: Intensity and CCT
- **Data:** nLight with nTune technology for both handles of control



- **A** Productivity Range 3000K to 5000K
- **B** Rhythm Range 2700K to 6500K

### PERFORMANCE DATA

Based on 4FT, 90CRI, @30K. See website for additional IES files.

Nominal Lumens/FT	Distribution	Delivered Lumens	Input Watts	Lumens/Watt	Delivered Lumens Per Foot	Input Watts Per Foot
250	9x9	876	13.12	66.77	219	3
	15x30	958	13.12	73.02	240	3
	WW	899	13.12	68.52	225	3
400	9x9	1456	20.31	71.69	364	5
	15x30	1592	20.31	78.39	398	5
	WW	1494	20.31	73.56	374	5
500	9x9	1825	25.31	72.11	456	6
	15x30	1995	25.31	78.82	499	6
	WW	1873	25.31	74.00	468	6
600	9x9	2117	32	66.16	529	8
	15x30	2315	32	72.34	579	8
	WW	2172	32	67.88	543	8
700	9x9	2499	37.26	67.07	625	9
	15x30	2733	37.26	73.35	683	9
	WW	2565	37.26	68.84	641	9

Lumen Values are from photometric test performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configuration shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of on-user environment and application. Consult [www.marklighting.com](http://www.marklighting.com) for performance data on any configurations not shown here.

### SCALING CHARTS

#### Warm Dimming HALR Range

CRI	CCT	Scale Factor
80CRI	@27K	1.09
80CRI	@30K	1.13
90CRI	@27K	0.93

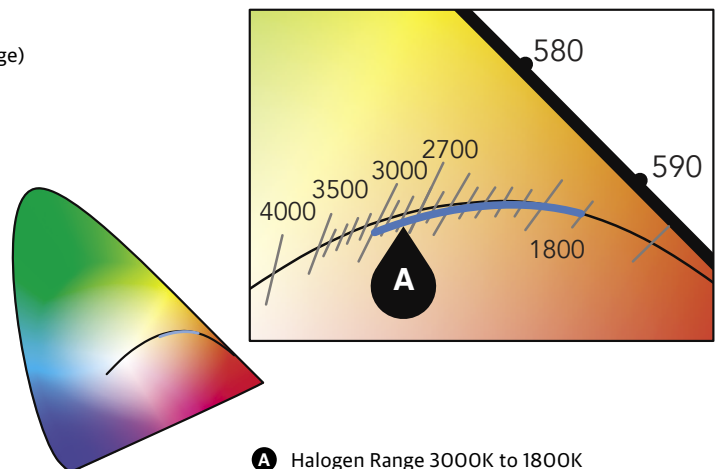
Shielding	Multiplier
PFCB	0.98
MBFB	0.42
MFCA	0.89
MGVB	0.70
MHCB	0.13

These tables can be used to approximate the lumen values at different Kelvin temperatures and Color Rendering Index. Power consumption would stay the same.

### MAINSTREAM DYNAMIC WARM DIMMING WITH NTUNE TECHNOLOGY

#### Warm Dimming GPHD

- Gamut:** Triangular: to achieve efficiency and CRI
- Path:** Curved tracking Black Body Curve: 3000K@100%-1800K<1% (Halogen Range)
- Handle:** One Handle: Intensity (with implicit CCT)
- Data:** DMX512/RDM and nLight®



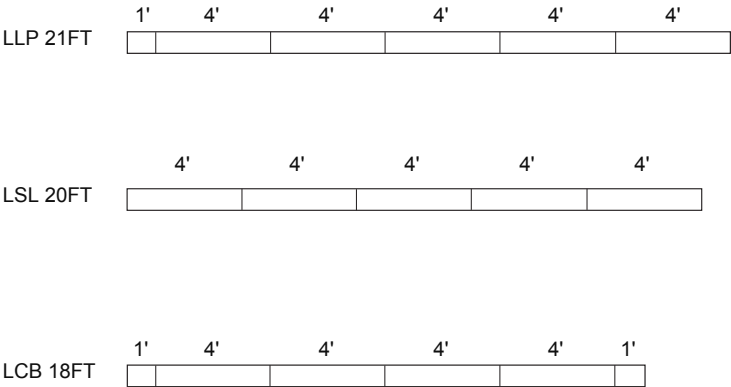
LINEAR PLAN

Mark offers the ability to provide a continuous run plan to suit your requirements by optionally offering three methods of configuration.

**LLP** Longest Length Possible:  
In this plan the longest length available is optimized resulting in the fewest segments and mounting locations. Caution should be used where balanced appearance is a concern. Example: 21FT row would have (5) 4FT segments and (1) 1FT segment located at one end.

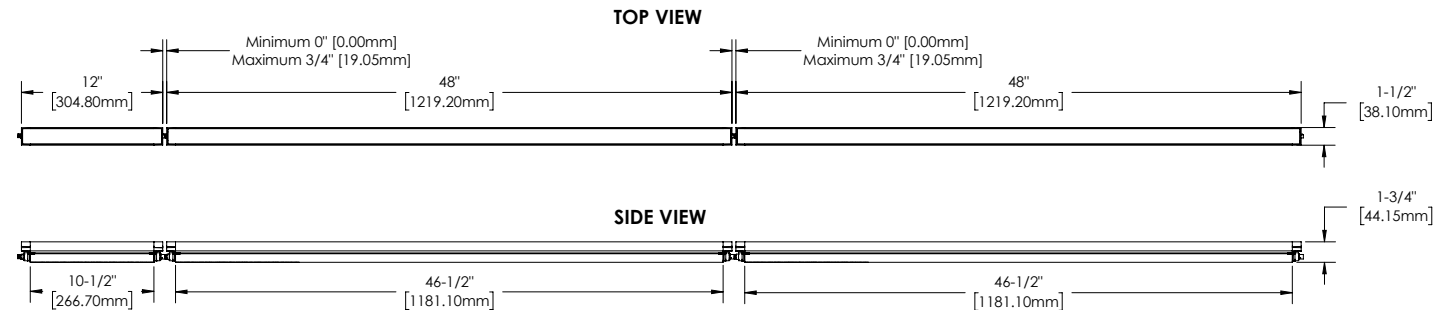
**LSL** Longest Same Length:  
In this configuration each segment is the same length is standardized based on the longest length available and is the only option provided. Because it is dependent on one segment length there are mathematical limitations on what overall row lengths can be achieved. Example: 20FT row would be achieved with (5) 4FT long segments equaling 20FT (nominal).

**LCB** Longest Center Balanced:  
This configuration incorporates the longest center segment(s) along with any additional lengths required to fill located at each end. Example: 18FT row would have (2) 1FT segments (one at each end) and (4) 4FT intermediate segments located in between.

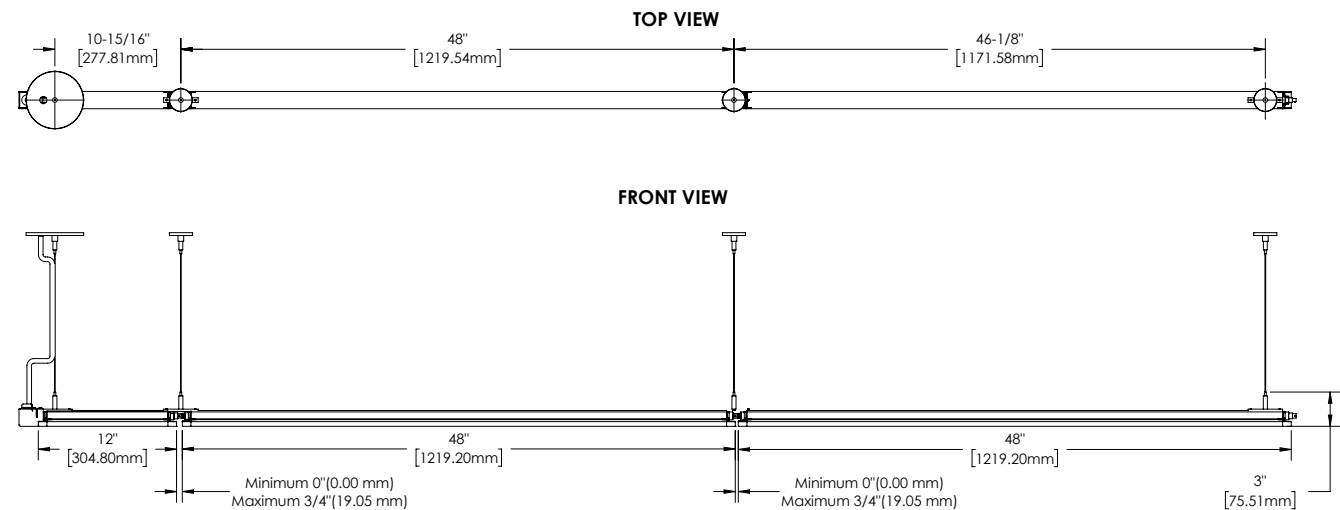


DRAWING DETAILS

MKS101 Series Typical End-To-End Run Configuration



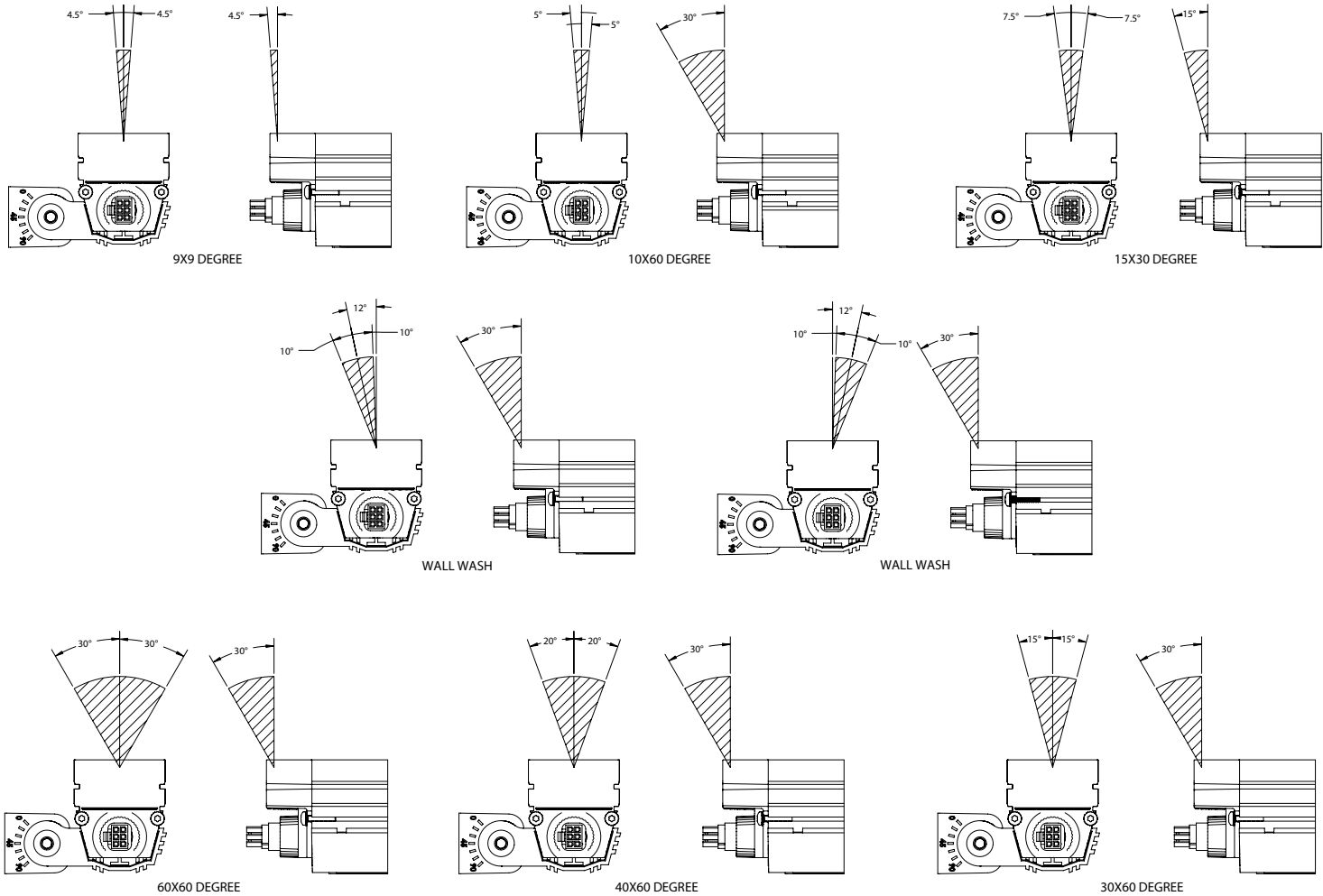
MKS101 Cable Suspension Typical End-To-End Run Configuration



MARKLINE 101  
Tunable White &  
Warm Dimming

DISTRIBUTION

Note: All are shown with M100ADJH2 mount

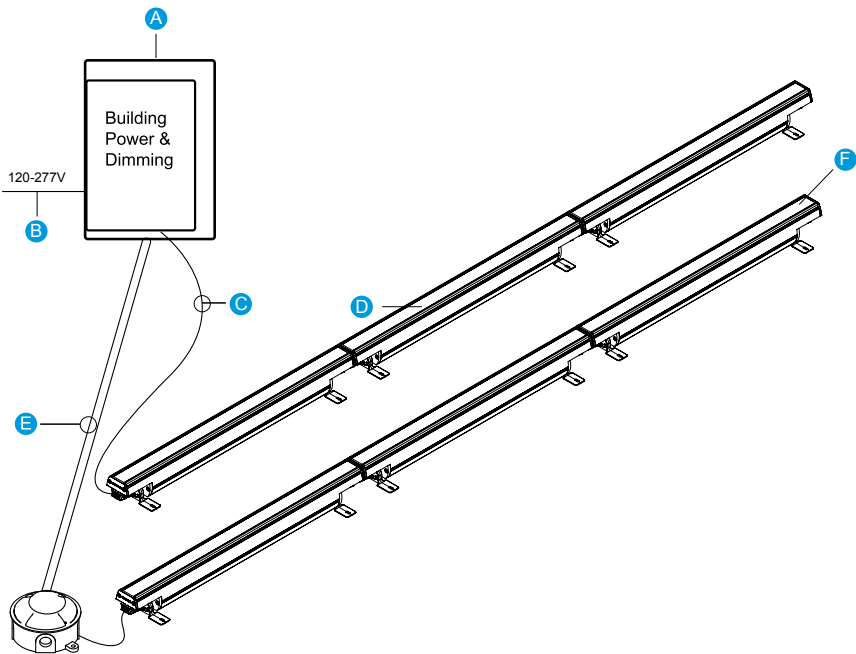


# MARKLINE 101

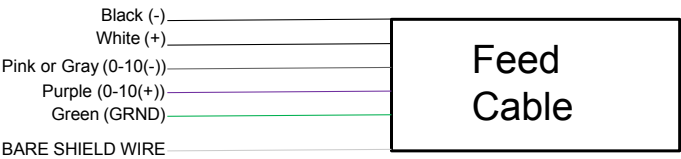
Tunable White &  
Warm Dimming

## BASIC SYSTEM WIRING INFORMATION WITHOUT DMX

This very basic system wiring diagram provides an overview of components and materials required for a simple installation of MKS101 luminaires controlled by building system power (By Others). These diagrams should not be used in place of actual installation instructions or submittal drawings prepared for a specific project.



### Feed Cable Wiring



- \*Notes
- 1) Cap BARE SHIELD WIRE in Junction box. (By Others)
  - 2) When not using 0-10V dimming, cap Pink or Gray and Purple separately in the junction box. (By Others)

Luminaire installation can be as simple as a single luminaire and one control to many different luminaires in multiple locations being triggered and manipulated in real time. Consulting with the factory at the beginning stages of the project will ensure the required equipment be specified and properly installed.

- A Building power and dimming control input via 0-10V or DALI system provided by others.
- B 120V-277V input. Metallic conduit and standard fittings are compatible as are multi-conductor cords provided they are appropriate to the mounting location.
- C Feed cable connects junction box or control input with first fixture in a run. 14 ga. conductors carry power, shielded 18 ga. conductors carry data. Input end is stripped for connection to the junction box, output end includes a female or male plug for fixture connection. Also included with each feed cable is a sealing cap for the end of each run.
- D Consult Fixture Installation Instructions, for Luminaire Run Length Limits table.
- E Power can be run to junction box locations in rigid conduit. Use Belden 9829 for data and copper wire per local code for power. Use appropriate fitting for combination cord.
- F Included with each feed cable is a sealing cap for the last luminaire in each run. See installation instructions.

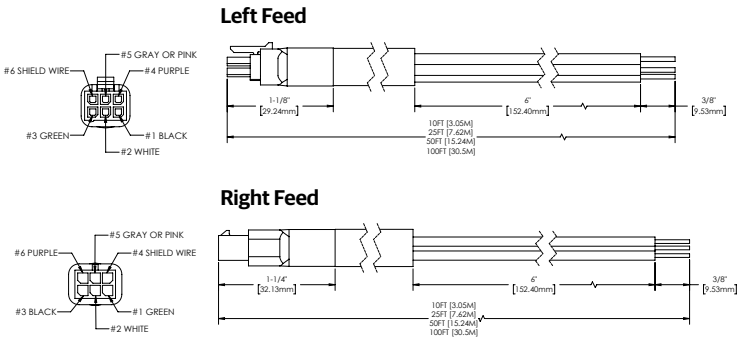
ACCESSORY OPTIONS

Feed Cables

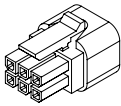
\*Minimum of one feed cable, left or right, required per installation

Model	Cord Color	DMX
<b>MFCL10TL</b> Left 10FT Feed Cable	<b>WCRD</b> White Cord <b>BCRD</b> Black Cord	<b>DXP</b> DMX Plug
<b>MFCL25TL</b> Left 25FT Feed Cable		<b>NDXP</b> Non-DMX Plug
<b>MFCL50TL</b> Left 50FT Feed Cable		
<b>MFCL100TL</b> Left 100FT Feed Cable		
<b>MFCL10TR</b> Right 10FT Feed Cable		
<b>MFCL25TR</b> Right 25FT Feed Cable		
<b>MFCL50TR</b> Right 50FT Feed Cable		
<b>MFCL100TR</b> Right 100FT Feed Cable		

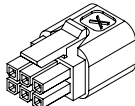
Carries DMX or NON-DMX signal and 120-277 line voltage power to right end of first fixture in run.  
Supplied with termination/sealing cap.  
\*Use one feed cable per run only.\*



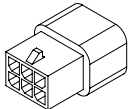
Left Dust Cap



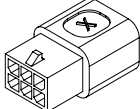
Left DMX Terminator Cap



Right Dust Cap



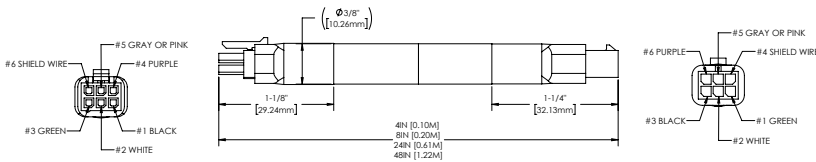
Right DMX Terminator Cap



Jumper Cable \*Optional\*

Model	Cord Color
<b>MJCLM2</b> 2FT Jumper Cable	<b>WCRD</b> White Cord
<b>MJCLM4</b> 4FT Jumper Cable	<b>BCRD</b> Black Cord
<b>MJCLM4IN</b> 4IN Jumper Cable	
<b>MJCLM8IN</b> 8IN Jumper Cable	

Carries DMX or NON-DMX signal and 120-277 line voltage power between two units in a run when larger spacing between units is required.



MARKLINE 101  
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Warm Dimming

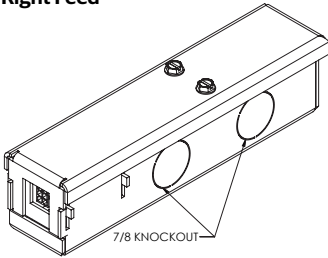
ACCESSORY OPTIONS (CONTINUED)

Wire Splice Box, \*Optional\*

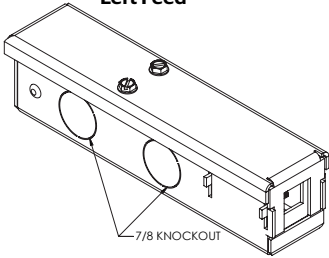
Model		Direct Distribution		Finish		DMX	
M100BXL	M100 Wire Splice Box Left	9X9DEG	9 x 9 Degrees	WTP	White Textured	DXP	DMX Plug
M100BXR	M100 Wire Splice Box Right	10X60DEG	10 x 60 Degrees	BKT	Black Textured	NDXP	Non-DMX Plug
		15X30DEG	15 x 30 Degrees	SIT	Silver Textured		
		30X60DEG	30 x 60 Degrees	RALTB	RAL Color TBD		
		40X60DEG	40 x 60 Degrees				
		60X60DEG	60 x 60 Degrees				
		WW	Wall Wash				

Replaces feed cable for areas where flexible cord cannot be used to bring input DMX or NON\_DMX signal and 120-277 line voltage power to right end of beginning of run. Box allows 1/2" NPT conduit fitting connection and area for building wire splice connections. Supplied with termination/sealing cap. \*Use one wire splice box per run only.\*

Right Feed



Left Feed

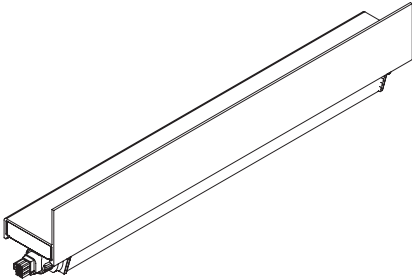


MARKLINE 101  
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ACCESSORY OPTIONS (CONTINUED)

Glare Visor (Linear) \*Optional\*

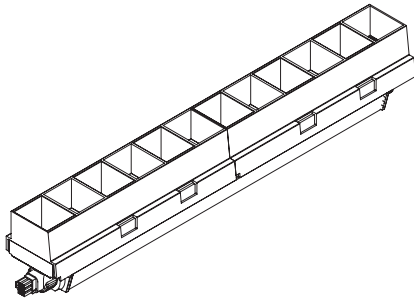
Model	Fixture Section
<b>MGVB1</b> Glare Visor, Black	<b>U1</b> 1FT Length Unit <b>U4</b> 4FT Length Unit



Reference Accessory Details  
document for dimensions

Baffle (Linear) \*Optional\*

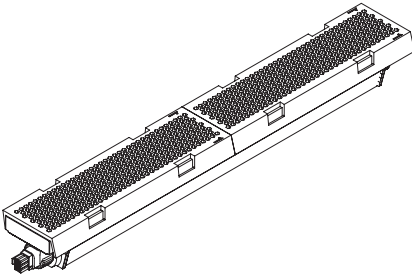
Model	Fixture Section
<b>MBFB1</b> Baffle Linear Surface, Black	<b>U1</b> 1FT Length Unit <b>U4</b> 4FT Length Unit



Reference Accessory Details  
document for dimensions

Hexagonal Cell \*Optional\*

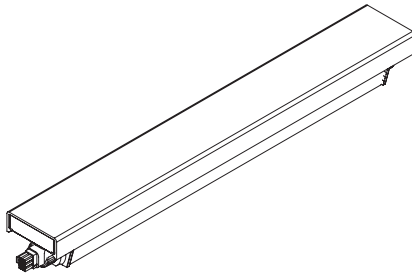
Model	Fixture Section
<b>MHCB1</b> Hexagonal Cell Louver, Black	<b>U1</b> 1FT Length Unit <b>U4</b> 4FT Length Unit



Reference Accessory Details  
document for dimensions

Frosted Clear \*Optional\*

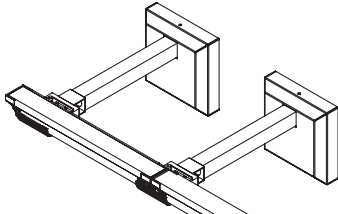
Model	Fixture Section
<b>MFCA1</b> Frosted Clear Acrylic	<b>U1</b> 1FT Length Unit <b>U4</b> 4FT Length Unit



Reference Accessory Details  
document for dimensions

Cantilever Brackets \*Optional\*

Series	Finish
<b>MCLB6</b> Cantilever Bracket 6" Projection	<b>BKT</b> Black Textured Paint
<b>MCLB12</b> Cantilever Bracket 12" Projection	<b>SIT</b> Silver Textured Paint
<b>MCLB18</b> Cantilever Bracket 18" Projection	<b>WTP</b> White Textured Paint
	<b>RALTB</b> RAL Paint Finish



Reference Accessory Details  
document for dimensions

# MARKLINE 101

## Tunable White & Warm Dimming

### SPECIFICATIONS

**Voltage:** 120 through 277v/60Hz

**Distribution:** 9° x 9°, 10° x 60°, 15° x 30°, 30° x 60°, 40° x 60°, 60° x 60°, Asymmetric

**Size:** 1.5 W x 1.75 H

**Housing:** Extruded aluminum snap together construction

**Finish:** Polyester powder coat painted finish. Natural stainless steel fasteners.

**Lens Material:** Extruded acrylic

**LED:** 12 LED diodes per foot

**Ambient Temperature Ranges:** -20° to +45°C

**Mounting:** Suitable for mounting within the space between ground and 4FT (1.2M) of the ground. Suitable for damp location applications.

**Certification/Compliance:** CSA Certified to meet U.S. and Canadian standards conforming to UL 1598 and CAN/CSA C22.2 No. 250.0

Buy America: This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to [www.acuitybrands.com/buy-american](http://www.acuitybrands.com/buy-american) for additional information.

**Warranty:** 5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

**Assembled in America:** Buy American Act Compliant