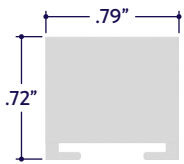


END VIEW / DIMENSIONS



MINIMUM & MAXIMUM RUNS

Wattage	1.5W	2W	3W	4W	5W	6W	8W	10W	12W
0-10V & DALI Minimum Run	4'	3'	2'	2'	2'	1'	1'	1'	1'
0-10V & DALI Maximum Run	39'	27'	19'	14'	11'	9'	7'	6'	5'
DMX Minimum Run	4'	3'	2'	2'	2'	1'	1'	1'	1'
DMX Maximum Run	26'	18'	13'	9'	8'	6'	4'	4'	3'

SPECIFY PRODUCT CODE | CHOOSE FROM DROP DOWNS

Series	Lens / Optics	Finish	BIOS LED	Watts per Foot	Dimming	Listing	Luminaire Voltage ⁷	Luminaire Length
A1-ZUCO-STN-BIOS							UNV	
ZUCO Standard BIOS Illuminated (A1-ZUCO-STN-BIOS)	Clear Lens (CL)	Natural Silver ^{*2} (NA)	BIOS Biological Static: 3500K Daytime ^{*3} (BS-35K)	1.5 Watts (1.5W) 234 Lumens / ft ^{*6}	0-10V (10V)	Indoor (DRY)	120-277V Line Voltage (UNV)	Specify Length in Feet & Inches Example: 7'8"
	50% Semi-Frosted Lens (SF)			2 Watts (2W) 312 Lumens / ft ^{*6}				
	100% Frosted Lens (F)	Silver (SR)		3 Watts (3W) 468 Lumens / ft ^{*6}	DALI (DALI)	Outdoor (DAMP)		
	Asymmetric Lens Left (ASML)	White (WH)	BIOS Biological Dynamic: 3500K Daytime - 3000K Evening ^{*4} (BD-35K-30K)	4 Watts (4W) 624 Lumens / ft ^{*6}				
	Asymmetric Lens Right ^{*5} (ASMR)	Satin (SA)		5 Watts (5W) 780 Lumens / ft ^{*6}	DMX-512 (DMX)			
	15° Optics (15D)	Black (BK)		6 Watts (6W) 936 Lumens / ft ^{*6}				
30° Optics (30D)		BIOS Biological Tunable: 3500K Daytime - 2700K Evening ^{*5} (BT-35K-27K)	8 Watts (8W) 1248 Lumens / ft ^{*6}					
45° Optics (45D)			10 Watts (10W) 1560 Lumens / ft ^{*6}					
60° Optics (60D)			12 Watts (12W) 1872 Lumens / ft ^{*6}					

- ^{*1} Default Asymmetric Direction is Right (ASMR) if unspecified.
- ^{*2} Default finish is Natural Silver (NA) if left blank.
- ^{*3} BIOS Biological Static available in standard 3500K Daytime CCT. Consult factory for other color temperature options.
- ^{*4} BIOS Biological Dynamic available in standard 3500K Daytime - 3000K Evening CCT gamut. Consult factory for other color temperature options.
- ^{*5} BIOS Biological Tunable available in standard 3500K Daytime - 2700K Evening CCT gamut. Consult factory for other color temperature options.
- ^{*6} Lumens per Foot based on 35K CCT LED. **Example:** 156 Lumens x 4 Watts = 624 Initial Lumens per Foot.
- ^{*7} Remote drivers wattage sized based on length of run. **Example:** 6' run x 10 watts per foot = 60 watts. Driver will be sized to 60 watts maximum.

GENERAL FEATURES

Applications	Accent, Cove, Under Cabinet Lighting
Lens	Clear, 50% Semi-Frosted, or 100% Frosted
Optics & Asymmetric	15°, 30°, 45°, 60°, 120°, or Asymmetric Optics
Length	Built to Order (+/- 1.8" Tolerance) See Length Restrictions Table for details
Construction	Aluminum Extrusion
Weight	0.38 lbs per foot
Mounting	Mounting Clips (Sold Separately)
Listing	Dry or Damp Location UL1598, CSA C22.2#250.0 UL8750, CSA250 UL2108, 67.1.9, 60.4, CSA C22.2 #9
Driver	Remote
Temperature Ratings	Operating / Startup: -20° to 48°C (-4° to 120°F) Storage: -40° to 76°C (-40° to 170°F)
Installation Link	

ELECTRICAL

Dimming	0-10V, DMX, DALI
Luminaire Voltage	120V - 277V (UNV)



A1 Series | Surface

ZUCO Standard BIOS Illuminated

(A1-ZUCO-STN-BIOS)

TYPE



LAMP FEATURES

Lamp Type	BIOS SkyBlue™ LEDs
CRI	> 80
Efficacy*	156 Lumens per Watt

Note: Efficacy is based on Biological Static (BIOS-BS-35K) with Clear Lens (CL).

LAMP SPECIFICATIONS

Lamp Number	Description	Efficacy (Lumens per Watt)	L70 LED Life
BIOS-BS-35K	Biological Static: 3500K Daytime	156	
BIOS-BD-35K-30K	Biological Dynamic: 3500K Daytime - 3000K Evening	156	60,000 hrs.
BIOS-BT-35K-27K	Biological Tunable: 3500K Daytime - 2700K Evening	156	

Note: Efficacy is based on 35K CCT LED with Clear Lens (CL).

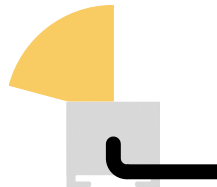
Note: To calculate Lumens per Foot, multiply Efficacy by Watts per Foot.

Example: 156 Lumens per Watt x 4 Watts per Foot = 624 Lumens per Foot.

OPTICS ORIENTATION



Asymmetric Lens Right (ASMR)



Asymmetric Lens Left (ASML)

Note: Refer to the above diagrams to understand optics orientation in relation to the power feed.

LENS / OPTICS APPEARANCE



Clear Lens (CL)
Visible Diode Image
0% Loss Factor



50% Semi-Frosted Lens (SF)
Slight Diode Image
12.5% Loss Factor



100% Frosted Lens (F)
No Diode Image: Line of Light
25% Loss Factor

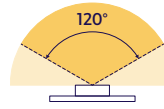


Asymmetric Lens (ASML, ASMR)
Slight Diode Image
18% Loss Factor

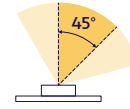


Optic Lens (15D, 30D, 45D, 60D)
Slight Diode Image
18% Loss Factor

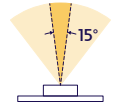
BEAM ANGLES



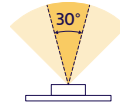
120° x 120° Beam
Clear Lens (CL)
50% Semi-Frosted Lens (SF)
100% Frosted Lens (F)



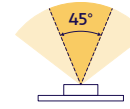
45° x 60° Beam
Asymmetric Lens (ASM)



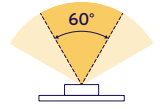
15° x 60° Beam
Optic Lens (15D)



30° x 60° Beam
Optic Lens (30D)

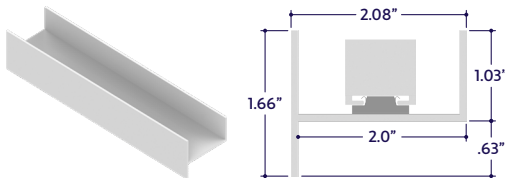


45° x 60° Beam
Optic Lens (45D)



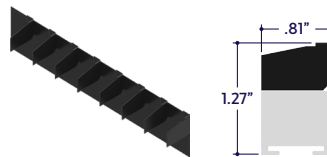
60° x 60° Beam
Optic Lens (60D)

ACCESSORIES (Sold Separately)



Part #	Qty.
A1-ZUCO-STN-UCH-8'	

Note: Order Mounting Channel as needed in 8', field cuttable lengths. Only available in Natural Silver (NA) finish.

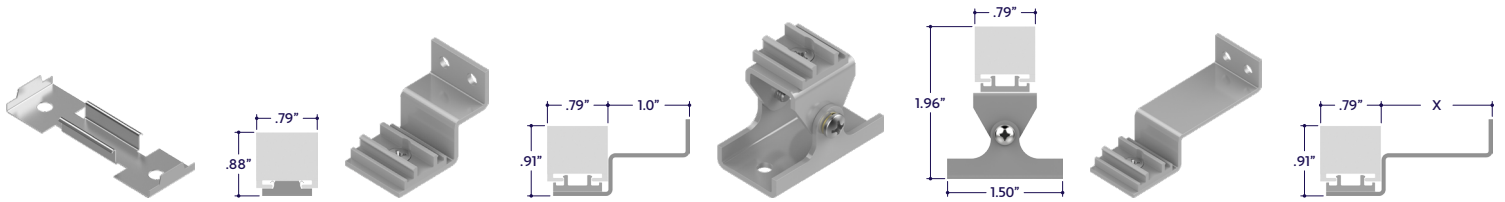


Part #	Qty.
A1-ZUCO-STN-LVR	

Note: Louver is available in 1' increments. Specify total number of louvers needed. Only available in black finish.

MOUNTING OPTIONS (Sold Separately)

Note: Mounting clips are only available in Natural Silver Finish, unless otherwise specified.



Part #	Qty.
A1-ZUCO-STN-MC	

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



Part #	Qty.
A1-ZUCO-STN-MC-2	

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



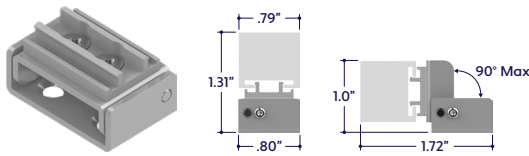
Part #	Qty.
A1-ZUCO-STN-MC-3	

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



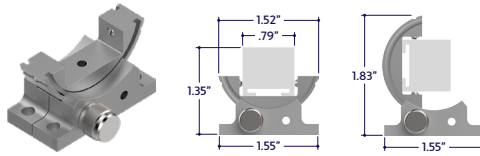
Part #	Length	Qty.
A1-ZUCO-STN-MC-4-		

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



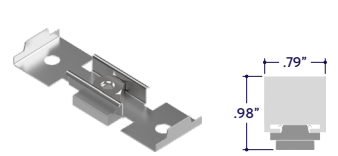
Part #	Qty.
A1-ZUCO-STN-MC-ADJ	

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



Part #	Qty.
A1-ZUCO-STN-MC-PVT	

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



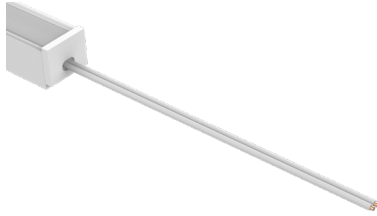
Part #	Qty.
A1-ZUCO-STN-MC-MM	

Note: Use 1 mounting clip per 2', rounded up. Click on image to see cut sheet for details.



POWER CONNECTORS (Sold Separately)

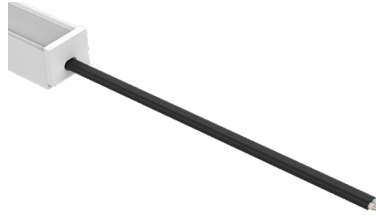
Note: Connectors are factory assembled to each run length. Connectors are subject to change without notice.



Dry Power Connector
(Biological Static LEDs Only)
(20/2 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BS-DRY-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BS-DRY-	36"	
A1-ZUCO-STN-BIOS-PC-BS-DRY-		

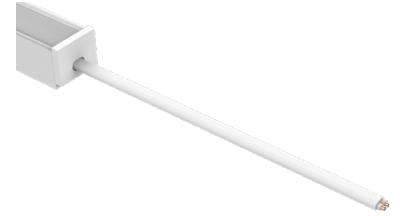
Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector with Black Jacket
(Biological Static LEDs Only)
(20/2 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BS-DRY-BK-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BS-DRY-BK-	36"	
A1-ZUCO-STN-BIOS-PC-BS-DRY-BK-		

Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector with White Jacket
(Biological Static LEDs Only)
(20/2 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BS-DRY-WH-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BS-DRY-WH-	36"	
A1-ZUCO-STN-BIOS-PC-BS-DRY-WH-		

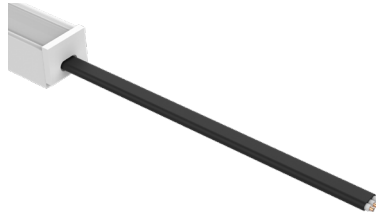
Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector
(Biological Dynamic LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BD-DRY-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BD-DRY-	36"	
A1-ZUCO-STN-BIOS-PC-BD-DRY-		

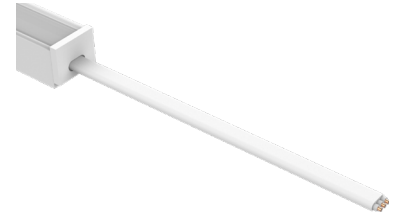
Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector with Black Jacket
(Biological Dynamic LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BD-DRY-BK-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BD-DRY-BK-	36"	
A1-ZUCO-STN-BIOS-PC-BD-DRY-BK-		

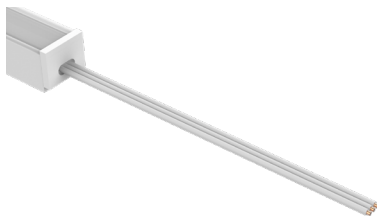
Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector with White Jacket
(Biological Dynamic LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BD-DRY-WH-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BD-DRY-WH-	36"	
A1-ZUCO-STN-BIOS-PC-BD-DRY-WH-		

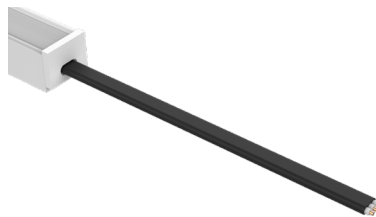
Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector
(Biological Tunable LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BT-DRY-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BT-DRY-	36"	
A1-ZUCO-STN-BIOS-PC-BT-DRY-		

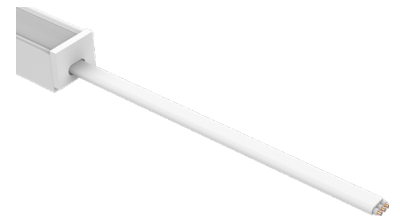
Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector with Black Jacket
(Biological Tunable LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BT-DRY-BK-X)
X = Specify Length, 36" Default, 25' Maximum

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BT-DRY-BK-	36"	
A1-ZUCO-STN-BIOS-PC-BT-DRY-BK-		

Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



Dry Power Connector with White Jacket
(Biological Tunable LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-PC-BT-DRY-WH-X)
X = Specify Length, 36" Default, 25' Maximum

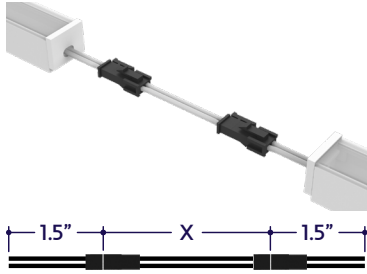
Part #	Length	Qty.
A1-ZUCO-STN-BIOS-PC-BT-DRY-WH-	36"	
A1-ZUCO-STN-BIOS-PC-BT-DRY-WH-		

Note: Specify 1 Power Connector for each lead required.
Power Connectors are factory assembled to each length.



CONTINUOUS CONNECTORS (Sold Separately)

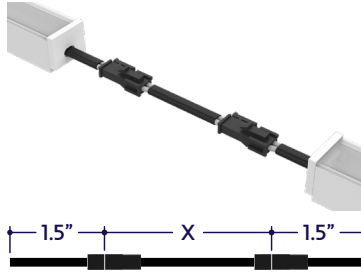
Note: Connectors are factory assembled to each run length. Connectors are subject to change without notice.



Dry Continuous Connector
(Biological Static LEDs Only)
(20/2 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BS-DRY-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BS-DRY-	3"	
A1-ZUCO-STN-BIOS-CC-BS-DRY-		

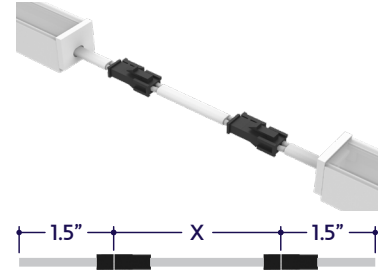
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector with Black Jacket
(Biological Static LEDs Only)
(20/2 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BS-DRY-BK-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BS-DRY-BK-	3"	
A1-ZUCO-STN-BIOS-CC-BS-DRY-BK-		

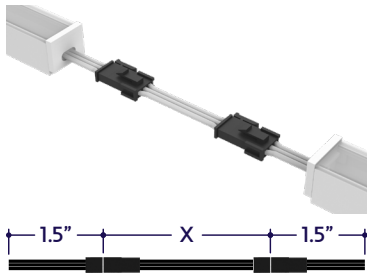
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector with White Jacket
(Biological Static LEDs Only)
(20/2 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BS-DRY-WH-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BS-DRY-WH-	3"	
A1-ZUCO-STN-BIOS-CC-BS-DRY-WH-		

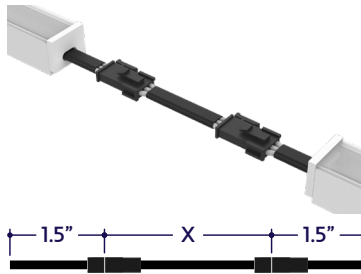
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector
(Biological Dynamic LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BD-DRY-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BD-DRY-	3"	
A1-ZUCO-STN-BIOS-CC-BD-DRY-		

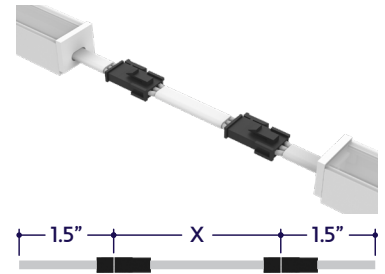
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector with Black Jacket
(Biological Dynamic LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BD-DRY-BK-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BD-DRY-BK-	3"	
A1-ZUCO-STN-BIOS-CC-BD-DRY-BK-		

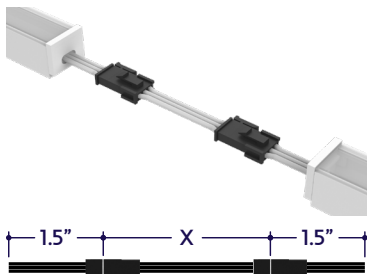
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector with White Jacket
(Biological Dynamic LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BD-DRY-WH-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BD-DRY-WH-	3"	
A1-ZUCO-STN-BIOS-CC-BD-DRY-WH-		

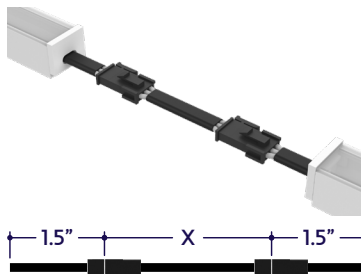
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector
(Biological Tunable LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BT-DRY-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BT-DRY-	3"	
A1-ZUCO-STN-BIOS-CC-BT-DRY-		

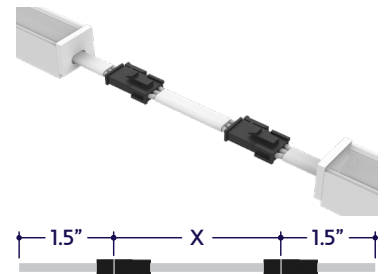
Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector with Black Jacket
(Biological Tunable LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BT-DRY-BK-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BT-DRY-BK-	3"	
A1-ZUCO-STN-BIOS-CC-BT-DRY-BK-		

Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.



Dry Continuous Connector with White Jacket
(Biological Tunable LEDs Only)
(20/3 Gauge Wire)
(A1-ZUCO-STN-BIOS-CC-BT-DRY-WH-X)
X = Specify Length, 3" Default

Part #	Length	Qty.
A1-ZUCO-STN-BIOS-CC-BT-DRY-WH-	3"	
A1-ZUCO-STN-BIOS-CC-BT-DRY-WH-		

Note: Specify Continuous Connectors to traverse a gap or obstacle. Continuous Connectors are factory assembled to specified lengths.

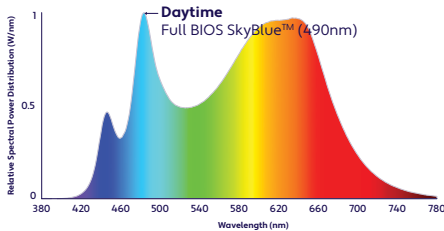
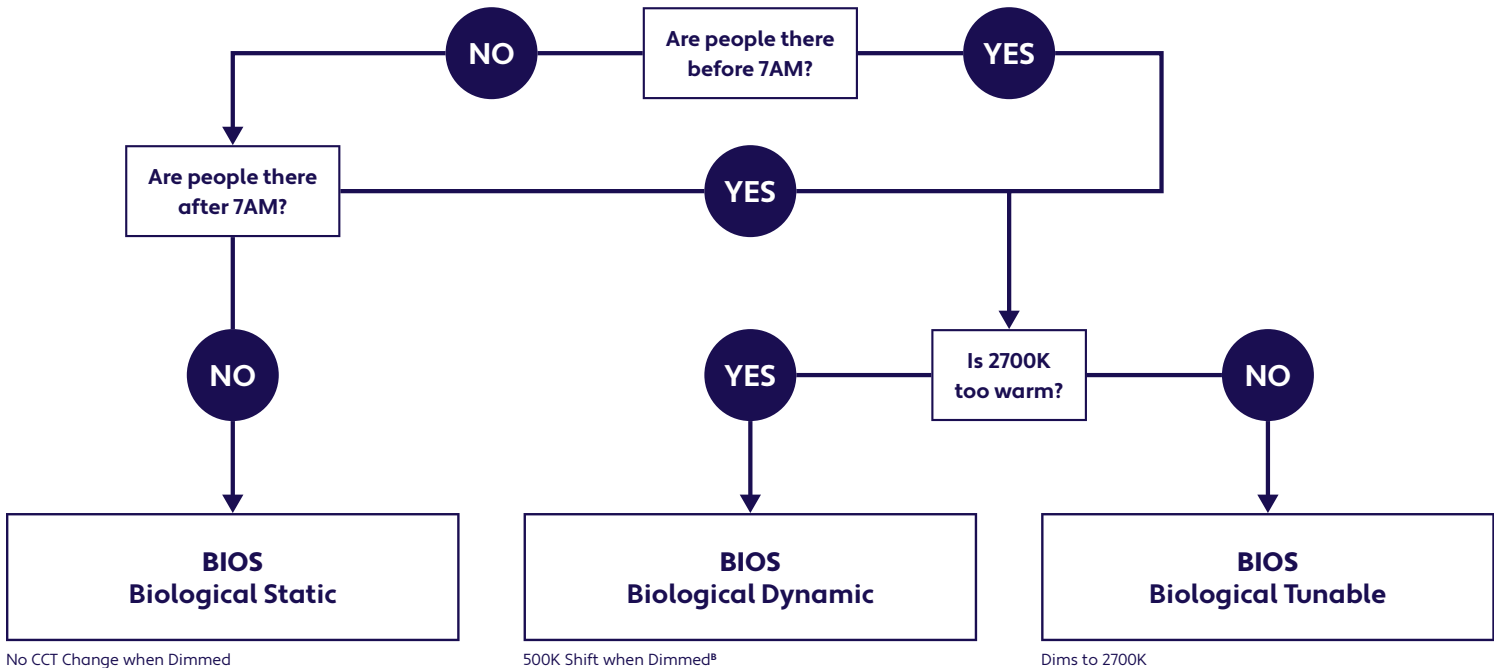
DELIVERED MELANOPIC RATIOS

BIOS Solution / Nominal CCT / Product Code	Spectral Mode	CRI	R9	Daytime Spectrum Melanopic Ratio* (M/P)	
				m-EER	m-DER
BIOS Biological Static: 3500K Daytime (BIOS-BS-35K)	Daytime Solution	80+	> 90	≥ 0.80	≥ 0.72
BIOS Biological Dynamic: 3500K Daytime - 3000K Evening (BIOS-BD-35K-30K)	Daytime + Evening Solution	80+	> 90	≥ 0.70	≥ 0.63
BIOS Biological Tunable: 3500K Daytime - 2700K Evening (BIOS-BT-35K-27K)	Daytime + Evening Solution	80+	> 90	≥ 0.80	≥ 0.72

*Melanopic ratios are provided in two forms: (m-EER) which is calculated using the WELL v2 methodology and the corresponding CIE melanopic Daylight Equivalent Ratio, (m-DER).

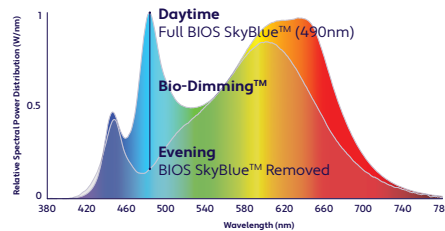
CHOOSING YOUR BIOS SOLUTION

ALUZ offers four different BIOS Circadian LED Solutions – Biological Static, Biological Dynamic, and Biological Tunable White. Use the decision tree below to identify when and where to use BIOS Wellness LED Lighting Solutions .



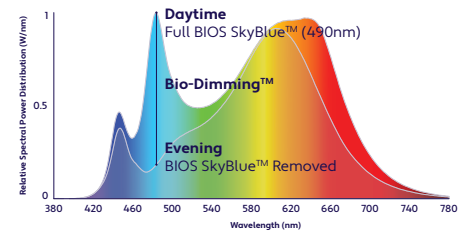
Daytime Solution
(Offices, Medical / Dental Offices)

Spaces in operation during daytime hours, between 7AM and 7PM.



Daytime + Evening Solution
(Hospitals)

Spaces in operation overnight, after 7PM and before 7AM. CCT color shift in the evening not preferred.
(^B3000K dims to 2700K)

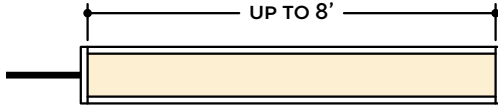


Daytime + Evening Solution
(Offices, Shiftwork)

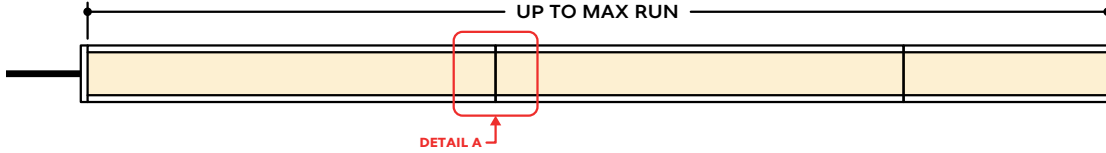
Spaces in operation overnight, after 7PM and before 7AM and people do not sleep there. CCT color shift in the evening not preferred.

DESIGN GUIDELINES

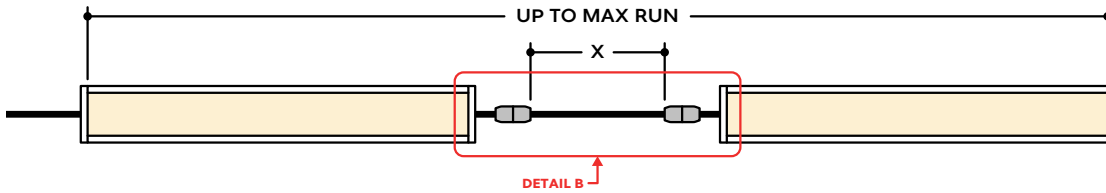
Individual Fixture



Continuous Run (Dry Location)



Runs with Continuous Connector (Dry Location)

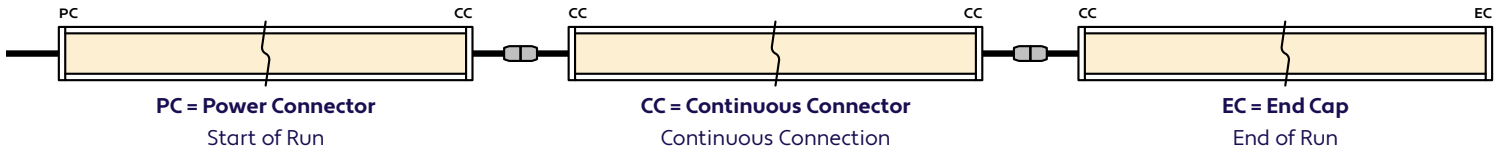


KEY

- Detail A** **Continuous Connection (Dry Location):** Luminaire segments connect using pins, leaving no gaps between segments, with a mounting clip holding the two segments together. Refer to installation instructions for additional information.
- Detail B** **Dry Continuous Connector:** Used to span a corner or traverse a gap, corner, or obstacle in a dry location installation area.

Note: Drawings not to scale. Product may differ from examples shown.

CONNECTION SEQUENCE

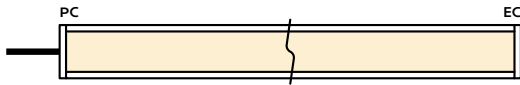


- Specifying a layout is not required to place an order.
- Configuration code applies to full length ordered and will be built per the Continuous Run models on Design Guidelines.
- Connector type subject to change based on availability and listing. Refer to Design Guidelines for details.

HOW TO SPECIFY CONFIGURATIONS

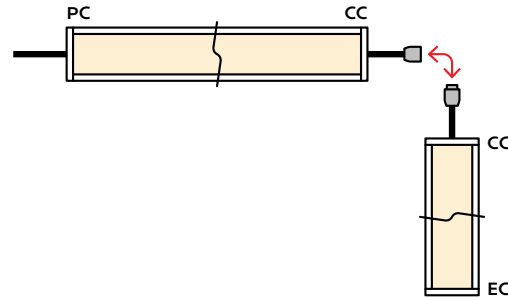
Example: 20' Straight Run

- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-9'-PC-EC



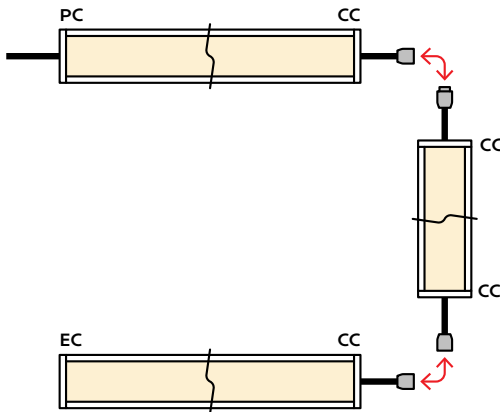
Example: 25' L-Shaped Run

- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-6'-PC-CC
- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-7'-CC-EC



Example: 30' U-Shaped Run

- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-6'-PC-CC
- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-9'-CC-CC
- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-6'-CC-EC



Example: 28' Rectangle Shaped Run

- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-5'-PC-CC
- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-3'-CC-CC
- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-5'-CC-CC
- 1x A1-ZUCO-STN-BIOS-CL-NA-BS-35K-10W-10V-DRY-UNV-3'-CC-EC

