

# BeveLED® 2.2

## 4.5” Round Adjustable - KB4RA

Universal and Field Convertible - Trim | Trimless | Millwork

Trimmed - KB4RAF



Trimless - KB4RAL



Millwork - KB4RA



Trimless Acoustical Tile - KB4RAP



### FEATURES

- Field Flexibility between trimmed, trimless and millwork
- Dry/damp/wet location rated for bathrooms and showers
- 1% dimming standard + more dimming options
- Clear overspray protector for installation convenience
- Full family platform
- Iconic beveled look

### COMPANION FAMILY PRODUCTS



Deep Regress - KB4RC



Downlight - KB4RD



Wall Wash - KB4RW

### ADJUSTABLE PERFORMANCE DATA

### LED COLOR CHOICES

DELIVERED* PERFORMANCE:	Classic White						Warm Glow Dimming		Color Select		
	9W	12W	16W	24W	33W	36W	16W	32W	16W	32W	
<b>Source Lumens:</b>	1150	1300	1725	2400	3025	4150		1275	2150	1250	2075
<b>Lumens Per Watt: 20° / 30° / 40° (solite glass)</b>	95	81	81	75	64	89		55	50	56	45
<b>Delivered Lumens: 20° / 30° / 40° (solite glass)</b>	850	975	1300	1800	2250	3000		875	1475	800	1350
<b>Lumens Per Watt: 10° (clear glass)</b>	116	99	99	92	81	N/A		56	48	N/A	N/A
<b>Delivered Lumens: 10° (clear glass)</b>	1050	1175	1575	2200	2750	N/A		900	1500	N/A	N/A
<b>EM Mode Output:</b>	500 Delivered Lumens (nominal)						400 Delivered Lumens		400 Delivered Lumens		

\*Based on 3000K, 80+ CRI. Performance varies for each specific beamspread and color temperature.

### CORRELATED COLOR TEMPERATURE MULTIPLIER

	Classic White						Warm Glow Dimming				Color Select					
	2200K	2700K	2700K	3000K	3500K	4000K	2700K	2700K	3000K	3500K	2200K	2700K	3500K	4000K	5000K	6000K
<b>Color Rendering Index:</b>	80+	80+	90+	90+	80+	80+	80+	90+	90+	80+	80+	80+	80+	80+	80+	80+
<b>Multiplier for Lumen Output:</b>	0.72	0.94	0.78	0.78	1.00	1.06	0.94	0.74	0.80	1.07	0.87	0.96	1.04	1.09	1.13	1.18

### THE COMPLETE BEVELED FAMILY PLATFORM

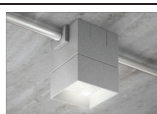
More Ceiling Applications

More Sizes and Shapes

Armstrong® Ceiling Solutions Compatible



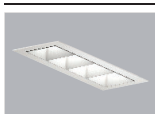
Sloped Ceiling



BeveLED Block



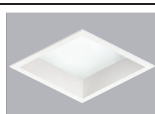
Cylinders



BeveLED Micro



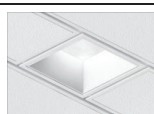
BeveLED Mini



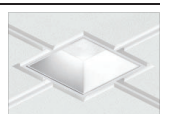
BeveLED 5.0



Trimless Acoustical



Connect TechZone



BeveLED Connect

# BeveLED® 2.2

## 4.5” Round Adjustable - KB4RA with TIR-Based Optics

BeveLED Trim Style	Trim Tilt	Wattage Options	LED Color Options	Beam Options	Lens Options	Bevel Trim Finish Options	*Flange/Millwork Collar Finish	Housing Options	Voltage Options <small>Select one</small>	Dimming Driver Options	Accessories (Optional)
F Trimmed with Flange (use with all materials)	25° - 25° tilt angles (provided standard)	Classic White Light		T10 10° beam	S Solite (provided standard)	WH White	WH White	FTA Flat Adjustable Housing (24W Maximum)	UNV 120V-277V	For use with Universal Voltage 120V - 277V	CB27 27” C-Channel Bars CB52 52” C-Channel Bars
		09C3 9W LED	22KS 2200K, 80+ CRI	T15 15° beam		SC Conduit Silver	SC Conduit Silver				
L Trimless Spackle-in (use with sheetrock and plaster only)	40° - 40° tilt angles			T20 20° beam	SF Solite Frosted	GR Grey	GR Grey	NC New Construction			EM Emergency Battery (5)
		12C3 12W LED	27KS 2700K, 80+ CRI	T25 25° beam		BL Black	BL Black				
M Millwork Knife-Edge (use with wood and stone)				T30 30° beam	BF Borosilicate Frosted	BZ Bronze	BZ Bronze	NCCP Chicago Plenum			EMW Emergency Battery Wet Location (5)
		16C3 16W LED	27KH 2700K, 90+ CRI	T45 45° beam		PR Primer Finish	PR Primer Finish				
		Warm Glow Dimming		T50 50° beam	BC Borosilicate Clear Glass (required to achieve 10° beam)	AC Clear Matte Anodized	AC Clear Matte Anodized	NCIC Insulation Contact Rated / Airtight			HEX Hex Cell Louver
16WG2 16W LED	2722KS 2700K-2200K, 80+ CRI	T55 55° beam	WH White	WH White		D6A EldoLED 0-10V, 0.1%					
32WG2 (2) 32W LED	2722KH 2700K-2200K, 90+ CRI	T62 20° x 60° linear spread	GR Grey	GR Grey	D6B EldoLED 0-10V, 0.1%						
						AB Piano Gloss Black	BL Black	BL Black		120V	For use with 120V only
					WH White		WH White	RAL Custom Color Specify RAL #			
					GR Grey	GR Grey	*Leave blank for Trimless				
					BL Black	BL Black					

Notes: 1 Not available for Warm Glow  
2 Not available with FTA housing.  
3 Not available with 9W.  
4 Not available with 33W.

5 Not available with 347V. For NC housings only.

### TRIM FINISH OPTIONS



White



Grey



Black



Bronze



Custom RAL (example)



Custom RAL (example)

# BeveLED® 2.2

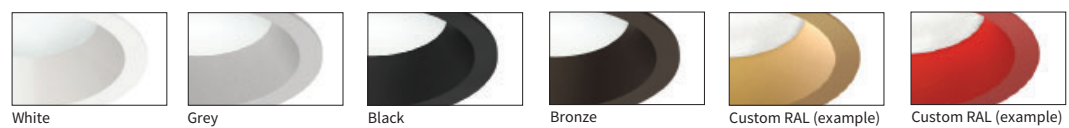
## 4.5” Round Adjustable - KB4RA with Reflector-Based Optics

Specify fixture part number. (All boxes must be filled in to correctly order)

KB4RA														
BeveLED Trim Style	Trim Tilt	Wattage Options	LED Color Options	Beam Options	Lens Options	Bevel Trim Finish Options	*Flange/Millwork Collar Finish	Housing Options	Voltage Options <small>Select one</small>	Dimming Driver Options	Accessories (Optional)			
F Trimmed with Flange (use with all materials)	25 0° - 25° tilt angles (provided standard)	Classic White Light		R25 25° beam (1, 2, 3)	S Solite (provided standard)	WH White	WH White	NC New Construction	UNV 120V-277V	For use with Universal Voltage 120V - 277V	CB27 27” C-Channel Bars			
		09C3 9W LED	22KS (1) 2200K, 80+ CRI	R30 30° beam (1, 2, 3)		SC Conduit Silver	SC Conduit Silver					NCCP Chicago Plenum	<div style="border: 1px solid black; padding: 2px;">                     No Additional Charge                      D6E                      EldoLED 0-10V, 1% (provided standard)                      D6F                      EldoLED 0-10V, 1%                 </div>	
		12C3 12W LED	27KS 2700K, 80+ CRI	R35 35° beam (2, 3)		GR Grey	GR Grey							NCIC Insulation Contact Rated / Airtight (1)
		16C3 16W LED	27KH 2700K, 90+ CRI	R40 40° beam		BL Black	BL Black							
L Trimless Spackle-in (use with sheetrock and plaster only)	40 25° - 40° tilt angles	24C3 24W LED	30KS 3000K, 80+ CRI	R50 50° beam (1, 2)	SF Solite Frosted	PR Primer Finish	PR Primer Finish		120V	<div style="border: 1px solid black; padding: 2px;">                     No Additional Charge                      D19                      Phase 2-wire, 1% (1, 2, 3, 4, 5)                 </div>	D4 Lutron 3-wire/ECO, 1%  D4E Lutron 5 ECO, 5% (2, 3, 4)  D4H Lutron H ECO, 1% Fade (2, 3, 4)  D6A EldoLED 0-10V, 0.1%  D6B EldoLED 0-10V, 0.1%  D7 EldoLED DALI, 0.1%  D18 Moons DMX, 0.1% (2, 3)			
33C3 33W LED		30KH 3000K, 90+ CRI	R60 60° beam (7)	AC Clear Matte Anodized		AC Clear Matte Anodized	RAL Custom Color Specify RAL #					RAL Custom Color Specify RAL #		
36E1 36W LED		35KS 3500K, 80+ CRI	R70 70° beam	WH White		WH White							*Leave blank for Trimless	
			40KS 4000K, 80+ CRI	R85 85° beam		GR Grey	GR Grey							
M Millwork Knife-Edge (use with wood and stone)		Warm Glow Dimming		R64 40° x 60° linear spread	BF Borosilicate Frosted	AB Piano Gloss Black	AB Piano Gloss Black		347V	For use with 347V only D15 0-10V dim, 1% 347V only (2, 3)	EM Emergency Battery (6)  EMW Emergency Battery Wet Location (6)  HEX Hex Cell Louver			
		16WG2 16W LED	2722KS 2700K-2200K, 80+ CRI			WH White	WH White							
		32WG2 32W LED	2722KH 2700K-2200K, 90+ CRI			GR Grey	GR Grey							
			3022KS 3000K-2200K, 80+ CRI			BL Black	BL Black							
		Color Select Tunable White												
		16CS1 16W LED	6022KS 6000K-2200K, Tunable White Light 80+ CRI											
		32CS1 32W LED												

Notes: 1 Not available with 36E1LED  
 2 Not available for Warm Glow.  
 3 Not available for Color Select.  
 4 Not available with 9W.  
 5 Not available with 33W.  
 6 Not available with 347V.  
 For NC housings only.  
 7 Not available with C3 LED.

TRIM FINISH OPTIONS



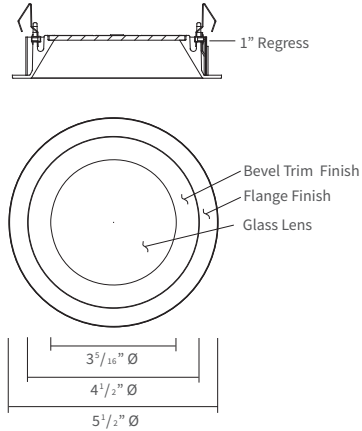
# BeveLED® 2.2

## 4.5" Round Adjustable - KB4RA

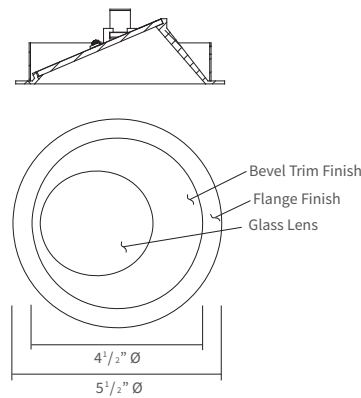
### Trimmed - KB4RAF

#### TRIM DETAILS

Trimmed - KB4RAF-25



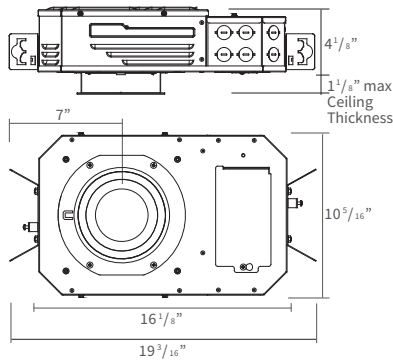
Trimmed - KB4RAF-40



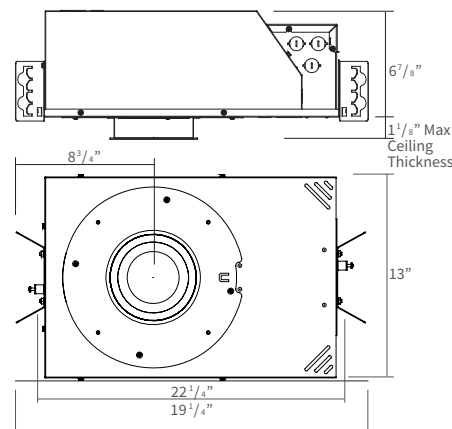
Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

#### HOUSING OPTIONS

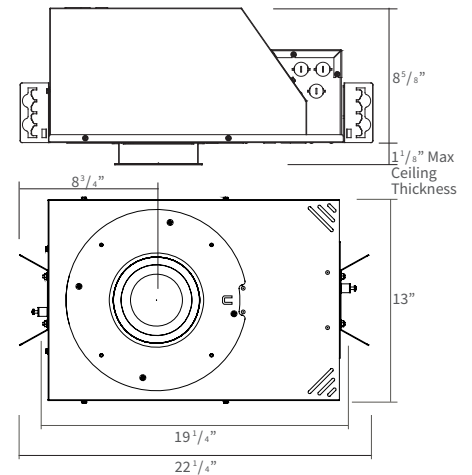
Flat Adjustable Housing - FTA



New Construction - NC  
Insulation-Contact Rated (24W Max) - NCIC  
Chicago Plenum Rated (24W Max) - NCCP  
NC with Emergency Battery



Insulation-Contact Rated (32W-33W) - NCIC  
Chicago Plenum Rated (32W-36W) - NCCP



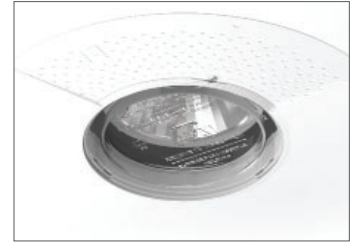
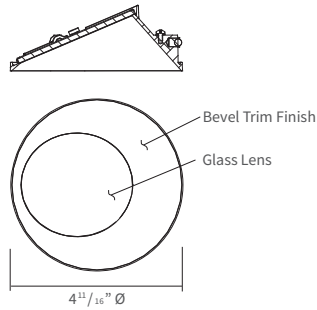
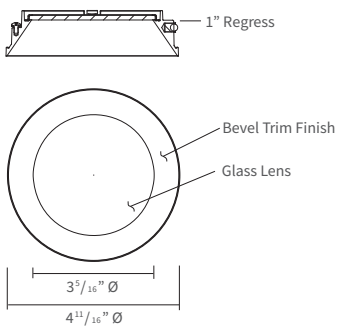
# BeveLED® 2.2

## 4.5" Round Adjustable - KB4RA

### Trimless - KB4RAL

#### TRIM DETAILS

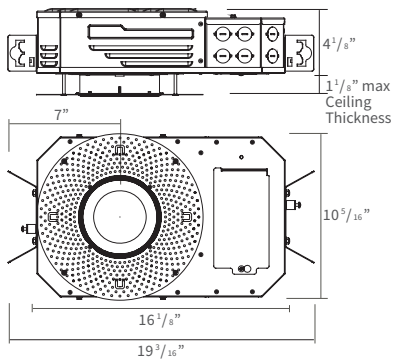
Trimless - KB4RAL-25



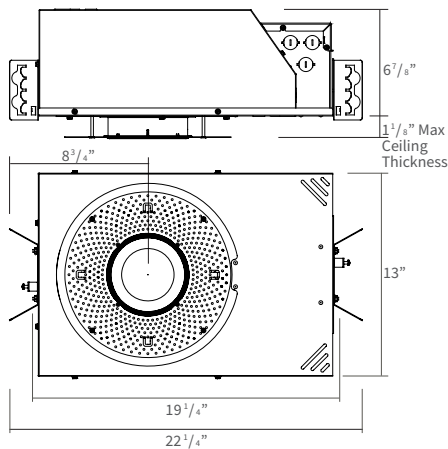
Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

#### HOUSING OPTIONS

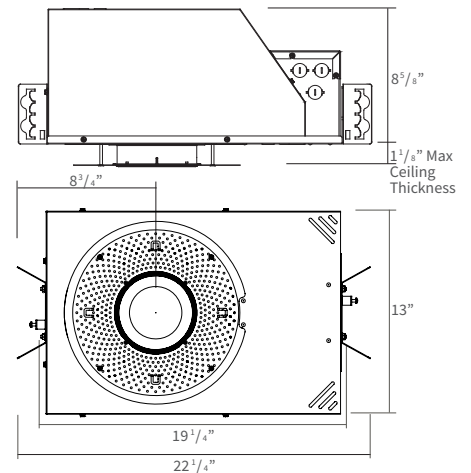
Flat Adjustable Housing - FTA



New Construction - NC  
Insulation-Contact Rated (24W Max) - NCIC  
Chicago Plenum Rated (24W Max) - NCCP  
NC with Emergency Battery



Insulation-Contact Rated (32W-33W) - NCIC  
Chicago Plenum Rated (32W-36W) - NCCP

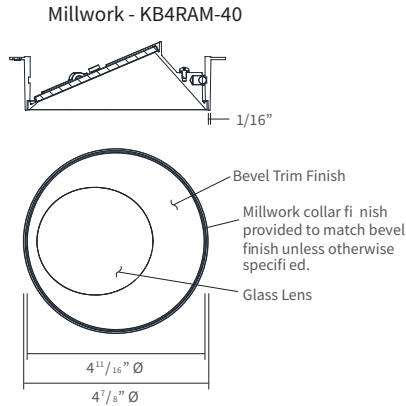
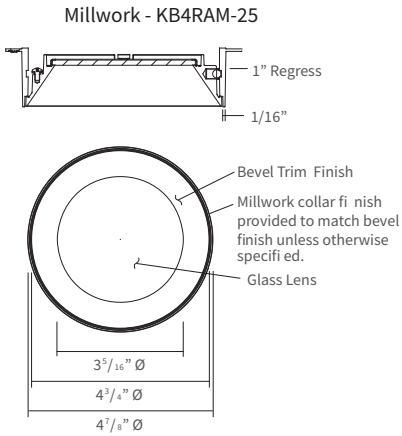


# BeveLED® 2.2

## 4.5" Round Adjustable - KB4RA

### Millwork - KB4RAM

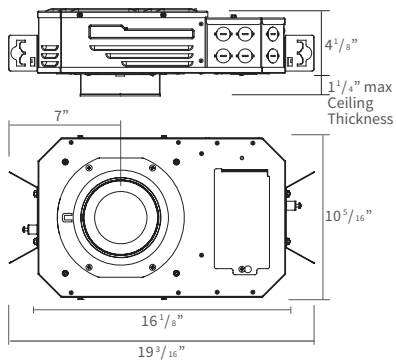
#### TRIM DETAILS



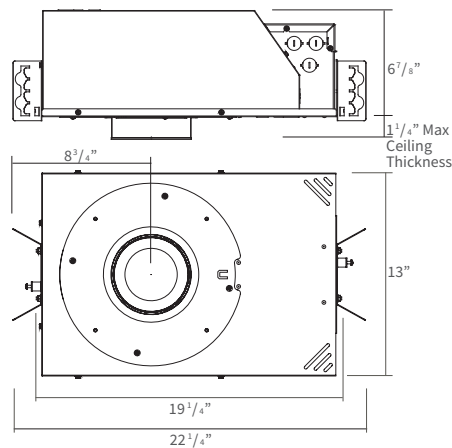
Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

#### HOUSING OPTIONS

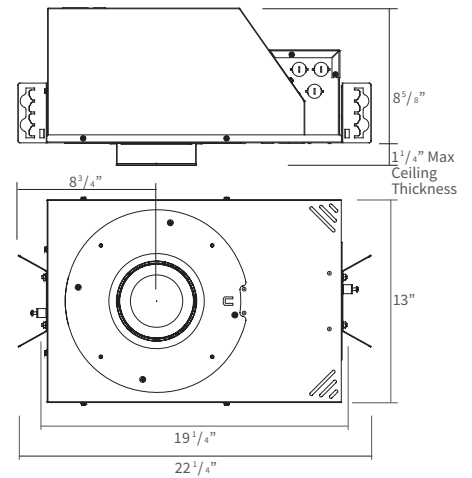
##### Flat Adjustable Housing - FTA



##### New Construction - NC Insulation-Contact Rated (24W Max) - NCIC Chicago Plenum Rated (24W Max) - NCCP NC with Emergency Battery



##### Insulation-Contact Rated (32W-33W) - NCIC Chicago Plenum Rated (32W-36W) - NCCP



# BeveLED® 2.2

## 4.5” Round Adjustable - KB4RA

### BEVELED 2.2 SPECIFICATIONS

#### FIELD REPLACEABLE LED LIGHT ENGINE

is serviceable through the aperture without tools or with a Phillips screwdriver. FTA Flat Adjustable housing requires use of ultra-low profile optics, which limits the beamspreads and LED light engines that can be offered with this housing. Performance may vary, see IES files for details.

#### ADJUSTMENT

True hot aiming with center beam optics is adjustable, either tool-less or with a Phillips screwdriver. 0°-40° lockable vertical tilt with 362° lockable rotation.

#### ACCESSORY HOLDER

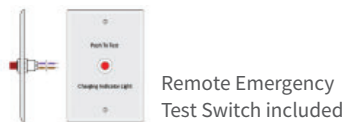
Snap in accessory holder shipped with fixture accommodates 2 accessories maximum.

#### FIELD REPLACEABLE DRIVER

Unless otherwise specified, a 0-10V, 100%-1% solid state electronic constant current integral D6E dimming driver with a high power factor is provided standard and sources 2mA. All integral dimming drivers are located within the fixture housing and are serviceable from below the ceiling through the aperture. Some on-time delay may be experienced depending on control system used. All dimming drivers comply with IEEE C62.41 surge protection.

#### EMERGENCY BATTERY

IOTA emergency battery provides backup power for 90 minutes and is provided with a remote test switch, which comes with a 24” lead length for location of the test switch. Remote EM test switch is dry/damp only; select EMW emergency option for a wet location-rated EM test switch. EM battery is located inside NC housing and can be serviced through the aperture from below the ceiling plane. Fixtures that have no USAI EM option may be connected to an inverter (by others) for emergency lighting. Battery is not available with 347V.



#### HOUSING

All BeveLED 2.2 fixtures are field-flexible which allows for field changes from trimless or millwork to trimmed with a simple components change with parts from USAI. Housings are fabricated of 20 ga. steel construction with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring. NCIC housing for use with 9W, 12W, and 16W light engines only are rated for direct contact with spray foam insulation of R-42 or less. NCIC housing is IC-rated up to 33W maximum.

#### MOUNTING

KB4RAF overlap flange fixtures are designed for use in sheetrock, acoustical ceiling tile, and many other ceiling materials. B4RAL trimless fixtures are provided with a spackle collar and are designed for use in sheetrock/mud-in ceiling applications. KB4RAM millwork fixtures are provided with a millwork collar in finish to match trim finish specified and are designed for use in wood/millwork, stone and tile construction applications. Butterfly brackets and adjustable nailer bars extendible from 14” to 24” centers with integral nails are provided for attachment to building structure. C-channel bars are optionally available for acoustical ceiling applications.

#### FIXTURE WEIGHT

NC, NCIC, and NCCP housings weigh 16 lbs. FTA housing weighs 10 lbs. NC housing with EM weighs 24.5 lbs.

#### WARRANTY

Based on IESNA LM80-2008, BeveLED has a 50,000 hour rated life at 70% lumen maintenance (L70). USAI Lighting Warranty covers replacement parts for 5 years from date of shipment. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

#### CEILING CUT OUT

KB4RAF Trimmed Overlap Flange: 5-1/16” Ø

KB4RAL Trimless Spackle-in: 5-1/2” Ø

KB4RAM Millwork Knife-edge: 4-15/16” Ø

#### LISTINGS

Dry/Damp/Wet location. AC and AB trim finishes are dry/damp only. Remote EM test switch is dry/damp only. Select EMW option for wet location remote test switch. UL2043 rated for use in air handling plenums. NRTL/CSA-US tested to UL standards. IBEW union made.



#### NOTES

- Use of pressure washer voids warranty

#### PHOTOMETRICS

Consult factory or website for IES files. Tested in accordance with IESNA LM79.

# BeveLED® 2.2

## 4.5” Round Adjustable - KB4RA

### LED COLOR OPTIONS

#### Classic White Light

Our proprietary LED light engines achieve a 2-step MacAdam ellipse along the black body locus, resulting in reliable and uniform color from fixture to fixture. You'll see the results in consistently beautiful light throughout your space.



#### Warm Glow \* Dimming

Warm Glow Dimming provides warmth and glow once possible only in dimmed incandescent sources. Utilizing our patented proprietary algorithm and circuitry, Warm Glow Dimming technologies precisely mimic the black body curve of a standard 100W A19 lamp by gradually transitioning from 2700K, 3000K or 3500K down to 2200K. The result is virtually indistinguishable from an incandescent light source.



#### Color Select \* Tunable White

Color Select represents the next innovation in color temperature control for advanced LED recessed downlighting. Color Select® products allow users to adjust color temperature from 6000K down to 2200K while independently adjusting intensity to achieve ultimate control over the quality of light in a space with a single fixture type. Color Select interfaces with standard dimming and control systems.





**DIMMING DRIVER WIRING SCHEMES:**

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixtures. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**IMPORTANT SAFETY INSTRUCTIONS  
- SAVE THESE INSTRUCTIONS**

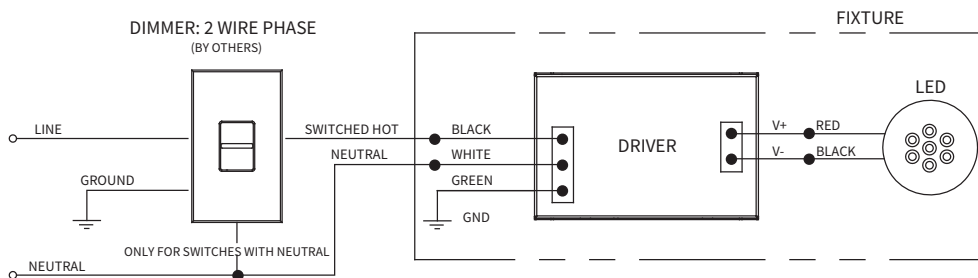
1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

**D3 / DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V**

D3 / DIML3 Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer*	
				Fixture Wattage	
120V Only					
				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	ELV10	100% - 1%	1 - 26	1 - 13
ETC	Unison DRd Cabinet	ELV10	100% - 1%	1 - 26	1 - 13
Lutron	Maestro Wireless® 600W dimmer	MRF2-6ND-120-	100% - 1%	1 - 8	1 - 4
Lutron	Maestro Wireless® 1000W dimmer	MRF2-10ND-120-	100% - 1%	1 - 13	1 - 6
Lutron	HomeWorks® QS adaptive dimmer	HQRD-6NA-	100% - 1%	1 - 8	1 - 4
Lutron	HomeWorks® QS 600W dimmer	HQRD-6ND-	100% - 1%	1 - 8	1 - 4
Lutron	HomeWorks® QS 1000 W dimmer	HQRD-10ND-	100% - 1%	1 - 13	1 - 6
Lutron	Caseta Wireless® Pro 1000W dimmer	PD-10NXD-	100% - 1%	1 - 13	1 - 6
Lutron	Stanza® dimmer	SZ-6ND-	100% - 1%	1 - 8	1 - 4
Lutron	RadioRA® 2 adaptive dimmer	RRD-6NA-	100% - 1%	1 - 8	1 - 4
Lutron	RadioRA® 2 1000 W dimmer	RRD-10ND-	100% - 1%	1 - 6	1 - 3
Lutron	myRoom DIN power module	MOSE-4A1-D	100% - 1%	1 - 6	1 - 3
Lutron	HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120-	100% - 1%	1 - 26	1 - 13
Lutron	Homeworks® DIN power module	LQSE-4A1-D	100% - 1%	1 - 6	1 - 3
Lutron	HomeWorks® wallbox power module	HWI-WPM-6D-120	100% - 1%	1 - 26	1 - 13
Lutron	GRAFIK Eye® QS control unit	QSGR-, QSGRJ-	100% - 1%	1 - 26	1 - 13
Lutron	GRAFIK Eye® 3000 control unit	GRX-3100-, GRX-3500-	100% - 1%	1 - 26	1 - 13
Lutron	RPM-4U module	HW-RPM-4U-120, LP-RPM-4U-120	100% - 1%	1 - 26	1 - 13
Lutron	RPM-4A module	HW-RPM-4A-120, LP-RPM-4A-120	100% - 1%	1 - 26	1 - 13
Lutron	GP dimming panels	Various	100% - 1%	1 - 26	1 - 13
Lutron	Ariadni CL 250W dimmer	AYCL-253P-	100%-1%	1 - 8	1 - 4
Lutron	Diva CL 250W dimmer	DVCL-253P-, DVSCCL-253P-	100%-1%	1 - 8	1 - 4
Lutron	Graff T CL or RF CL dimmer	GT-250M-, GTJ-250M-	100%-1%	1 - 8	1 - 4
Lutron	Nova T CL 250W dimmer	NTCL-250-	100%-1%	1 - 10	1 - 5

\* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**D3 / DIML3  
2 WIRE PHASE DIMMING**



**DIMMING DRIVER WIRING SCHEMES:**

NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**IMPORTANT SAFETY INSTRUCTIONS  
- SAVE THESE INSTRUCTIONS**

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

**D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)**

D4 / DIML4 3-Wire Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control*	
				Fixture Wattage	
120V Only				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100%-1%	1-53	1-26
ETC	Unison DRd Cabinet	D20F Dimming module	100%-1%	1-53	1-26
Lutron	Nova T	NTF-10-	100%-1%	1-41	1-20
Lutron	Nova T	NTF-103P-	100%-1%	1-20	1-10
Lutron	Nova	NF-10-	100%-1%	1-41	1-20
Lutron	Nova	NF-103P-	100%-1%	1-20	1-10
Lutron	Vareo	VF-10-	100%-1%	1-20	1-10
Lutron	Skylark	SF-10P-, SF-103P-	100%-1%	1-20	1-10
Lutron	Divi	DVF-103P-, DVSCF-103P-	100%-1%	1-20	1-10
Lutron	Ariadni	AYF-103P-	100%-1%	1-20	1-10
Lutron	Vierti	VTF-6A-	100%-1%	1-15	1-7
Lutron	Maestro	MAF-6AM-, MSCF-6AM-	100%-1%	1-15	1-7
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%-1%	1-15	1-7
Lutron	RadioRA 2	RRD-F6AN-DV-	100%-1%	1-15	1-7
Lutron	HomeWorks QS	HORD-F6AN-DV	100%-1%	1-15	1-7
Lutron	Interfaces	PHPM-3F-120, PHPM-3F-DV	100%-1%	1-41	1-20
Lutron	GP Dimming Panels	Various	100%-1%	1-41	1-20
277V Only				40W and Less	41W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100%-1%	1-53	1-26
ETC	Unison DRd Cabinet	D20F Dimming module	100%-1%	1-53	1-26
Lutron	Nova T	NTF-10-277-	100%-1%	1-44	1-22
Lutron	Nova T	NTF-103P-277-	100%-1%	1-33	1-16
Lutron	Nova	NF-10-277-	100%-1%	1-44	1-22
Lutron	Nova	NF-103P-277-	100%-1%	1-33	1-16
Lutron	Skylark	SF-12P-277-, SF-12P-277-3	100%-1%	1-33	1-16
Lutron	Divi	DVF-103P-277-, DVSCF-103P-277-	100%-1%	1-33	1-16
Lutron	Ariadni	AYF-103P-277-	100%-1%	1-44	1-22
Lutron	Vierti	VTF-6A-	100%-1%	1-33	1-16
Lutron	Maestro	MAF-6AM-277-, MSCF-6AM-277-	100%-1%	1-20	1-10
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%-1%	1-33	1-16
Lutron	RadioRA 2	RRD-F6AN-DV-	100%-1%	1-33	1-16
Lutron	HomeWorks QS	HORD-F6AN-DV	100%-1%	1-33	1-16
Lutron	Interfaces	PHPM-3F-DV	100%-1%	1-88	1-44
Lutron	GP Dimming Panels	Various	100%-1%	1-88	1-44

\* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

KDIML4 wiring diagrams continued on next page

December 2018

**DIMMING DRIVER WIRING SCHEMES:**

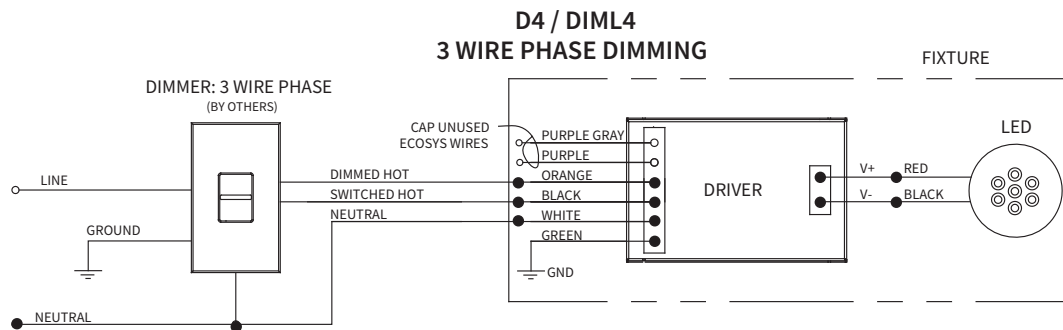
**NOTES:**

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**IMPORTANT SAFETY INSTRUCTIONS  
- SAVE THESE INSTRUCTIONS**

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

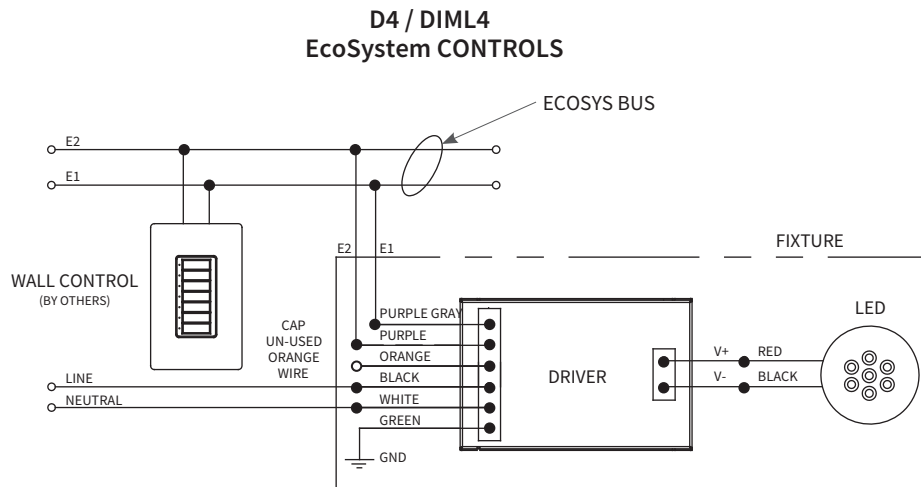
**D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)**



**D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with EcoSystem Control / LED Dimming Driver Wiring (Dims down to**

D4 / DIML4 EcoSystem Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control*	
				Fixture Wattage	
<b>120V / 277V</b>				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%-1%	1-32	1-16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%-1%	1-64	1-32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%-1%	1-64	1-32
Lutron	Quantum	Various	100%-1%	1-64	1-32

\* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.



### DIMMING DRIVER WIRING SCHEMES:

**NOTES:**

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5. Cap any wires not used separately (not together).

### D4E / DIML4E LED: Lutron 5 Series EcoSystem LED Driver / LED Dimming Driver Wiring (Dims down to 5%)

D4E / DIML4E EcoSystem Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control*	
				Fixture Wattage	
<b>120V / 277V</b>				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%-5%	1-32	1-16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%-5%	1-64	1-32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%-5%	1-64	1-32
Lutron	Quantum	Various	100%-5%	1-64	1-32

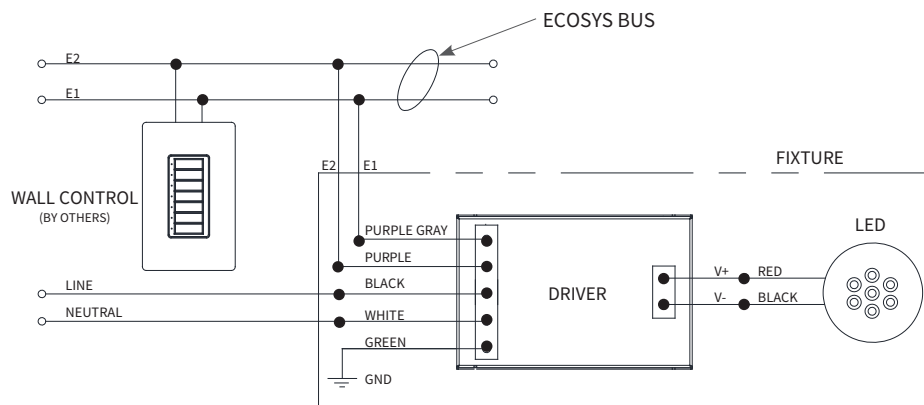
\* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

### D4H / DIML4H LED: Lutron H Series EcoSystem LED Driver with Fade to Black (dims down to 1%)

D4H / DIML4H EcoSystem Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control*	
				Fixture Wattage	
<b>120V / 277V</b>				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%-1%	1-32	1-16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%-1%	1-64	1-32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%-1%	1-64	1-32
Lutron	Quantum	Various	100%-1%	1-64	1-32

\* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

### D4E / DIML4E and D4H / DIML 4H EcoSystem CONTROLS



# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE

## D6A / DIML6A and D6E / DIML6E

## D6B / DIML6B and D6F / DIML6F

### IMPORTANT SAFETY INSTRUCTIONS

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4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

### D6A / DIML6A and D6E / DIML6E LED Dimming Compatibility Table

D6A / DIML6A and D6E / DIML6E are linearly programmed dimming drivers for use with logarithmic-style dimming controls (e.g. **trons** and others listed in the table below)  
 D6A / DIML6A = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%  
 D6E / DIML6E = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6A / DIML6A and D6E / DIML6E Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range		Qty Fixtures Per Dimmer*
			DIML6A	6E	
<b>120V &amp; 277V</b>					Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Lutron	Diva	DVTV/NFTV with PP-20	99% - 0.1%	1%	
Lutron	Nova T	NTFTV with PP-20	99% - 0.1%	1%	
Lutron	Energi Savr Node	QSN-4T16-S	100% - 0.1%	1%	
Lutron	GP Dimming Panels	TVM2 Module	99% - 0.1%	1%	
Lutron	Interfaces	GRX-TVI w/ GRX3503	100% - 0.1%	1%	
Sensor Switch	nIO	nIO EZ	100% - 0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% - 0.1%	1%	

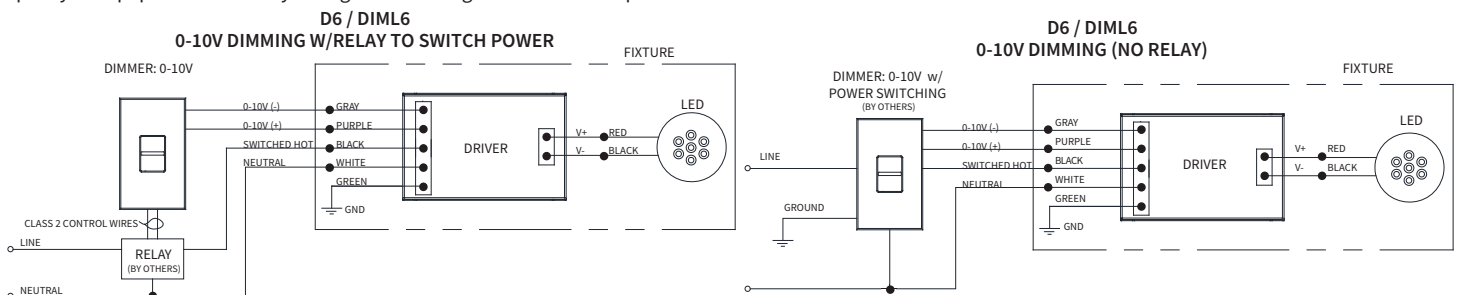
### D6B / DIML6B and D6F / DIML6F LED Dimming Compatibility Table

D6B / DIML6B and D6F / DIML6F are logarithmic-programmed dimming drivers for use with linear-style dimming controls (e.g. **trons** non-Lutron and others listed below)  
 D6B / DIML6B = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1% D6F / DIML6F = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6B / DIML6B and D6F / DIML6F Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range		Qty Fixtures Per Dimmer*
			DIML6B	6F	
<b>120V &amp; 277V</b>					Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Bush-Jaeger	Electronic potentiometer	2112U-101	100% - 0.1%	1%	
Jung	Electronic potentiometer	240-10	100% - 0.1%	1%	
Leviton	Iluma Tech dimmer	IP710-DLX	100% - 0.1%	1%	
Lightolier (Philips)	Momentum (120V ONLY)	ZP600FAM 120	100% - 0.1%	1%	
Merten	Electronic potentiometer	5729	100% - 0.1%	1%	
Pass & Seymour	Titan	CD4FB-W	100% - 0.1%	1%	
Watt Stopper	M iro	DCLV1	100% - 0.1%	1%	
Synergy	Wallbox Dimmers	ISD BC	100% - 0.1%	1%	
ABB	i-bus	SD/S 2.16.1	100% - 0.1%	1%	
Crestron	Modules	GLX-DIM FLV8, GLXP-DIM FLV8	100% - 0.1%	1%	
Crestron	Green Light	GLPAC-DIM FLV4-, GLPAC-DIM FLV8-	100% - 0.1%	1%	
Crestron	Green Light Power Pack	GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM	100% - 0.1%	1%	
Crestron	DIN Rail Analog Output Module	DIN-A08	100% - 0.1%	1%	
Crestron	DIN Rail 0-10V Fluorescent Dimmer	DIN-4DIM FLV4	100% - 0.1%	1%	
Crestron	iLux 0-10V Dimmer Expansion Module	CLS-EXP-DIM FLV	100% - 0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% - 0.1%	1%	

### DIMMING DRIVER WIRING SCHEMES:

NOTES: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to a fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.



## DIMMING DRIVER WIRING SCHEMES:

### NOTES:

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### IMPORTANT SAFETY INSTRUCTIONS

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2. Only qualified electricians in accordance to local codes should install these fixtures.
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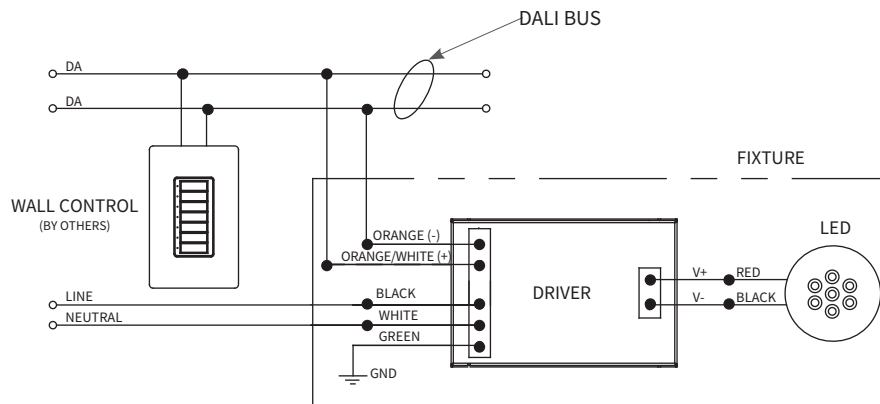
### D7 / DIML7 and D7E Dimming Driver Wiring

D7 / DIML7 and D7E are linearly programmed dimming drivers.

D7 / DIML7 = EldoLED SOLOdrive DALI control dims from 100% to 0.1%

D7E = EldoLED ECOdrive DALI control dims from 100% to 1%

### D7 / DIML7 / D7E DALI CONTROLS



**DIMMING DRIVER WIRING SCHEMES:**

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5. Cap any wires not used separately (not together).

**D8 / DIML8 and D8E Dimming Driver Wiring**

D8 / DIML8 and D8E are linearly programmed dimming drivers.

D8 / DIML8 = EldoLED POWERdrive DMX control dims from 100% to 0.1%

D8E = EldoLED POWERdrive DMX control dims from 100% to 1%

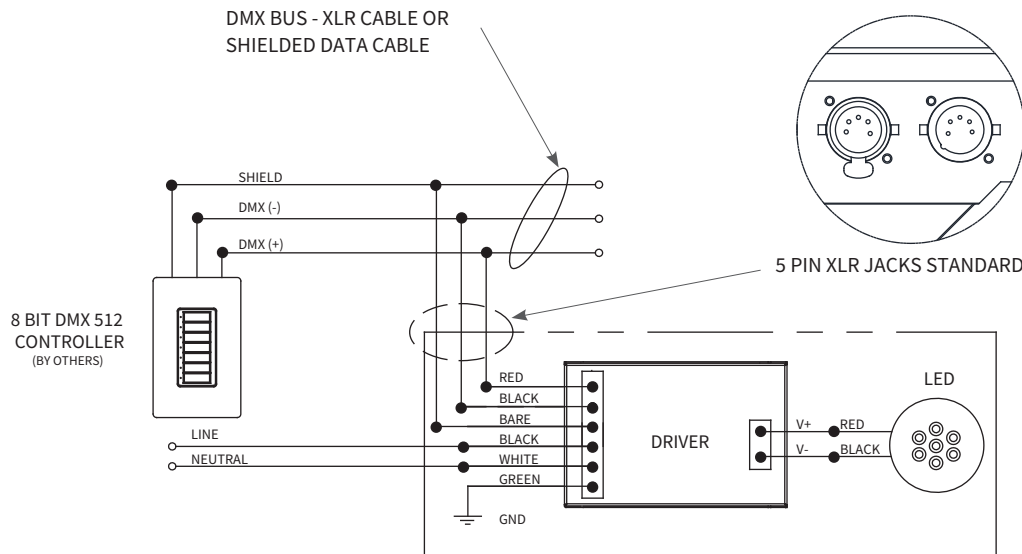
DMX BUS - XLR CABLE OR  
SHIELDED DATA CABLE

The data cable used must meet the following requirements:

- type: shielded, 2-conductor twisted pair
- maximum capacitance between conductors: 30 pF/ft
- maximum capacitance between conductor and shield: 55 pF/ft
- maximum resistance: 0.02 ohms/ft
- normal impedance: 100-140 ohms
- conductive core: 24 AWG is recommended

If 3-wire data cables are preferred, we suggest a Belden 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Do not use standard microphone cables: they cannot transmit DMX512 data reliably over long distances. NOTE: DMX link termination device (by others) should be used on last fixture in line on a circuit to avoid signal loss.

**D8 / DIML8 / D8E  
DMX CONTROLS**



**DIMMING DRIVER WIRING SCHEMES:**

**NOTES:**

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**IMPORTANT SAFETY INSTRUCTIONS**

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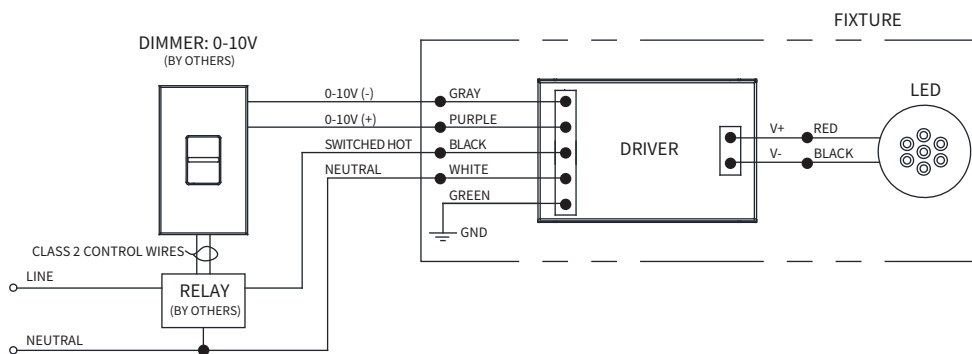
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5. Cap any wires not used separately (not together).

**D15 / DIML15 LED: 0-10V, 347V Dimming Driver Wiring (Dims down to 1%) 347V Only**

D15 / DIML15 Dimmer Compatibility Chart			
Manufacturer	Product	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
<b>347</b>			Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Acuity	Synergy ISD-BC	100% - 1%	
Douglas Lighting	WPN-5721, WPN-5822	100% - 1%	
Hubbell	Light Hawk2 LHD-IRS3-N347-xx	100% - 1%	
Leviton	Illuminatech IP710-DLZ with 347V relay	100% - 1%	
Leviton	Centura Fluorescent Control System	100% - 1%	
Lutron	Nova NFTV-* dimmer plus 347V relay	100% - 1%	
Lutron	Diva DVTV-* dimmer plus 347V relay	100% - 1%	

\* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**D15 / DIML15  
0-10V DIMMING W/RELAY TO SWITCH POWER**



**NOTE:**

If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.



**DIMMING DRIVER WIRING SCHEMES:**

**NOTES:**

Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

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**D18 Dimming Driver Wiring**

D18 are programmed dimming drivers.

D18 Moons DMX control dims from 100% to 1%

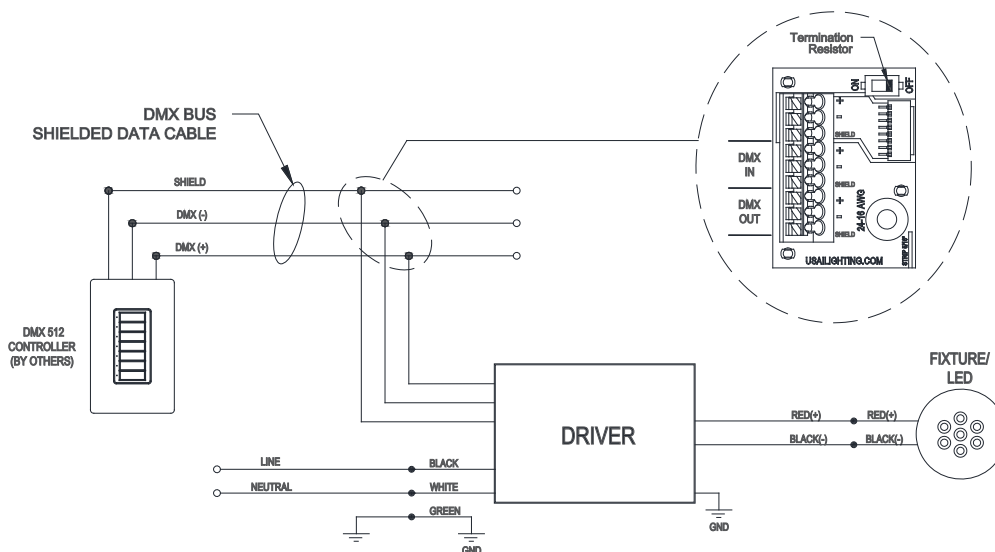
**DMX BUS -  
SHIELDED DATA CABLE**

The data cable used must meet the following requirements:

- type: shielded, 2-conductor twisted pair
- maximum capacitance between conductors: 30 pF/ft
- maximum capacitance between conductor and shield: 55 pF/ft
- maximum resistance: 0.02 ohms/ft
- normal impedance: 100-140 ohms
- conductive core: 24 AWG is recommended

If 3-wire data cables are preferred, we suggest a Belden 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Do not use standard microphone cables: they cannot transmit DMX512 data reliably over long distances. NOTE: DMX link termination device, provided through Dip Switch on connection board, should be used on last fixture in line on a circuit to avoid signal loss.

**D18  
DMX CONTROLS**



**DIMMING DRIVER WIRING SCHEMES:**

**NOTES:**

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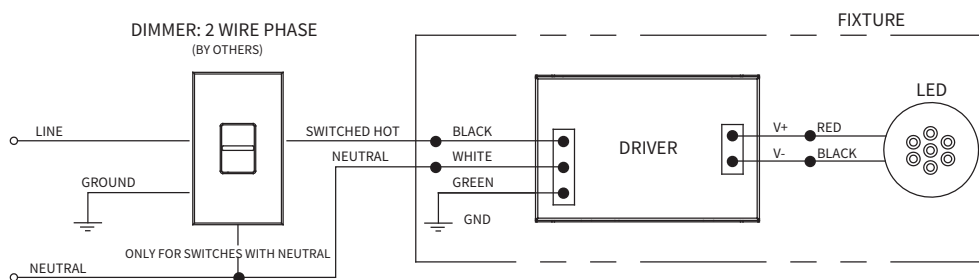
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5. Cap any wires not used separately (not together).

**D19 / DIML19 LED: Hatch XTC series or equivalent - Forward and Reverse Phase Dimming Driver.**  
Dims down to 1% contingent upon dimmer specification and load. 120V only.

**D19 / DIML19  
2 WIRE PHASE DIMMING**



**D19 / DIML19 Dimmer Compatibility Chart**

120V ONLY		
Forward Phase / TRIAC Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	IPL06-10Z	Use fixture wattage per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
	6613-xxx	
Lutron	S-600P	
	S-603P	
	DV-600P	
	DV-603P	
	DVSC-603P	
	CT-600P	
	CT-603P	

120V ONLY		
Reverse Phase / ELV Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	6615	Use fixture wattage per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
	IPE04-xxx	
Lutron	NTELV-300	
	NTELV-600	
	SELV-300P	
	SELV-303P	
	DVELV-300P	
	DVELV-303P	