LUMENTURE®

DIMMING COMPATIBILITY - TRACK & RECESSED (TRIAC & ELV driver)

Lumenture track fixtures are compatible with most Triac/ELV dimming controls in the U.S. Please see below for general compatibilities and wiring diagrams. Lumenture recommends testing your specific dimming schemes as the full configuration (dimmer, fixture quantity, voltage, etc.) may affect your dimming performances. The information below is for wired dimmers only.

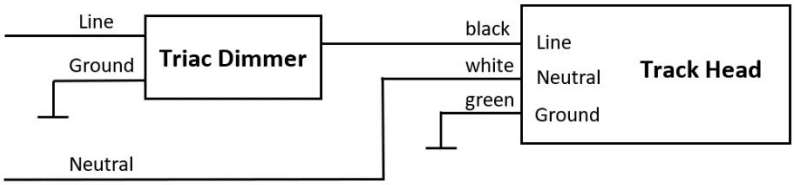
Triac (forward phase) dimming uses “standard” wall dimmers that are widely used in installations across America.

Notes:

- 120V only
- Low End adjustment on dimmer may be necessary to achieve optimal performance.
- Dims down to as low as 1% in current and light output with select dimmers.
    - Generally dims down to 5% light output.
- Consult the dimming manufacturer for installation and programming instructions.
- Must meet dimmer minimum load requirements per dimming manufacturers.

Compatible dimmers include: Wall Box Style

- Lutron DIVA CL
- Lutron Skylark CL
- Lutron MACL
- Lutron DVW
- Lutron NT
- Leviton DSL06
- Leviton TSL06
- Leviton Sureslide



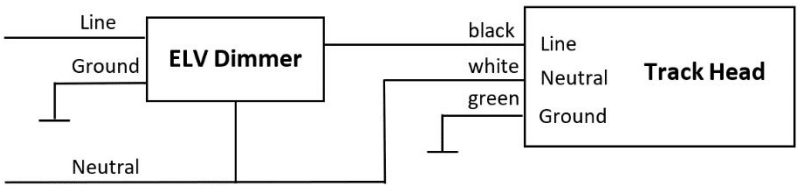
ELV - Electronic Low Voltage (reverse phase) dimming uses specialized “ELV” dimmers.

Notes:

- 120V only
- Low End adjustment on dimmer may be necessary to achieve optimal performance.
- Dims down to as low as 1% in current and light output on select dimmers.
    - Generally dims down to 5% light output.
- Consult the dimming manufacturer for installation and programming instructions.
- Must meet dimmer minimum load requirements per dimming manufacturers.

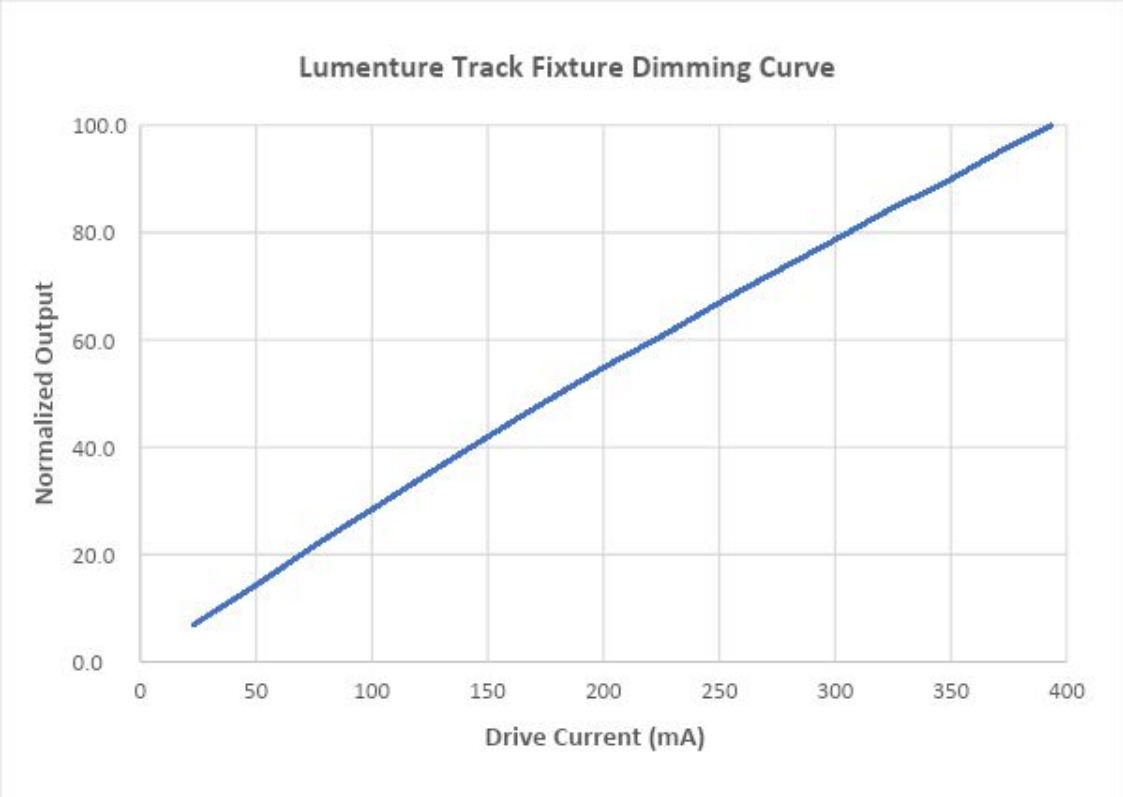
Compatible dimmers include: Wall Box (ELV Style)

- Lutron Skylark SELV
- Lutron NTELV
- Lutron MAELV
- Leviton VRE06



Lumenture Track Fixture Driver Performance Chart

Tests are done with Triac/ELV dimmer @ 120V/60Hz. Test fixture output was stabilized.



Measured Dimmer Performance

Don't see your favorite model? Contact us and we are happy to test it!

Dimmer	Type	Current %	Light %	Smooth?
Leviton DSL06 - Default Settings	Triac	5.1%	8.4%	Y
Leviton DSL06 - Programmed	Triac	2.0%	2.0%	Y*
Leviton Sureslide 6674 - Default	Triac	7.7%	9.8%	Y
Leviton Sureslide 6674 - Programmed	Triac	1.3%	3.0%	Y
Lutron MACL-153M - Default	Triac	6.8%	11.3%	Y
Lutron MACL-153M - Programmed	Triac	0.5%	0.7%	Y
Lutron Skylark CL 150W - Default	Triac	7.7%	9.0%	Y
Lutron Skylark CL 150W - Programmed	Triac	2.6%	4.2%	Y
Leviton TSL06-1LI - Default	Triac	5.1%	8.4%	Y
Leviton TSL06-1LI - Programmed	Triac	2.0%	2.0%	Y*
Lutron NT-603P-IV	Triac	2.6%	4.7%	Y
Lutron DVW-600PH	Triac	2.6%	5.7%	Y
Lutron DIVA CL - Default	Triac	6.4%	8.7%	Y
Lutron DIVA CL - Programmed	Triac	2.6%	4.0%	Y
Leviton VRE06-1LZ - Default	ELV	7.7%	11.1%	Y
Leviton VRE06-1LZ - Programmed	ELV	5.1%	7.5%	Y
Lutron MAELV-600 - Default	ELV	7.7%	10.3%	Y
Lutron MAELV-600 - Programmed	ELV	0.5%	0.7%	Y
Lutron Skylark SELV-300P-LA	ELV	5.3%	8.2%	Y
Lutron NTELV-300	ELV	9.5%	12.4%	Y
Lutron Maestro C L Pro	ELV	4.0%	8.0%	Y
CLW-DIMEX-E	Triac	1.0%	8.0%	Y
CLW-DIMEX-P	Triac	1.0%	8.0%	Y
CLW-DIMSWEX-E	Triac	1.0%	8.0%	Y
CLW-DIMSWEX-P	Triac	1.0%	8.0%	Y
CLW-DELVEX-E	ELV	1.0%	5.0%	Y
CLW-DELVEX-P	ELV	1.0%	5.0%	Y
CLX-2DIMU8	Universal	7.0%	10.0%	Y
HZ-DIMEX Series	Triac	3.0%	3.0%	Y
HZ-DIMUEX Series	Universal	1.0%	6.0%	Y
*blinking at lowest dimmer setting, but normal at ~2% light output.				

DIMMING COMPATIBILITY – RECESSED (Universal Triac/ELV/0-10v driver)

Lumenture recessed products use several drivers manufactured by ERP Power. If your project requires a specific driver type, please clearly note that on any purchase orders. If you have any questions – please do not hesitate to contact us.

Dimming compatibility matrix with TRIAC & ELV dimmers at 120 Vac

ESS020W-0450-42		Total Score:	93.8%		Driver Current (mA) with no Dimmer:	447	Driver Light (FC) with no Dimmer:		1270		Scoring: 0 - Needs improvement; 1 - Unlikely to be noticed; 2 - No issues			
		Avg. Min. Dimming:	6.0%											
Dimmer List		Indiv. Score	Light Output (Foot Candle)		Current (mA)		Light Dimming Range		Smooth Dimming	Sag	No Start Flash	Flicker	Shimmer	Able to turn off	Audible Noise
Mfg.	Model	%	Max	Min	Max	Min	Max	Min		%					
Lutron	S-603PG	100.0%	1170	60	404	21	92%	5%	2	10.0%	2	2	2	2	2
Leviton	IPI06-1LZ	100.0%	1270	10	447	3	100%	1%	2	0.0%	2	2	2	2	2
Leviton	6631-2	75.0%	1270	10	447	3	100%	1%	2	0.0%	2	2	0	2	1
Lutron	DVCL-153P	100.0%	1270	10	447	3	100%	1%	2	0.0%	2	2	2	2	2
Lutron	DV600P	83.3%	1270	60	447	21	100%	5%	2	0.0%	2	0	2	2	2
Lutron	TGCL-153P	100.0%	1270	70	447	23	100%	6%	2	0.0%	2	2	2	2	2
Lutron	S600P	100.0%	1270	30	447	11	100%	2%	2	0.0%	2	2	2	2	2
Leviton	VPE06	100.0%	1270	130	447	39	100%	10%	2	0.0%	2	2	2	2	2
Lutron	DVELV303P	100.0%	1270	90	447	28	100%	7%	2	0.0%	2	2	2	2	2
Lutron	SELV300P	100.0%	1270	100	447	31	100%	8%	2	0.0%	2	2	2	2	2
Leviton	6683-IW	95.8%	1270	10	447	3	100%	1%	2	0.0%	1	2	2	2	2
Leviton	6161	91.7%	1270	200	447	61	100%	16%	2	0.0%	2	2	2	2	2
Leviton	6633-P	83.3%	1270	20	447	8	100%	2%	2	0.0%	2	2	1	2	1
Lutron	TG-600P	79.2%	1270	180	447	55	100%	14%	2	0.0%	2	2	0	2	2
Cooper	DLC03P	100.0%	1270	20	447	10	100%	2%	2	0.0%	2	2	2	2	2
Lutron	LG600P	83.3%	1270	70	447	23	100%	6%	2	0.0%	2	2	0	2	2
Lutron	CT103P	100.0%	1270	130	447	41	100%	10%	2	0.0%	2	2	2	2	2
Cooper	SLC03P	83.3%	1270	10	447	3	100%	1%	2	0.0%	2	0	2	2	2
Leviton	IPE04	100.0%	1270	80	447	27	100%	6%	2	0.0%	2	2	2	2	2
Lutron	MAELV600	95.8%	1270	150	447	47	100%	12%	2	0.0%	2	2	2	2	2
Lutron	FAELV500	95.8%	1270	150	447	47	100%	12%	2	0.0%	2	2	2	2	2
Lightolier	ZP260QEW	100.0%	1270	90	447	29	100%	7%	2	0.0%	2	2	2	2	2
Cooper	DAL06P	91.7%	1270	10	447	3	100%	1%	2	0.0%	2	2	2	2	1

NOTES:

1. If light is measured, then the dimming range is based on light output. If light is not measured, then the dimming range is based on the percentage of output current.
2. While adjusting the dimming level, a smooth dimming, with no sudden jumps in light output, results in a score of 2. A small jump that is only noticeable if directly staring at the light results in a score of 1. A large obvious jump results in a score of 0.
3. Percentage away from 100% output current when dimmer is inserted in the circuit, at the dimmer's maximum conduction angle.
4. No flash at startup (at maximum conduction angle) results in a score of 2. A smooth, but still noticeable transition from overshoot results in a score of 1. A transition with overshoot and undershoot results in a score of 0.
5. Highly visible repeating light fluctuations. No flicker results in a score of 2. Flicker results in a score of 0. There is no "1" score. Flicker is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
6. Low frequency or random variations in light output that are typically less noticeable than flicker (the light output does not turn off at any point). No shimmer, perfect light output, results in a score of 2. Only noticeable shimmer, if staring directly at the LEDs, results in a score of 1. Obvious shimmer, even if looking away from the LEDs, results in a score of 0. Like Flicker, Shimmer is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
7. No light output when dimmer switch or button is turned off.
8. Audible noise with driver located at 3 feet and measured at 90 degree conduction angle (worst case). A strongly apparent noise resuts in a score of 0. A score of 1 is assigned if the noise is not very obvious, and most likely to not be noticed inside of a fixture.
9. All the dimmers are set to the widest dimming range, when the trim potentiometer is available. Testing is done with 1 dimmer per LED driver.

Dimming compatibility matrix with 0-10v dimmers at 120 Vac

PSB30W-0700-42		Total Score:	94.0%	Driver Current (mA) With No Dimmer:	712	Driver Light Output (FC) With No Dimmer:	3450	Scoring: 0 - Needs Improvement; 1 - Unlikely to Be Noticed; 2 - No Issues				
		Avg. Min. Dimming:	1.0%									
Dimmer List		Indiv. Score	Light Output (Foot Candles)		Current (mA)		Dimming Range[1]		Smooth Dimming[2]	Sag[3]	No Start Flash[4]	Flicker[6]	Shimmer[7]	Able to turn off[8]	Audible Noise[9]
Mfg.	Model	%	Max	Min	Max	Min	Max	Min		%					
Lutron	Nova NFTV	96.4%	3450	1	712.0	1.0	100%	0%	2	0.0%	1	2	2	2	2
Leviton	Diva DVTV	96.4%	3450	80	712.0	14.0	100%	2%	2	0.0%	1	2	2	2	2
Leviton	IP710-DL	89.3%	3360	1	685.0	1.0	97%	0%	2	4.0%	1	2	2	2	2

NOTES:

1. If light is measured, then the dimming range is based on light output. If light is not measured, then the dimming range is based on the percentage of output current.
2. While adjusting the dimming level, a smooth dimming, with no sudden jumps in light output, results in a score of 2. A small jump that is only noticeable if directly staring at the light results in a score of 1. A large obvious jump results in a score of 0.
3. Percentage away from 100% output current when dimmer is inserted in the circuit, at the dimmer's maximum conduction angle.
4. No flash at startup (at maximum conduction angle) results in a score of 2. A smooth, but still noticeable transition from overshoot results in a score of 1. A transition with overshoot and undershoot results in a score of 0.
5. Highly visible repeating light fluctuations. No flicker results in a score of 2. Flicker results in a score of 0. There is no "1" score. Flicker is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
6. Low frequency or random variations in light output that are typically less noticeable than flicker (the light output does not turn off at any point). No shimmer, perfect light output, results in a score of 2. Only noticeable shimmer, if staring directly at the LEDs, results in a score of 1. Obvious shimmer, even if looking away from the LEDs, results in a score of 0. Like Flicker, Shimmer is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
7. No light output when dimmer switch or button is turned off.
8. Audible noise with driver located at 3 feet and measured at 90 degree conduction angle (worst case). A strongly apparent noise resuts in a score of 0. A score of 1 is assigned if the noise is not very obvious, and most likely to not be noticed inside of a fixture.
9. All the dimmers are set to the widest dimming range, when the trim potentiometer is available. Testing is done with 1 dimmer per LED driver.

Dimming compatibility matrix with 0-10v dimmers at 277 Vac

PSB30W-0700-42		Total Score:	94.0%	Driver Current (mA) With No Dimmer:	712	Driver Light Output (FC) With No Dimmer:	3450	Scoring: 0 - Needs Improvement; 1 - Unlikely to Be Noticed; 2 - No Issues				
		Avg. Min. Dimming:	1.0%									
Dimmer List		Indiv. Score	Light Output (Foot Candles)		Current (mA)		Dimming Range[1]		Smooth Dimming[2]	Sag[3]	No Start Flash[4]	Flicker[6]	Shimmer[7]	Able to turn off[8]	Audible Noise[9]
Mfg.	Model	%	Max	Min	Max	Min	Max	Min		%					
Lutron	Nova NFTV	96.4%	3450	1	712.0	1.0	100%	0%	2	0.0%	1	2	2	2	2
Leviton	Diva DVTV	96.4%	3450	80	712.0	14.0	1400%	2%	2	0.0%	1	2	2	2	2
Leviton	IP710-DL	89.3%	3360	1	688.0	1.0	100%	0%	2	3.0%	1	2	2	2	2

NOTES:

1. If light is measured, then the dimming range is based on light output. If light is not measured, then the dimming range is based on the percentage of output current.
2. While adjusting the dimming level, a smooth dimming, with no sudden jumps in light output, results in a score of 2. A small jump that is only noticeable if directly staring at the light results in a score of 1. A large obvious jump results in a score of 0.
3. Percentage away from 100% output current when dimmer is inserted in the circuit, at the dimmer's maximum conduction angle.
4. No flash at startup (at maximum conduction angle) results in a score of 2. A smooth, but still noticeable transition from overshoot results in a score of 1. A transition with overshoot and undershoot results in a score of 0.
5. Highly visible repeating light fluctuations. No flicker results in a score of 2. Flicker results in a score of 0. There is no "1" score. Flicker is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
6. Low frequency or random variations in light output that are typically less noticeable than flicker (the light output does not turn off at any point). No shimmer, perfect light output, results in a score of 2. Only noticeable shimmer, if staring directly at the LEDs, results in a score of 1. Obvious shimmer, even if looking away from the LEDs, results in a score of 0. Like Flicker, Shimmer is measured using a stable AC source delivered by a power supply. AC line voltage instability will cause visible light fluctuations.
7. No light output when dimmer switch or button is turned off.
8. Audible noise with driver located at 3 feet and measured at 90 degree conduction angle (worst case). A strongly apparent noise resuts in a score of 0. A score of 1 is assigned if the noise is not very obvious, and most likely to not be noticed inside of a fixture.
9. All the dimmers are set to the widest dimming range, when the trim potentiometer is available. Testing is done with 1 dimmer per LED driver.