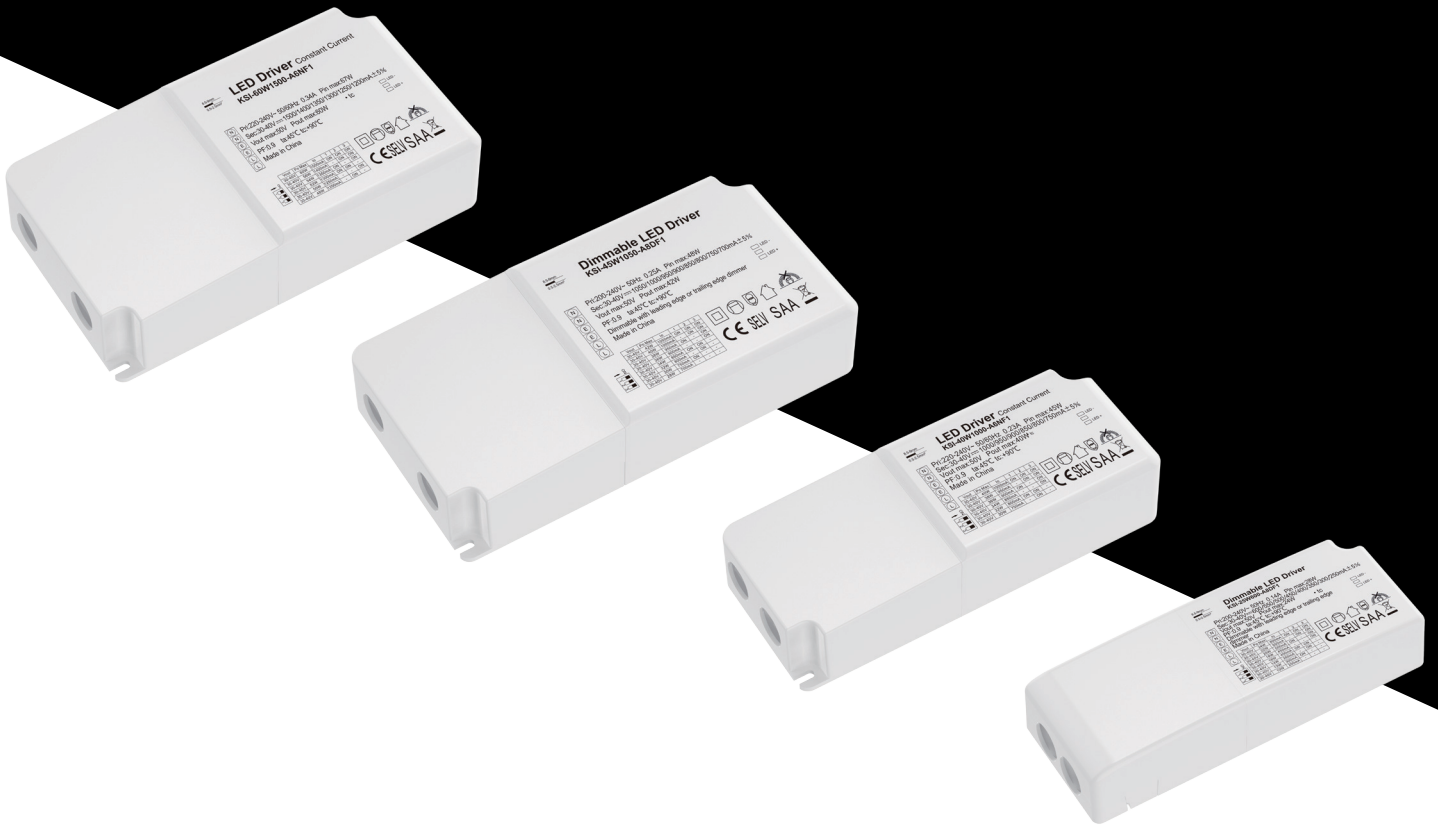


SPECIFICATION

# LED DRIVER

## K Series



# INTRODUCTION

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The K series led driver provides the best compromise between an attractive price and qualified performance.

With a focus on application-related functions, the LED Driver range offers good quality and performance that ensures reliable operation of LED module.

## Features

- Independent fixed output LED Driver
- Constant current
- Both non-dimmable and triac dimmable optional
- Specific, optimized output current and voltage
- Output current 150-1050mA for dim, 180-1500mA for non-dim
- Output power 8-45W for dim, 8-60W for non-dim
- High efficiency, non-dimmable type efficiency upto 89-90%
- Whole range are featured with flicker free performance
- Idea circuit design overcome luminarie flickering with voltage fluctuation.
- Perfect triac dimming compatibility, applicable for leading & trailing edge dimmer, smooth dimming effect
- Low noise operation, especially for leading edge dimmer
- Nominal life-time up to 50,000 h
- For luminaires of protection class I and protection class II
- Temperature protection as per EN /EC61347
- Small, super compact dimensions



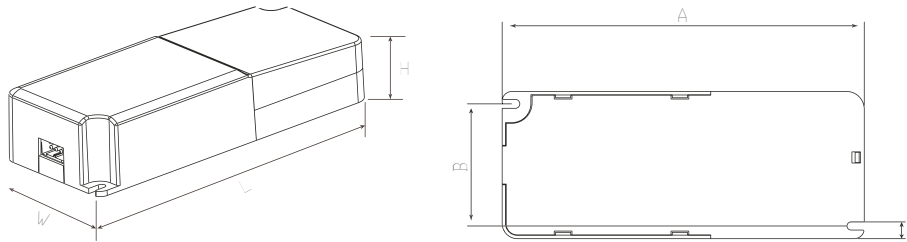
# TECHNICAL DATASHEET

Driver Datasheet (Non-dimmable)					
Code	KSI-15W350-A4NF1	KSI-25W600-A4NF1	KSI-40W1000-A6NF1	KSI-60W1500-A6NF1	
Input	Input Power	15W	25W	40W	60W
	Input Voltage	200-264V			
	Rated Input Voltage(V)	220-240V			
	Frequency	50/60HZ			
	Input Current	≤0.09A	≤0.14A	≤0.23A	≤0.34A
	Rated Input Current	≤0.08A	≤0.13A	≤0.20A	≤0.29A
	Power Factor (typ)	0.9 @230VAC ,full load (Please refer to "Power Factor (PF) Characteristic" section)			
	Total Harmonic Distortion(THD)	<20% @230V			
	Efficiency (typ)	≥86%	≥88%	≥90%	≥90%
	Inrush Current (Typ.)	12.4A/342uS	16.2A/360uS	35.4A/332uS	41.6A/445uS
	Max Circuit Breaker	Please refer to" Circuit breaker Specification"			
	Leakage Current	<0.5mA/240V			
	No Load Wattage	<0.5w @230v			
Output	Output Voltage Range	30-40V			
	Rated Output Current	Current level selectable via DIP switch, please refer to"DIP SWITCH TABLE" section			
		350mA/300mA/ 250mA/200mA	600mA/550mA/ 500mA/450mA	1000/950/900/ 850/800/750mA	1500/1400/1350/ 1300/1250/1200mA
	Line Regulation	±5%			
	Open Circuit Voltage (max)	50V			
	Setup time(note1)	500ms @230V			
Flickering Index(IEEES <sub>td</sub> 1789)	0.9%(NO RISK)	0.4%(NO RISK)	0.5%(NO RISK)	0.5%(NO RISK)	
Protection	Short Circuit Protection	Constant current limiting, recovers automatically after fault condition is removed			
	Over Voltage Protection	Shut down o/p voltage			
	Over Temperature Protection	Shut down o/p voltage, recovers automatically after temperature goes down			
Safety & EMC	Safety Standards	IEC/EN61347-1, IEC/EN61347-2-13, IEC/EN62384 independent,GB19510.14,GB19510.1 approved			
	Withstand Voltage	I/P-O/P:3.75KVac, <5mA 60S; I/P-FG:1.6KVac, <5mA 60S; O/P-FG:0.5KVac, <5mA 60S			
	Isolation Resistance	I/P-O/P: 500VDC, ≥100M Ω			
	Surge	IEC/EN61000-4-5(L-N:0.5KV)	IEC/EN61000-4-5(L-N:1KV)		
	EMC Emission	IEC/EN55015, IEC/EN61000-3-2			
	EMC Immunity	IEC/EN61000-4-2,3,4,5,6,8,11; IEC/EN61547			
Other	Dimension	131*50*26mm(L*W*H)	131*50*26mm(L*W*H)	143*58*30mm(L*W*H)	144*80*32mm(L*W*H)
	Weight	0.087Kg	0.095Kg	0.123Kg	0.195Kg

# DIMENSION

Driver Datasheet (Triac Dimmable )						
Code	KSI-13W300-A4DF1	KSI-25W600-A8DF1	KSI-35W800-A8DF1	KSI-45W1050-A8DF1	KSI-XXWXXXX-DF2	
Input	Input Power	13W	25W	35W	45W	46-60W
	Input Voltage	180-264V				
	Rated Input Voltage(V)	200-240V				
	Frequency	50HZ				
	Input Current	≤0.08A	≤0.14A	≤0.2A	≤0.25A	≤0.34A
	Rated Input Current	≤0.07A	≤0.13A	≤0.17A	≤0.22A	≤0.29A
	Power Factor (typ)	0.9 @230VAC ,full load (Please refer to "Power Factor (PF) Characteristic" section)				
	Total Harmonic Distortion(THD)	<20% @230V				
	Efficiency (typ)	≥80%	≥83%	≥84%	≥84%	≥86%
	Inrush Current (Typ.)	2.12A/31.2uS	3.92A/83.2uS	8.56A/354uS	4.2A/120uS	4.2A/120uS
	Max Circuit Breaker	Please refer to" Circuit breaker Specification"				
	Leakage Current	<0.5mA/240V				
	No Load Wattage	<1w @230v				
	Phase-Cut Dimmer	leading, trailing, universal				
Output	Output Voltage Range	30-40V				
	Rated Output Current	Current level selectable via DIP switch, please refer to "DIP SWITCH TABLE" section				
		300/250/230/180mA	600/550/500/450/400 /350/300/250mA	800/750/700/650/600 /550/500/450mA	1050/1000/950/900/850/800/750/700mA	1100-1450mA
	Line Regulation	±5%				
	Open Circuit Voltage (max)	50V				
	Setup time(note1)	500ms @230V				
Flickering Index(IEEESd 1789)	5%(LOW RISK)	4%(LOW RISK)	3%(LOW RISK)	3%(LOW RISK)	5%(LOW RISK)	
Protection	Short Circuit Protection	Constant current limiting, recovers automatically after fault condition is removed				
	Over Voltage Protection	Shut down o/p voltage				
	Over Temperature Protection	Shut down o/p voltage, recovers automatically after temperature goes down				
Safety & EMC	Safety Standards	IEC/EN61347-1, IEC/EN61347-2-13, IEC/EN62384 independent,GB19510.14,GB19510.1 approved				
	Withstand Voltage	I/P-O/P:3.75KVac,<5mA 60S; I/P-FG:1.6KVac,<5mA 60S; O/P-FG:0.5KVac,<5mA 60S				
	Isolation Resistance	I/P-O/P: 500VDC, ≥100M Ω				
	Surge	IEC/EN61000-4-5(L-N:0.5KV)	IEC/EN61000-4-5(L-N:1KV)			
	EMC Emission	IEC/EN55015, IEC/EN61000-3-2				
EMC Immunity	IEC/EN61000-4-2,3,4,5,6,8,11; IEC/EN61547					
Other	Dimension	131.0*50.0*26.0mm (L*W*H)	143.0*58.0*30.0mm (L*W*H)	144.0*80.0*32.0mm (L*W*H)	156.0*80.0*32.0mm (L*W*H)	
	Weight	0.12Kg	0.17Kg	0.25Kg	0.30Kg	0.32Kg
NOTE: Dimmer types: leading, trailing, universal,not all of dimmers match the maximum number of LED Drivers per dimmer is defined by the power of the LED Driver and the dimmer. The total power of all connected LED Drivers must not exceed 50 % of the power of the dimmer.						

# CURRENT AND POWER TECHNICAL DATASHEET



Code	Dimension(mm)						Product Weight (Kg)		Package weight (Kg)		Carton Size(cm)	Qty/CTN
	L	W	H	A	B	C	N.W/PC	G.W/PC	N.W/CTN	G.W/CTN		
KSI-13W300-A4DF1	131.0	50.0	26.0	122.0	41.0	3.2	0.12	0.14	12.42	13.04	46.5*34.5*24.5	90pcs
KSI-25W600A8DF1	143.0	58.0	30.0	132.2	48.1	3.2	0.17	0.18	16.38	17.00	46.5*34.5*24.5	90pcs
KSI-35W800-A8DF1	144.0	80.0	32.0	133.4	69.4	3.2	0.25	0.27	16.08	17.70	46.5*34.5*24.5	60pcs
KSI-45W1050-A8DF1	156.0	80.0	32.0	145.7	68.3	3.2	0.30	0.23	18	19.7	46.5*34.5*24.5	60pcs
KSI-XXWXXXX-DF2							0.32	0.25	19.2	20.9		
KSI-15W350-A4NF1	131.0	50.0	26.0	122.0	41.0	3.2	0.09	0.11	9.45	10.07	46.5*34.5*24.5	90pcs
KSI-25W600-A4NF1	131.0	50.0	26.0	122.0	41.0	3.2	0.10	0.11	10.17	10.79	46.5*34.5*24.5	90pcs
KSI-40W1000A6NF1	143.0	58.0	30.0	132.2	48.1	3.2	0.12	0.15	10.62	11.24	46.5*34.5*24.5	90pcs
KSI-60W1500-A6NF1	144.0	80.0	32.0	133.4	69.4	3.2	0.20	0.22	12.90	13.52	46.5*34.5*24.5	60pcs

## CIRCUIT BREAKER SPECIFICATION

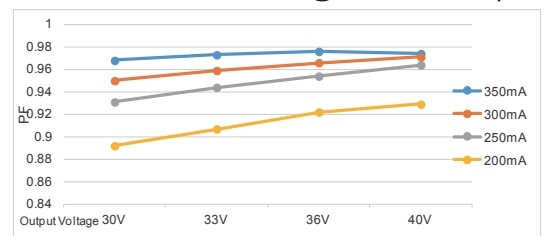
Circuit Breaker Specification								
Code	B10	B13	B16	B20	C10	C13	C16	C20
	10	13	16	20	10	13	16	20
KSI-13W300-A4DF1	83	108	133	167	83	108	133	167
KSI-25W600A8DF1	48	62	76	95	48	62	76	95
KSI-35W800-A8DF1	25	32	39	49	41	53	65	82
KSI-45W1050-A8DF1	27	35	43	53	27	35	43	53
KSI-XXWXXXX-DF2	20	25	31	39	20	25	31	39
KSI-15W350-A4NF1	17	22	27	34	28	37	45	56
KSI-25W600-A4NF1	13	17	21	26	22	28	35	43
KSI-40W1000A6NF1	6	8	9	12	10	13	16	20
KSI-60W1500-A6NF1	3	4	5	6	5	6	8	10

## DIP SWITCH TABLE

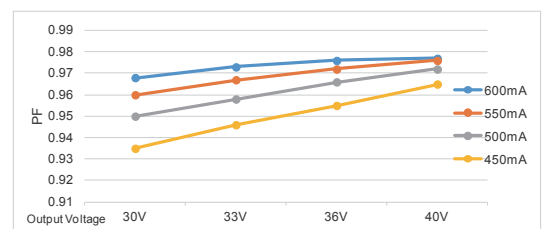
Code	Vout	Po Max	Io	1	2
KSI-15W350-A4NF1 Non-dimmable	30-40V	14W	350mA	ON	ON
	30-40V	12W	300mA	-	ON
	30-40V	10W	250mA	ON	-
	30-40V	8W	200mA	-	-

## POWER FACTOR CHARACTERISTIC

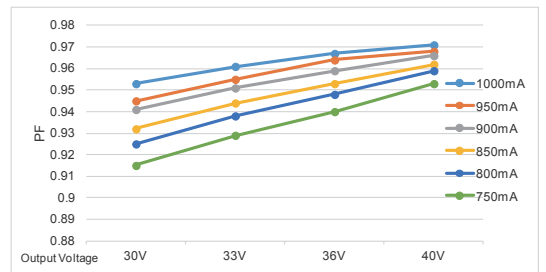
@ AC230Vac Input



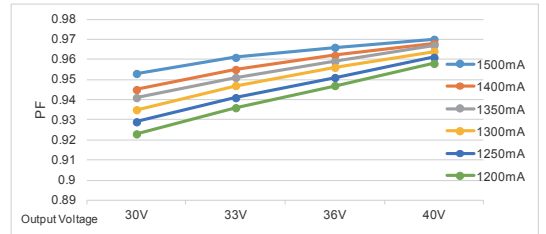
Code	Vout	Po Max	Io	1	2
KSI-25W600-A4NF1 Non-dimmable	30-40V	24W	600mA	ON	ON
	30-40V	22W	550mA	-	ON
	30-40V	20W	500mA	ON	-
	30-40V	18W	450mA	-	-



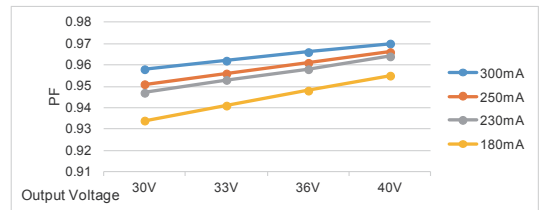
Code	Vout	Po Max	Io	1	2	3
KSI-40W1000-A6NF1 Non-dimmable	30-40V	40W	1000mA	ON	ON	ON
	30-40V	38W	950mA	-	ON	ON
	30-40V	36W	900mA	ON	-	ON
	30-40V	34W	850mA	-	-	ON
	30-40V	32W	800mA	ON	ON	-
	30-40V	30W	750mA	-	ON	-



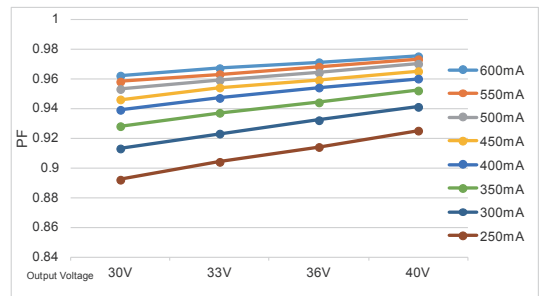
Code	Vout	Po Max	Io	1	2	3
KSI-60W1500-A6NF1 Non-dimmable	30-40V	60W	1500mA	ON	ON	ON
	30-40V	56W	1400mA	-	ON	ON
	30-40V	54W	1350mA	ON	-	ON
	30-40V	52W	1300mA	ON	ON	-
	30-40V	50W	1250mA	-	-	ON
	30-40V	48W	1200mA	-	ON	-



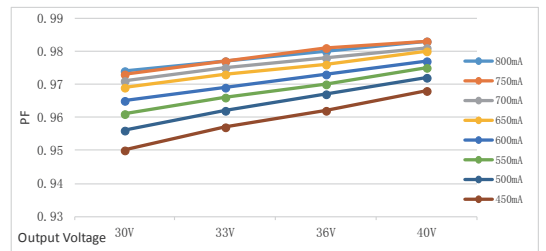
Code	Vout	Po Max	Io	1	2
KSI-13W300-A4DF1 Triac Dimmable	30-40V	12W	300mA	ON	ON
	30-40V	10W	250mA	-	ON
	30-40V	9.2W	230mA	ON	-
	30-40V	7.2W	180mA	-	-



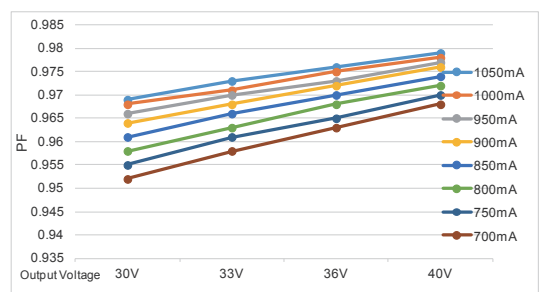
Code	Vout	Po Max	Io	1	2	3
KSI-25W600-A8DF1 Triac Dimmable	30-40V	24W	600mA	ON	ON	ON
	30-40V	22W	550mA	-	ON	ON
	30-40V	20W	500mA	ON	-	ON
	30-40V	18W	450mA	-	-	ON
	30-40V	16W	400mA	ON	ON	-
	30-40V	14W	350mA	-	ON	-
	30-40V	12W	300mA	ON	-	-
	30-40V	10W	250mA	-	-	-



Code	Vout	Po Max	Io	1	2	3
KSI-35W800-A8DF1 Triac Dimmable	30-40V	32W	800mA	ON	ON	ON
	30-40V	30W	750mA	-	ON	ON
	30-40V	28W	700mA	ON	-	ON
	30-40V	26W	650mA	-	-	ON
	30-40V	24W	600mA	ON	ON	-
	30-40V	22W	550mA	-	ON	-
	30-40V	20W	500mA	ON	-	-
	30-40V	18W	450mA	-	-	-



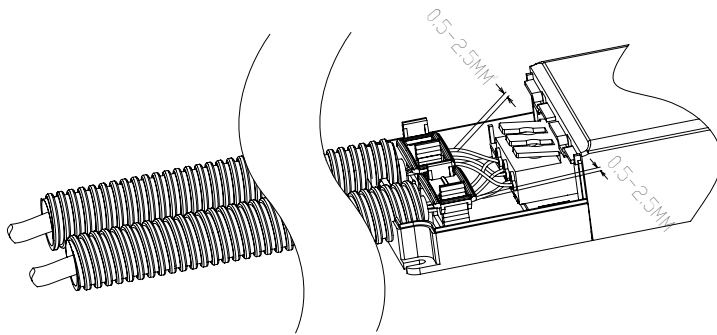
Code	Vout	Po Max	Io	1	2	3
KSI-45W1050-A8DF1 Triac Dimmable	30-40V	42W	1050mA	ON	ON	ON
	30-40V	40W	1000mA	-	ON	ON
	30-40V	38W	950mA	ON	-	ON
	30-40V	36W	900mA	-	-	ON
	30-40V	34W	850mA	ON	ON	-
	30-40V	32W	800mA	-	ON	-
	30-40V	30W	750mA	ON	-	-
	30-40V	28W	700mA	-	-	-



# CIRCUIT DIAGRAM

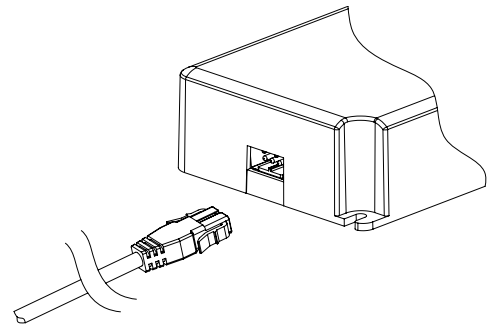
## No-load operation

In case of open circuit, protection will be activated, there will be 50V output voltage.

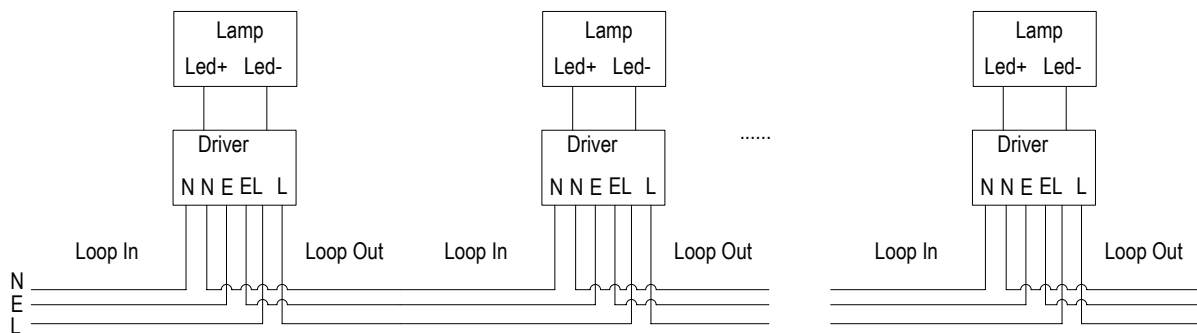


## Glow wire test

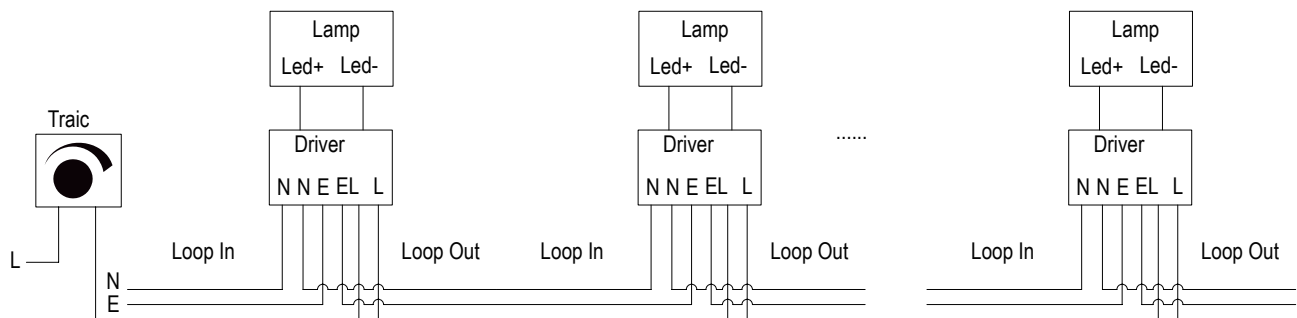
According to EN 61347-1 with increased temperature of 960°C passed.



## Non-dimmable Circuit Diagram



## Dimmable Circuit Diagram



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*Up to Shine, there is life* 光之上，是生活