

# LED Driver

## USCI LINEAR Series

# USCI LINEAR



### Highlights & Features

- Constant current design
- Universal input voltage 120-277Vac
- Class 2 and SELV output
- High output current for office or high bay application
- Min. dim 10% of 0-10V / Resistor Dimming methods
- Dry and Damp location rated

### Safety Standards



### Dimensions (L x W x D):

USCI-100410DA	9.5 x 1.7 x 1.2 inch (241.3 x 43.1 x 30.0 mm)
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### General Description

Delta USCI LINEAR series of output current LED drivers with high output current comes with affordable and reliable features. Compatible with built-in type and A can case design from any LED manufacturer. Meet North America safety certifications, and compliant with FCC and NEMA Immunity/ Emissions/ Harmonic requirements. The products are designed and tested rigorously to work in various indoor LED lighting conditions.

### Model Information

#### USCI LINEAR LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current
USCI-100410DA	120-277Vac Typical 108-305Vac Range	15-24Vdc	4150mA

### Model Numbering

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Safety Approval cULus CE	Constant Current	Indoor		Output Power 100 – 100W	Output Current 410 – 4150mA	Function D – 0-10V Dimming	Variable A – standard

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### Specifications

<b>Model Number</b>	USCI-100410DA
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#### Input Ratings / Characteristics

Normal Input Voltage	120-277Vac	
Input Voltage Range	108-305Vac	
Normal Input Frequency	50/60 Hz	
Input Frequency Range	47-63 Hz	
Normal Input Current	1.20A @ 120-277Vac	
Efficiency <sup>1)</sup>	120Vac	85.0% typ.
	277Vac	86.0% typ.
No load Power Consumption	< 2W @ 120Vac	
Inrush Current @ 277Vac (Apk / 50%-us) (Cold Start)	200A/250us, Meet NEMA 410	
Power Factor	> 0.95 @ 120-277Vac full load	
Total Harmonic Distortion	< 20% @ 120-277Vac above 50% load	
Leakage Current	< 0.75mA @ 277Vac	

1) 100% Load (typical) and tested after 30 minutes warm up.

#### Output Ratings / Characteristics

Nominal Output Current	4150mA
Output Voltage Range	15-24Vdc
Max. No Load Output Voltage	30Vdc
Output Power Range	62.3-99.6W
Output Current Tolerance	± 3%
Line Regulation	± 5%
Load Regulation	± 5%
Output Current Ripple	5% @ full load (ripple = pk-avg/avg)
Rise Time	< 50ms @ 120-277Vac
Start-up Time	<1000ms @ 120-277Vac

#### Dimming Characteristics

Dimming Method	0 ~ 10Vdc for 10 ~ 100%. Dimming frequency 1kHz. Source current is 330uA. 1) 0V (10%) – 8V (100%) 2) Dimming wires Open (100%) 3) Dimming wires Short 10%
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### Mechanical

Casing	Metal sheet, Color: Black
Dimensions (L x W x H) [inch]	9.5 x 1.7 x 1.2
[mm]	241.3 x 43.1 x 30.0
Unit Weight [lb]	1.50
[kg]	0.68
Cooling System	Convection
Input	Line: Black, Neutral: White, Wires Length 300mm
Output	Positive: Red, Negative: Black, Dim+: Violet, Dim-: Gray, Wires Length 300mm
Noise (30cm distance)	Sound Pressure Level (SPL) < 24dBA

### Environment

Ambient Temperature	Operating	-40°C to +55°C
	Storage	-40°C to +85°C
Maximum Case Temperature		85°C
Lifetime Case Temperature		70°C
Relative Humidity	Operating	10 to 85% RH (Non-Condensing)
	Storage	5 to 95% RH (Non-Condensing)
Environmental Locations		Dry / Damp

### Protections

Over Voltage	Max. 30V, Auto-Recovery when the fault is removed
Open Load	Auto-Recovery when the fault is removed
Short Circuit	Auto-Recovery when the fault is removed
Over Temperature	Auto-Recovery when the fault is removed
Suitable for Luminaires Class	Class I. Insulation Class according to IEC 60598

### Reliability Data

Lifetime	50,000 hrs. at lifetime case temperature
MTTF	850,000 hrs. as per Telcordia SR-332 (ta: +40°C)

### Safety Standards / Directives

Electrical Safety	UL	UL 8750, Class P, type "HL". Output meet class 2 of UL1310			
	SELV	SELV output			
Material and Parts	RoHS Directive 2011/65/EU Compliant				
Galvanic Isolation		Mains (Input)	Output	DIM ±	Case
	Mains (Input)	N/A	2U <sup>1)</sup> +1kV	2U+1kV	2U+1kV
	Output	2U+1kV	N/A	2U+1kV	500V
	DIM ±	2U+1kV	2U+1kV	N/A	2U+1kV
	Case	2U+1kV	500V	500V	N/A

1) U means the maximum input voltage.

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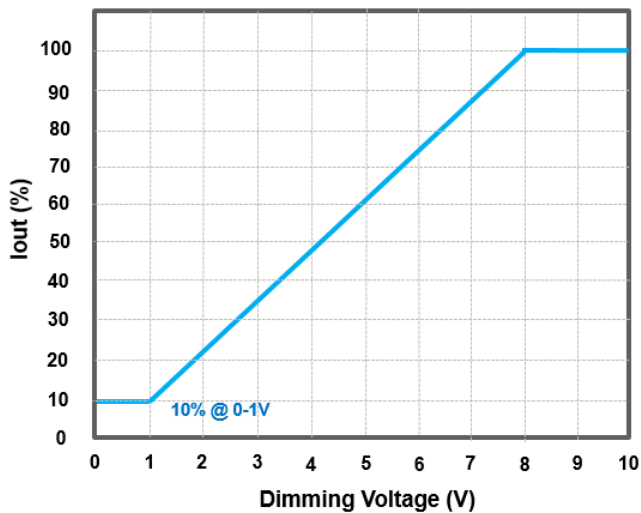
### EMC

Emissions (CE & RE)	Compliance to 47 CFR FCC Part 15, Subpart B, Class B Compliance to EN 55015 Class B	
Immunity	Compliance to EN 61547	
Electrostatic Discharge	IEC 61000-4-2	Air Discharge: 8kV; Contact Discharge: 4kV Criteria A <sup>1)</sup> or B <sup>2)</sup>
Radiated Disturbance	IEC 61000-4-3	80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% AM Modulation, Criteria A <sup>1)</sup>
Electrical Fast Transient / Burst	IEC 61000-4-4	1kV, Criteria A <sup>1)</sup> or B <sup>2)</sup>
Surge	IEC 61000-4-5	Common Mode <sup>3)</sup> : 1kV; Differential Mode <sup>4)</sup> : 2kV 1.2/50µs, 8/20µs Combination Wave with 2ohms (L-N), 12ohms (L-PE & N-PE) source impedance Criteria A <sup>1)</sup> or B <sup>2)</sup>
Conducted Disturbance	IEC 61000-4-6	150kHz-80MHz, 3Vrms, Criteria A <sup>1)</sup>
Power Frequency Magnetic Fields	IEC 61000-4-8	3A/Meter, Criteria A <sup>1)</sup>
Voltage Dips	IEC 61000-4-11	100% dip; 0.5 cycle; Self Recoverable 30% dip; 10 cycle; Self Recoverable, Criteria A <sup>1)</sup> or B <sup>2)</sup>
Harmonic Current Emission	IEC 61000-3-2	Class C (230Vac @ 100% load)
Voltage Fluctuation and Flicker	IEC 61000-3-3	$P_{st} \leq 1.0$ ; $d_{max} \leq 4\%$ ; $P_{It} \leq 0.65$ ; $d_c \leq 3.3\%$ ; $T_{max} \leq 500ms$

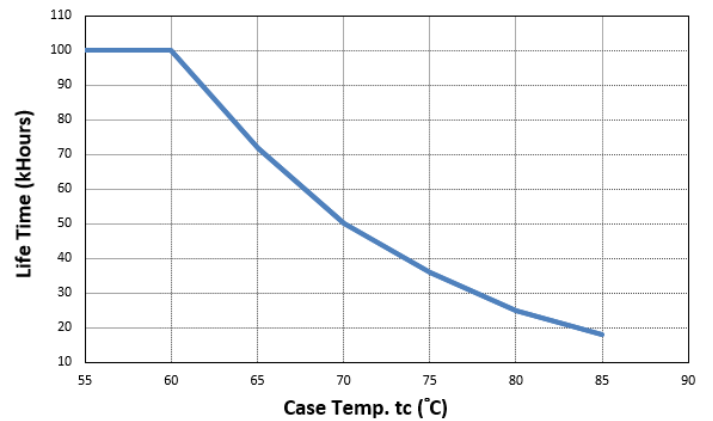
1) Criteria A: Normal performance within the specification limits  
2) Criteria B: Temporary degradation or loss of function, which is self-recoverable

3) Asymmetrical: Common mode (Line to earth)  
4) Symmetrical: Differential mode (Line to line)

### Dimming Curve- Dimming Voltage VS Output Current



### Lifetime VS Case Temperature

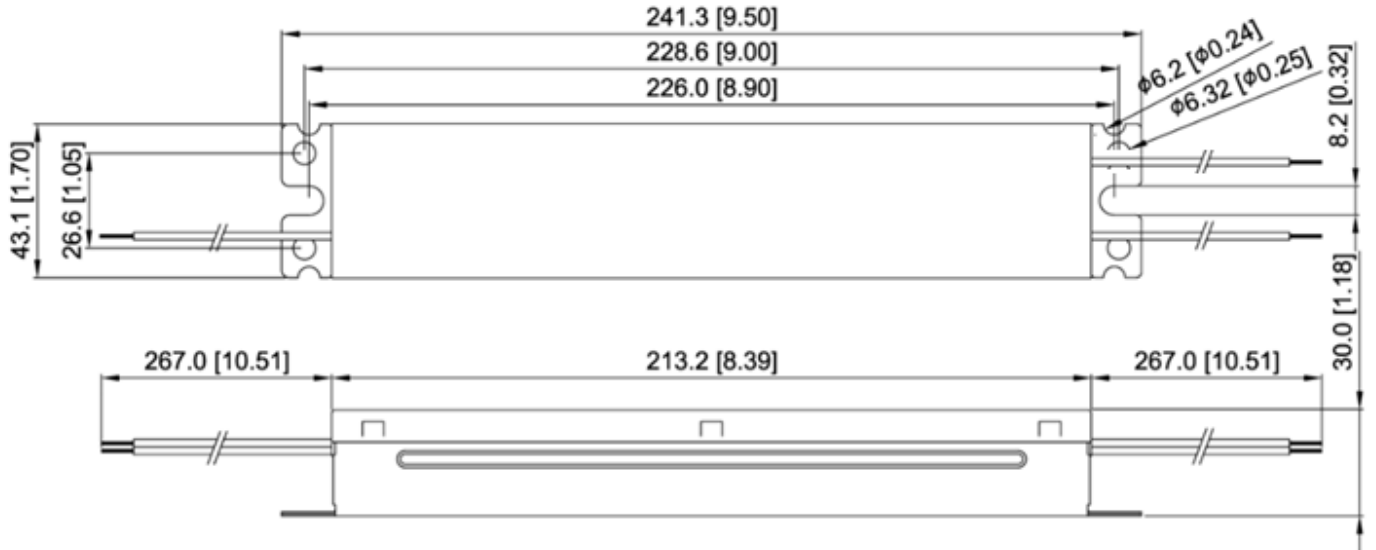


# LED Driver

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### Dimensions

USCI-100410DA



### Others

#### Warranty Policy

Please reach out our [Warranty Policy](#) should you require any further clarification.