

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

Model Number	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 ¹⁾	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 ¹⁾ +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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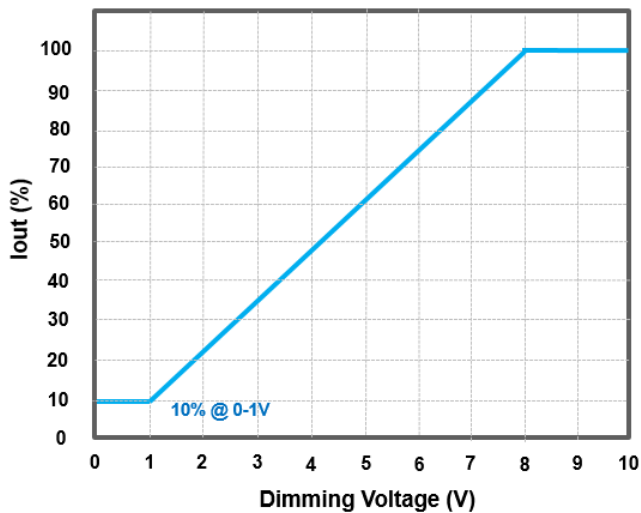
EMC

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

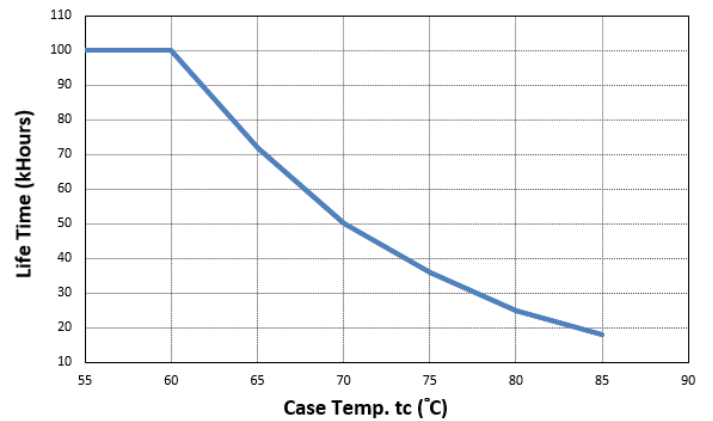
1) Criteria A: Normal performance within the specification limits
2) Criteria B: Temporary degradation or loss of function, which is self-recoverable

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

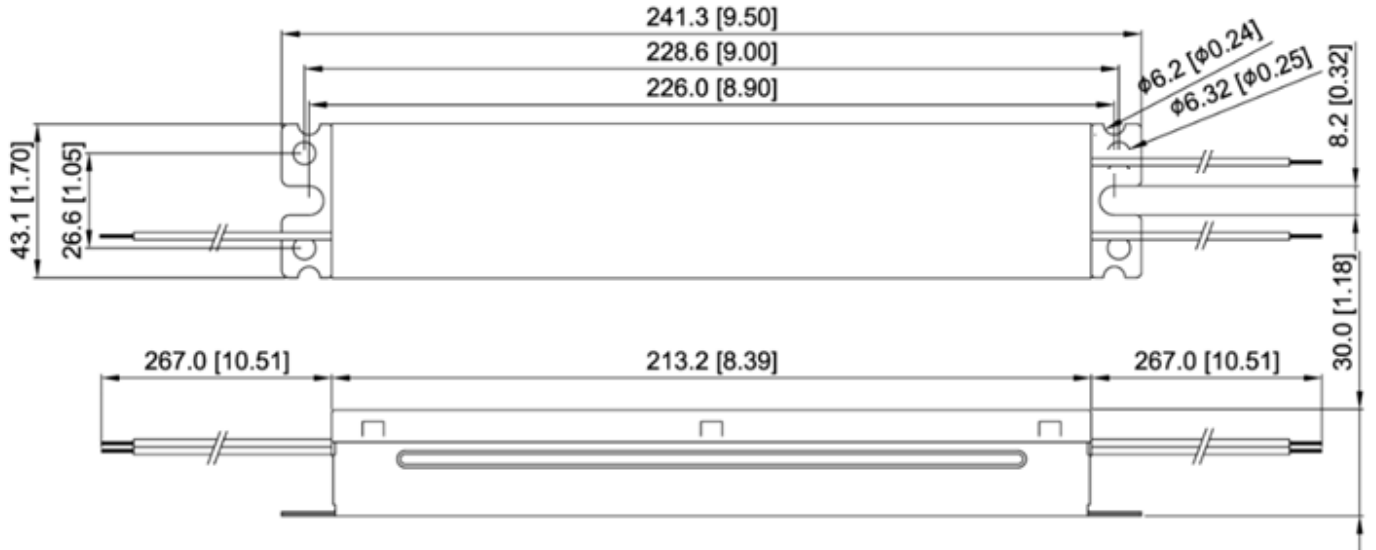


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Dimensions

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Others

Warranty Policy

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