

LED Driver

USCI Micro Series



USCI Micro

Highlights & Features

- Constant current design
- Universal AC input voltage from 120-277Vac
- Wide operating temperature range -20°C to +55°C
- Class 2 output
- Dry / Damp location

Safety Standards



Class 2

Dimensions (L x W x H):

USCI-020070FA	95x 40 x 25.4 mm (3.74 x 1.58x 1 inch)
USCI-030070FA	
USCI-020105FA	

General Description

Delta LED drivers come in different series to suit different application. The products are designed and rigorously tested to work with various indoor LED lighting conditions.

Model Information

USCI Micro LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Output Current	Output Power
USCI-020070FA	120-277Vac Typical	14-33Vdc	700mA	20W
USCI-030070FA		29-48Vdc	700mA	30W
USCI-020105FA	108-305Vac Range	8-23Vdc	1050mA	20W

Model Numbering

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Safety Approval – UL,	Constant current	Indoor		Output Power 020: 20W 030: 30W	Output Current 070: 700mA 105 – 1050mA	Fix output current	Variable A – Delta Standard

LED Driver

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Specifications

Model Number	USCI-020070FA	USCI-030070FA	USCI-020105FA
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Input Ratings / Characteristics

Normal Input Voltage		120-277Vac		
Input Voltage Range		108-305Vac		
Normal Input Frequency		50-60Hz		
Input Frequency Range		47-63Hz		
Max. Input Current	120Vac	0.23A	0.34A	0.23A
Efficiency ¹⁾	120-277Vac	80%	83.0%	80%
Inrush Current	277Vac	Meet NEMA410		
Power Factor		Full Load: > 0.9 @ 120-277Vac,		
Total Harmonic Distortion		Full Load: THD < 20% @ 120-277Vac		
Leakage Current		< 0.5mArms @ 277Vac		

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

Output Ratings / Characteristics

Output Voltage Range	14-33Vdc	29-48Vdc	8-23Vdc
Max. No Load Output Voltage	35Vrms	50Vrms	25Vrms
Output Power Range	20W	30W	20W
Rated Output Current	700mA	700mA	1050mA
Current Accuracy	± 10% (@ Typical output current range)		
Line Regulation	± 1% (@ 120-277Vac input)		
Load Regulation	± 3% (@ Min-Max output voltage)		
Output Current Ripple	30% (ripple = peak-average/average) at full load & @120V/277V 60Hz		
Start-up Time	1000ms max. @ 120-277Vac (full load)		

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Mechanical

Casing	Plastic, Color : White
Dimensions (L x W x H) [mm]	95.0*40.0*25.4
[inch]	3.74*1.58*1.00
Unit Weight [kg]	0.15
[lb]	0.33
Cooling System	Convection
Input Wire	Line: Black, Neutral: White, Wire Length 300mm
Output Wire	Positive: Red, Negative: Blue, Wire Length 300mm
Noise (90cm distance)	Sound Pressure Level (SPL) < 24dBA

Environment

Ambient Temperature	Operating	-20°C to +55°C		
	Storage	-40°C to +85°C		
Maximum Case Temperature		+85°C	+95°C	+85°C
Relative Humidity	Operating	10 to 85% RH (Non-Condensing)		
	Storage	5 to 95% RH (Non-Condensing)		
Environmental Locations		Dry / Damp		

Protections

Over Voltage	35Vrms	50Vrms	25Vrms
	Auto-Recovery when the fault is removed		
Overload / Overcurrent	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		

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Reliability Data

Lifetime	50,000 hours at case temp. tc & full load Refer to "Lifetime VS Case Temperature"		
Lifetime @ tc	+70°C	+80°C	+70°C

Safety Standards / Directives

Electrical Safety	UL 8750, UL 60950-1 Class 2 Output
Galvanic Isolation	Mains (Input) to Output : 3.75KVac

EMC Compliance

Emissions (CE & RE)	47 CFR FCC Part 15, Subpart B, Class B	
Electrostatic Discharge	IEC 61000-4-2	Air Discharge: 8kV Contact Discharge: 4kV Criteria A ¹⁾ or Criteria B ²⁾
Radiated Field	IEC 61000-4-3	80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% Modulation Criteria A ¹⁾
Electrical Fast Transient / Burst	IEC 61000-4-4	1KV, Criteria A ¹⁾ or Criteria B ²⁾
Surge		7 Strikes 2.5KV Ring wave
Conducted	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 , Criteria A ¹⁾ or Criteria B ²⁾ 30% dip; 10 cycle, Criteria A ¹⁾ or Criteria B ²⁾
Harmonic Current Emission	IEC 61000-3-2	Class C (230Vac @ 100% load)
Voltage Fluctuation & Flicker	IEC 61000-3-3	

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)

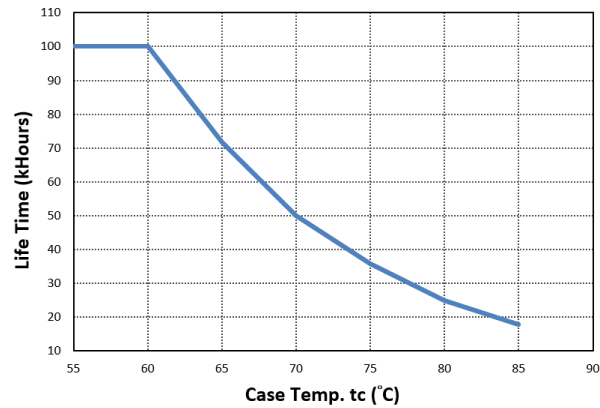
4) Symmetrical: Differential mode (Line to line)

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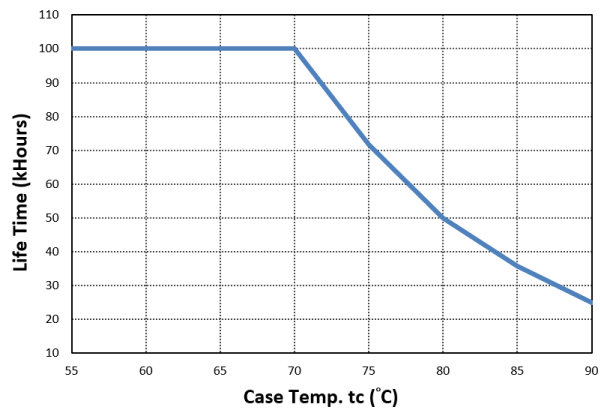
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Lifetime VS Case Temperature

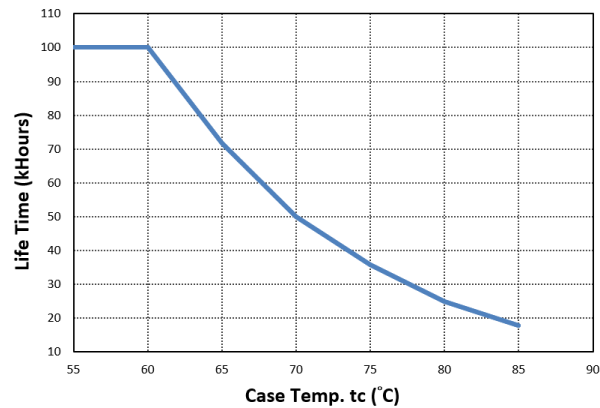
USCI-020070FA



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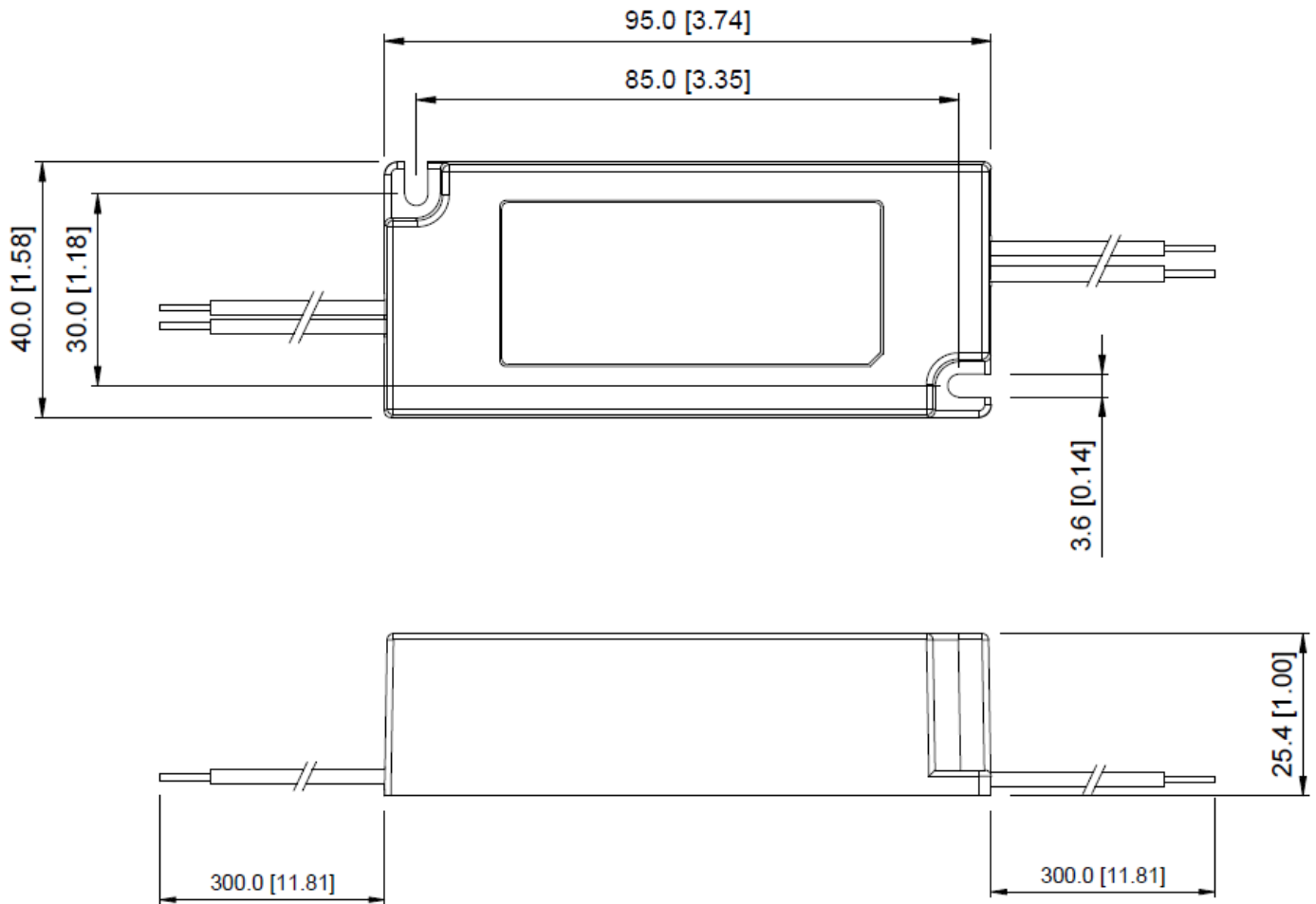


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Dimensions

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