

LED Driver

USCI A&B Can



Safety Standards



USCI A&B Can

Highlights & Features

- Constant current design
- Universal AC input voltage from 120-277Vac
- Wide operating temperature range -40°C to +55°C
- Build-in Active PFC and confirm to harmonic current IEC/EN 61000-3-2, Class C
- Common mode 4kV and differential mode 4kV surge immunity
- Suitable for Dry and Damp location
- 1-10V dimming and DALI available

Model Number: USCI-□□□□□□B,
USCI-□□□□□□C

Dimensions (L x W x H):

USCI-075070DB	241.3x 43.1 x30 mm (9.5 x 1.7 x 1.2 inch)
USCI-100070DB USCI-150070DB USCI-150105DC	241.3x 60x 41.5 mm (9.5 x 2.36 x 1.63 inch)
USCI-150070LC USCI-150105LC	241.3x 60x 41.5 mm (9.5 x 2.36 x 1.63 inch)

General Description

Delta LED drivers come in different series to suit different application needs. The USCI A&B-can series are including various output current level. All the models have major international safety certifications. USCI A&B-can series offers the capability to achieve different level of LED brightness via built-in 0-10V dimming function or DALI function to meet various application and energy optimization needs. The products are designed and rigorously tested to work with various outdoor LED lighting conditions. Featuring surge immunity (CM: 4kV, DM: 4kV) make Delta USCI A&B-can series an essential part of an energy efficient LED lighting power solution for built-in applications.

Model Information

USCI A&B Can LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current	Rated Output Power	Control
USCI-075070DB	120-277Vac Typical	54-107Vdc	700mA	75W	1-10V
USCI-100070DB	108-305Vac Range	72-143Vdc	700mA	100W	1-10V
USCI-150070DB		107-214Vdc	700mA	150W	1-10V
USCI-150105DC		72-143Vdc	1050mA	150W	1-10V
USCI-150070LC		107-214Vdc	700mA	150W	DALI
USCI-150105LC		72-143Vdc	1050mA	150W	DALI

Model Numbering

US	C	I	-	□□□	□□□	□	B/C
Safety Approval – UL,CE	Constant current	Indoor		Rated Output Power 075:75W 100:100W 150:150W	Rated Output Current 070 – 700mA 105 – 1050mA	D:1-10V L:DALI	Variable B or C – Delta Standard

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Specifications

Model Number	USCI-075070DB	USCI-100070DB	USCI-150070DB	USCI-150105DC	USCI-150070LC	USCI-150105LC
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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	0.82A	1.02A	1.52A	1.52A	1.52A	1.52A
Efficiency ¹⁾	230Vac	89%	90%	91%	91%	91%	91%
Inrush Current (Apk / 50% - μ S @ Cold Start)	277Vac	320A/250 μ S (Meet NEMA410))					
Max. no. of LED Drivers circuit breaker at 230Vac	B16	3	3	3	3	3	3
	C16	4	4	4	4	4	4
Power Factor	70% -Full Load: > 0.9 @ 120- 230Vac (except to USCI-075070DB, USCI-100070DB with load $\geq$ 60%)						
Total Harmonic Distortion	THD < 20% with load $\geq$ 70% at 120- 230Vac input (except to USCI-075070DB, USCI-100070DB with load $\geq$ 60%,						
Leakage Current	< 0.5mA rms & <0.7mA peak @ 277Vac						

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

Output Ratings / Characteristics

Output Voltage Range	54-107Vdc	72-143Vdc	107-214Vdc	72-143Vdc	107-214Vdc	72-143Vdc
Max. No Load Output Voltage	130Vrms	165Vrms	250Vrms	172Vrms	250Vrms	172Vrms
Output Power Range	75W	100W	150W	150W	150W	150W
Rated Output Current	700mA	700mA	700mA	1050mA	700mA	1050mA
Current Accuracy	$\pm$ 10% (@ Typical output current range)					
Line Regulation	$\pm$ 2% (@ 120-277Vac input)					
Load Regulation	$\pm$ 3% (@ Min-Max output voltage)					
Output Current LF Ripple	15% (ripple = peak-average/average) at full load (<100Hz) and 30% for USCI-075070DB					
Start-up Time	1000ms max. @ 120-277Vac (full load)				1200ms max. @ 120-277Vac (full load)	

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Mechanical

Casing	Metal sheet, Color : Black		
Dimensions (L x W x H) [mm]	241.3*43.1*30.0	240.5*60.0*37.8	
inch]	9.50*1.70*1.18	9.47*2.36*1.49	
Unit Weight [kg]/ [lb]	0.64/ 1.41	1.10/ 2.43	
Cooling System	Convection		
Input Wire :	Line: Black, Neutral: White, Wire Length 300mm		
Output Wire :	Positive: Red, Negative: Blue, Wire Length 300mm		
Dimming Wire :	Dim(+): Violet, Dim(-): Gray, Wire 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	+80C	+85°C	+85°C	+85°C	+85°C
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)					
	Storage	5 to 95% RH (Non-Condensing)					
Environmental Locations		Dry / Damp					

Protections

Over Voltage	130Vrms	165Vrms	250Vrms	172Vrms	250Vrms	172Vrms
	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					
Suitable for Luminaires Class	Class II. Insulation Class according to IEC 60598					

Reliability Data

Lifetime	50,000 hours at case temp. tc & full load. Refer to "Lifetime VS Case Temperature"					
Lifetime @ tc	+85°C	+80°C	+75°C	+75°C	+75°C	+75°C

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Safety Standards / Directives

Electrical Safety	EN 61347-1, EN 61347-2-13 CE UL 8750				
Material and Parts	RoHS Directive 2011/65/EU Compliant				
Galvanic Isolation		Mains (Input)	Earth (Case)	Output	DIM ±
USCI-075070DB	Mains (Input)	N/A	3750V	3750V	N/A
USCI-100070DB	Earth (Case)	3750V	N/A	3750V	N/A
	Output	3750V	3750V	N/A	1875V
	DIM ±	N/A	N/A	1875V	N/A
Galvanic Isolation		Mains (Input)	Earth (Case)	Output	DIM ±
USCI-150070DB	Mains (Input)	N/A	3750V	3750V	N/A
USCI-150105DC	Earth (Case)	3750V	N/A	3000V	N/A
	Output	3750V	3000V	N/A	3000V
	DIM ±	N/A	N/A	3000V	N/A
Galvanic Isolation		Mains (Input)	Earth (Case)	Output	DALI
USCI-150070LC	Mains (Input)	N/A	3750V	3750V	3000V
USCI-150105LC	Earth (Case)	3750V	N/A	3000V	N/A
	Output	3750V	3000V	N/A	1500V
	DALI	3000V	N/A	1500V	N/A

EMC Compliance

Emissions (CE & RE)	Compliance to EN 55015 Class B; 47 CFR FCC Part 15, Subpart B, Class B	
Immunity	Compliance to EN 61547	
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	IEC 61000-4-5	Differential Mode ⁴⁾ : 4kV, Common Mode ³⁾ : 4kV; Criteria A ¹⁾ or Criteria B ²⁾
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
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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1-10V Dimming Specification

Absolute Maximum Voltage	± 20V	N/A
Source Current	275μA ± 10%	N/A
Dimming Input Range	1) 0-1V: 10% duty , 1-10V: 10-100%duty 2) Open is 100% duty	N/A

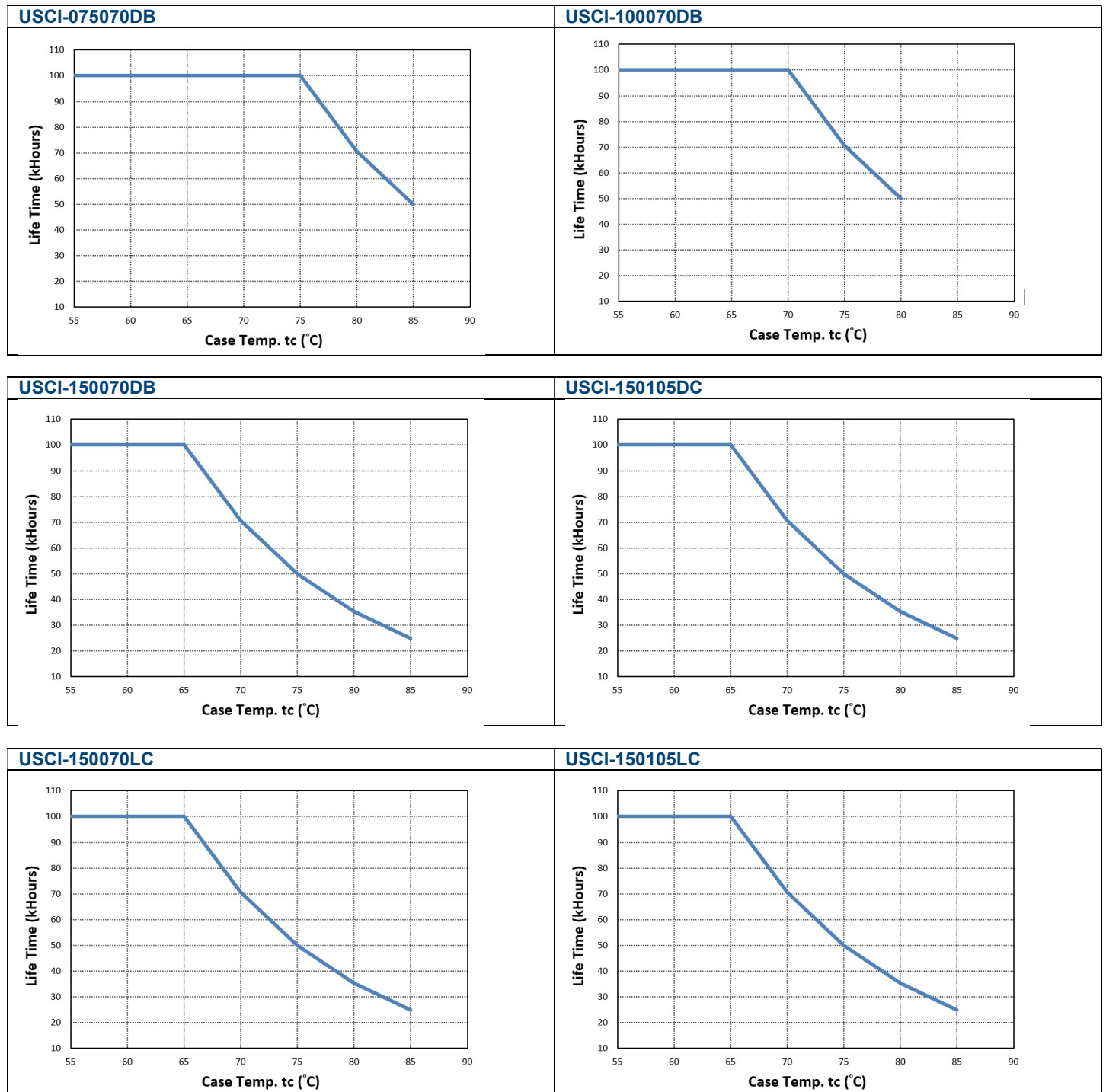
DALI Specification

Dimming range	N/A	10-100% duty
Standards	N/A	EN 62386-101 EN 62386-102 EN 62386-207

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Lifetime VS Case Temperature

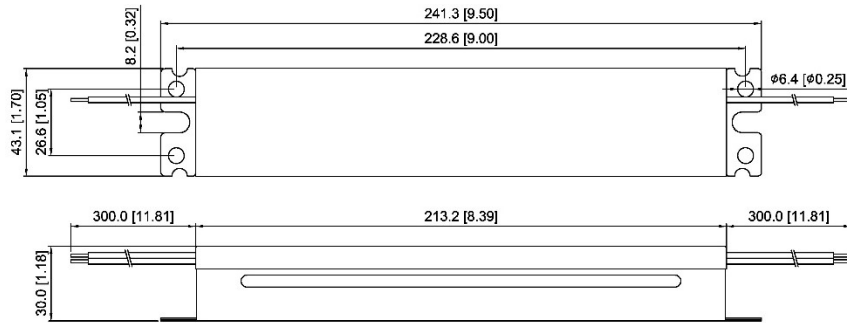


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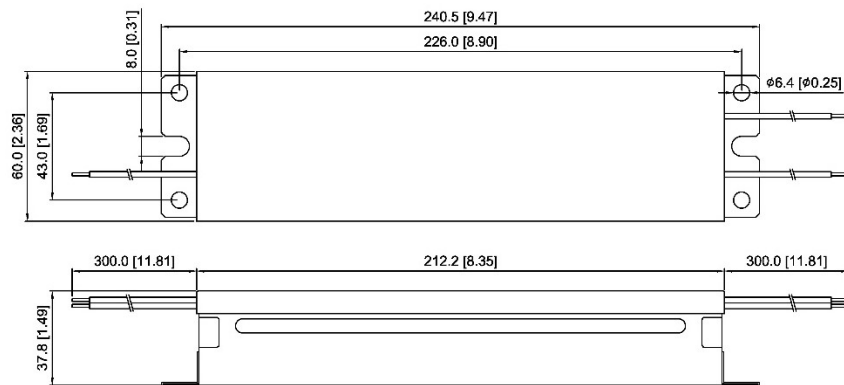
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Dimensions

USCI-075070DB



USCI-100070DB, USCI-150070DB, USCI-150105DC, USCI-150070LC, USCI-150105LC



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