USCT LINEAR

Highlights & Features

- Constant current design
- Universal input voltage 120-277Vac
- Class 2 Output
- Up to 90.0% efficiency for 80W model
- Programmable output current by DELTA interface
- Min. dim 1% of 0-10V / Resistor Dimming methods
- Dry and Damp location rated
- Linear type design for indoor and office lighting applications

Safety Standards

c UL us
LISTED
E336604
Class P
LED class 2 output

Dimensions (L x W x D):

USCT-030105GA	11.0 x 1.2 x 1.0 inch (280.0 x 30.0 x 25.4 mm)
USCT-050140GA	11.0 x 1.2 x 1.0 inch (280.0 x 30.0 x 25.4 mm)
USCT-080210GA	14.2 x 1.2 x 1.0 inch (360.0 x 30.0 x 25.4 mm)

General Description

Delta USCT-Linear series of output current LED drivers with i-Programming control comes with affordable and reliable features. Compatible with built-in type and linear mechanical case design from any LED manufacturer. Output current with i-Programming design for different lumen application. 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

USCT Linear LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current
USCT-030105GA	120-277Vac Typical 108-305Vac Range	16-54Vdc	150-1050mA
USCT-050140GA			350-1400mA
USCT-080210GA		20-54Vdc	700-2100mA

Model Numbering

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Safety Approval cULus	Constant Current	Terminal		Output Power 030 – 30W 050 – 50W 080 – 80W	Output Current 105 – 1050mA 140 – 1400mA 210 – 2100mA	Function G – i-Programming	Variable A – standard

Specifications

Model Number		USCT-030105GA	USCT-050140GA	USCT-080210GA
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		0.33A @ 120-277Vac	0.55A @ 120-277Vac	0.77A @ 120-277Vac
Efficiency[1)]	120Vac	89.0% typ. @ 555mA Io	87.5% typ. @ 925mA Io	89.0% typ. @ 2100mA Io
	277Vac	89.0% typ. @ 555mA Io	89.5% typ. @ 925mA Io	90.0% typ. @ 2100mA Io
No load Power Consumption		< 0.5W @120Vac		
Inrush Current @277Vac (Apk / 50%-us) (Cold Start)		20A/250us, Meet NEMA 410		80A/250us, Meet NEMA 410
Power Factor		> 0.95 @ 120-277Vac full load		
Total Harmonic Distortion		< 10% @ 120-277Vac		< 10% @ 120Vac full load < 15% @ 277Vac full load
Leakage Current		< 0.75mA @ 277Vac		

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

Output Ratings / Characteristics

Nominal Output Current	150-1050mA	350-1400mA	700-2100mA
Output Voltage Range	16-54Vdc	16-54Vdc	20-54Vdc
Max. No Load Output Voltage	60Vdc		
Output Power Range	0-30W	0-50W	0-80W
Output Current Tolerance	± 5%		
Line Regulation	± 2%		
Load Regulation	± 5%		
Output Current Ripple	5% @full load(ripple = pk-avg/avg)		
Rise Time	< 50ms @ 120-277Vac		
Start-up Time	<1000ms @ 120-277Vac		

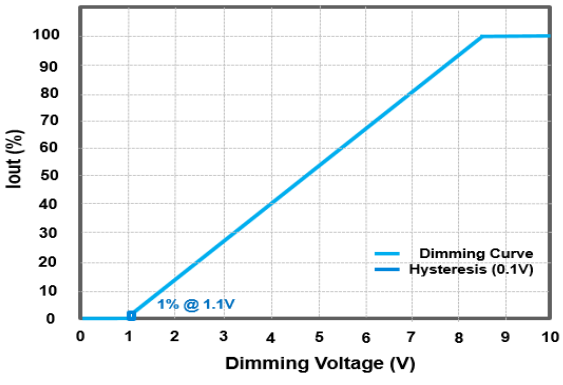
Model Number	USCT-030105GA	USCT-050140GA	USCT-080210GA

Dimming Characteristics

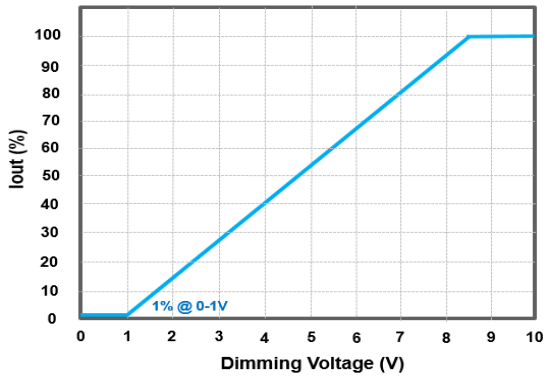
0 – 10V Dimming	0 - 10V Analog Dimming Interface: • Suitable for Class 1 or Class 2 wiring. • Driver will source a 100uA for control needs. • Controller must sink current from the 0-10V control leads. Dimming Characteristics: • 10V = maximum output • 0V = dim-to-off or programmed minimum dimming level (dim-to-off for 30W/ 50W; minimum dim 1% for 80W) • 1.1V (1%) – 8.5V (100%) • For 80W model, When Vout<33V, Iout_min should be >=100mA

Dimming Curve- Dimming Voltage vs. Output Voltage

USCT-030105GA / USCT-050140GA



USCT-080210GA



Mechanical

Casing		Metal sheet, Color: Natural		
Dimensions (L x W x H)	[inch]	11.0 x 1.2 x 1.0	11.0 x 1.2 x 1.0	14.2 x 1.2 x 1.0
	[mm]	280.0 x 30.0 x 25.4	280.0 x 30.0 x 25.4	360.0 x 30.0 x 25.4
Unit Weight	[lb]	0.81	0.81	1.23
	[kg]	0.37	0.37	0.56
Cooling System		Convection		

Input connector (30/50/80W)	Terminal, 3-pole (Line – Black / Neutral – White / PE – Green), Conductor 0.5~1.5 mm² , Strip length 8.5…9.5mm
Output connector (30/50/80W)	Terminal, 6-pole (LED+ – Red / LED- – Black / GND – White / PRG_NTC – Orange / DIM – Pink / DIM+ – Purple), Conductor 0.5~1.5 mm² , Strip length 8.5…9.5mm for 30W and 50W model Terminal, 5-pole (LED+ – Red / LED- – Black / PRG_NTC – Orange / DIM – Pink / DIM+ – Purple), Conductor 0.5~1.5 mm² , Strip length 8.5…9.5mm for 80W model
Noise (30cm distance)	Sound Pressure Level (SPL) < 24dBA

Model Number		USCT-030105GA	USCT-050140GA	USCT-080210GA

Environment

Ambient Temperature	Operating	-25°C to +50°C		
	Storage	-30°C to +85°C		
Maximum Case Temperature		75°C	85°C	90°C
Lifetime Case Temperature		70°C	80°C	80°C
Relative Humidity	Operating	10 to 60% RH (Non-Condensing)		
	Storage	10 to 95% RH (Non-Condensing)		
Environmental Locations		Dry / Damp		

Protections

Over Voltage	Max. 60V, 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. The case must be grounded.

Reliability Data

Lifetime	50,000 hrs. at lifetime case temperature
MTTF	500,000 hrs. as per Telcordia SR-332 (ta: +50°C)

Safety Standards / Directives

Electrical Safety	UL	UL 8750, Class P, type “HL”. Output meet class 2 of UL1310
Material and Parts		RoHS Directive 2011/65/EU Compliant

Galvanic Isolation

	Mains (Input)	Output	DIM + / -	Case
Mains (Input)	N/A	2V + 1,000	2V + 1,000	2V + 1,000
Output	2V[1)] + 1,000	N/A	2V + 1,000	500V
DIM + / -	2V + 1,000	2V + 1,000	N/A	500V
Case	2V + 1,000	500V	500V	N/A

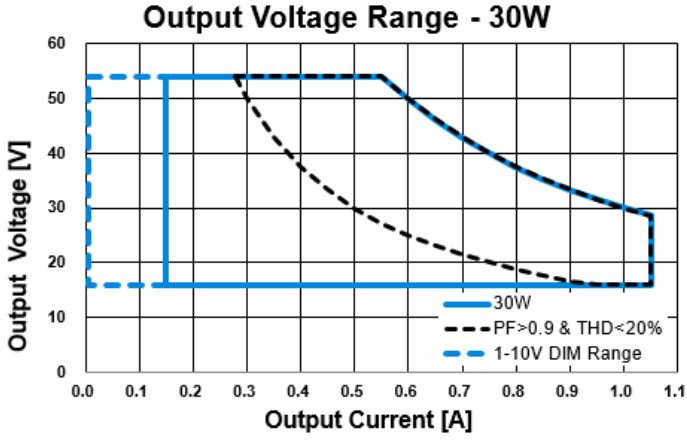
1) V is the maximum AC (rms) voltage between the parts under test

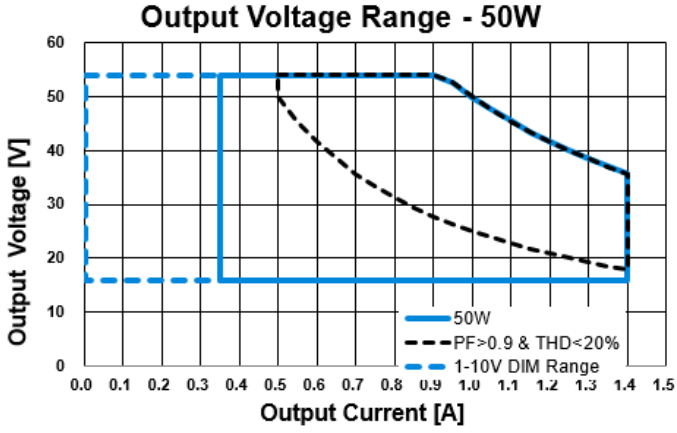
EMC

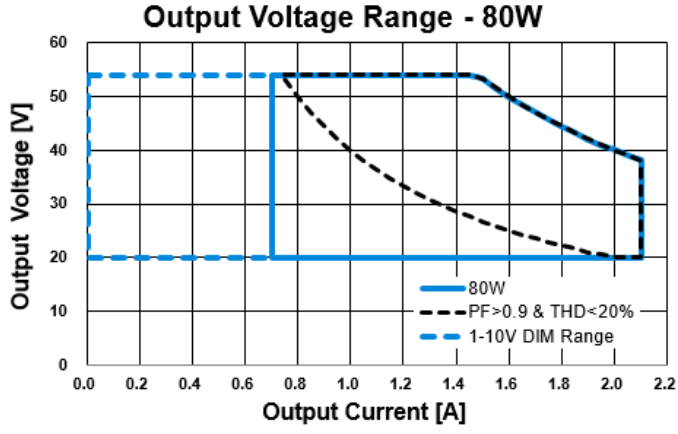
Emissions (CE & RE)	Compliance to 47 CFR FCC Part 15, Subpart B, Class A Compliance to CAN ICES-005(A) / NMB-005(A)
Surge	ANSI C62.41-Category A1 with a 2.5kV/100kA ring wave, Criteria A[1)]

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)

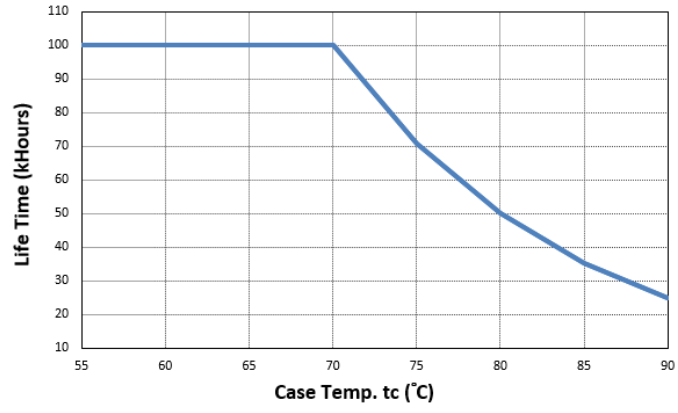
Output and Dimming Characteristic Curve





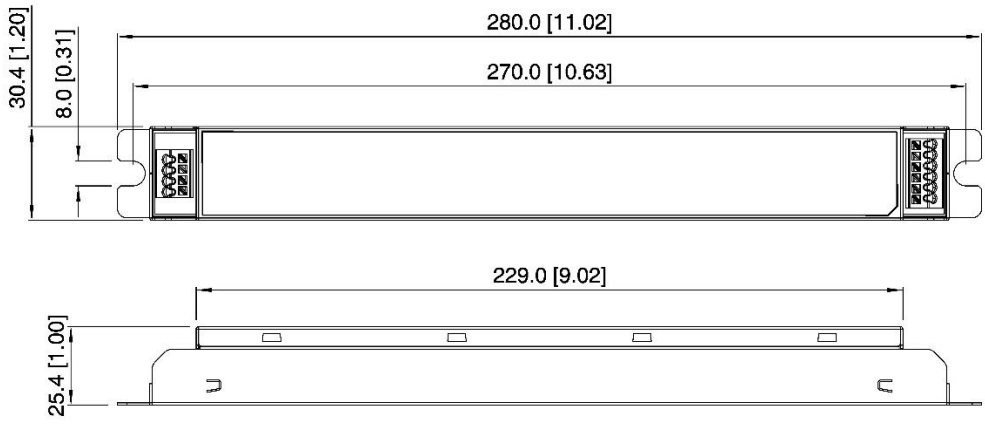


Lifetime VS Case Temperature



Dimensions

USCT-030140GA & USCT-050140GA



USCT-080210GA