LED Driver
USCI LITE

USCI LITE

Highlights & Features

- Constant current design
- Adjustable constant current level through program tool
- 6kV Combi-wave surge rating meet ANSI C82.77-5
- UL LISTED, Class P & Type HL , UL Dry & Damp
- 1-10V dimming available
- 50,000hours lifetime

Safety Standards

c UL us
LISTED
E336604

Class P
LED Class 2 Output
For Dry and Damp Location

Model Number: USCI-□□□□□□GB

Dimensions (L x W x H):

USCI-055180GB	6.59'' x 2.36'' x 1.5'' (168.0 x 60.0 x 38.0mm)
USCI-100140GB	6.59'' x 2.36'' x 1.5'' (168.0 x 60.0 x 38.0mm)
USCI-200140GB	9.45" x 2.36" x 1.5" (240.0 x 60.0 x 38.0mm')

General Description

Delta LED drivers come in different series to suit different application needs. The USCI LITE series features program output current level. USCI LITE series offers the capability to achieve different level of LED brightness via built-in 1-10V dimming 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 high surge immunity (CM: 6kV, DM: 6kV) and complying to Dry and Damp location.

Model Information

USCI LITE LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Program Output Current	Constant Power Current
USCI-055140GB	120-277Vac Typical 108-305Vac Range	18-52.4Vdc	520-1800mA	1050-1800mA
USCI-100140GB		50-143Vdc	600-1400mA	700-1400mA
USCI-200140GB		75-190Vdc	600-1400mA	1050-1400mA

Model Numbering

US	C	I	–	□□□	□□□	GB
Safety Approval – UL,	Constant current	Outdoor		Output Power 055:55W 100:100W/ 200:200W	Max Output Current 140 – 1400mA 180 – 1800mA	Programmable output current 1-10V dimming

All parameters are specified at 25°C ambient for all products unless otherwise indicated.
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Specifications

Model Number	USCI-055180GB	USCI-100140GB	USCI-200140GB

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	0.55A	1.04A	2.1A
	277Vac	0.25A	0.43A	0.9A
Efficiency [1]	120Vac	88%@1.05A	90.5%@0.7A	91.5%@1.05A
	277Vac	90%@1.05A	92.5%@0.7A	93.5%@1.05A
Inrush Current @ Cold Start	120Vac	50A/150uS	100A/150uS	100A/150uS
	277Vac	100A/150uS	200A/150uS	200A/150uS
Power Factor		> 0.9 @Full Load		
Total Harmonic Distortion		THD < 20% @Full Load		
Leakage Current		< 0.75mArms per UL8750		

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

Output Ratings / Characteristics

Output Voltage Range	18-52.4Vdc	50-143Vdc	75-190Vdc
Max. No Load Output Voltage	60Vrms	150Vrms	230Vrms
Output Power Range	55W	100W	200W
Adjustable Output Current (AOC)	520-1800mA	600-1400mA	600-1400mA
	With steps of 1mA, configurable via software		
Minimum Output Current	+/-10% dim level or 100mA		
Current Accuracy	± 5% (@ Typical output current range)		
Output Current LF Ripple	15% (ripple = peak-average/average) and Low frequency (≤120 Hz) <5% @Full Load		
Start-up Time	1000ms max. @ 120-277Vac @Full Load		

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Model Number	USCI-055180GB	USCI-100140GB	USCI-200140GB

Mechanical

Casing	Steel case, color : Black		
Dimensions (L x W x H) [inch] [mm]	6.59'' x 2.36'' x 1.5'' (168.0 x 60.0 x 38.0mm)		9.45" x 2.36" x 1.5" (240.0 x 60.0 x 38.0mm')
Unit Weight [lb] / [kg]	1.83 / 0.83		2.53 / 1.15
Cooling System	Convection		
Input Cable	L: Black, N: White; UL1316 18AWG solid copper wires Length 300mm		
Output Cable	Positive: Red ; Negative: Black (55W), Blue (100 / 200W) ; NTC/PRG: Orange ; UL1316 18AWG solid copper wires Length 300mm		
Dimming Cable	Dim(+): Purple, Dim(-): Pink ; UL1316 18AWG solid copper wires Length 300mm		
Noise	Sound Pressure Level (SPL) < 24dBA (30cm distance)		

Environment

Ambient Temperature	Operating	-40°C to +55°C		
	Storage	-40°C to +85°C		
Maximum Case Temperature		+80°C	+85°C	+90°C
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)		
	Storage	5 to 95% RH (Non-Condensing)		
Environmental Locations		Dry & Damp , Type HL		

Protections

Over Voltage	60Vrms	150Vrms	230Vrms
	Auto-Recovery when the fault is removed		
Overload / Overcurrent	Reduce output current. Auto-Recovery when the fault is removed		
Short Circuit	Auto-Recovery when the fault is removed		
Over Temperature	Reduce output current. Auto-Recovery when the fault is removed		
Case connection	Case must be grounding		

Reliability Data

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

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Model Number	USCI-055180GB	USCI-100140GB	USCI-200140GB

Safety Standards / Directives

Electrical Safety	UL 8750, UL List, Class P, Class2 of UL1310 for 55W			
Material and Parts	RoHS Directive 2011/65/EU Compliant			
	Main	Output	1-10V dim	Case
Main	N/A	2U + 1000V	2U + 1000V	2U + 1000V
Output	2U + 1000V	N/A	2U + 1000V	2U + 1000V
1-10V dim	2U + 1000V	2U + 1000V	N/A	2U + 1000V
Case	2U + 1000V	2U + 1000V	2U + 1000V	N/A

EMC Compliance

Emissions (CE & RE)	Compliance to 47 CFR FCC Part 15, Subpart B, Class A Compliance to CAN ICES-005(A) / NMB-005(A)
Surge	Compliance to ANSI C82.77-5 CAT C low 6KV Meet Criteria A or B

1) Criteria A: Normal performance within the specification limits

2) Criteria B: Temporary degradation or loss of function, which is self-recoverable

Model Number	USCI-055180GB	USCI-100140GB	USCI-200140GB

1-10V Dimming Specification

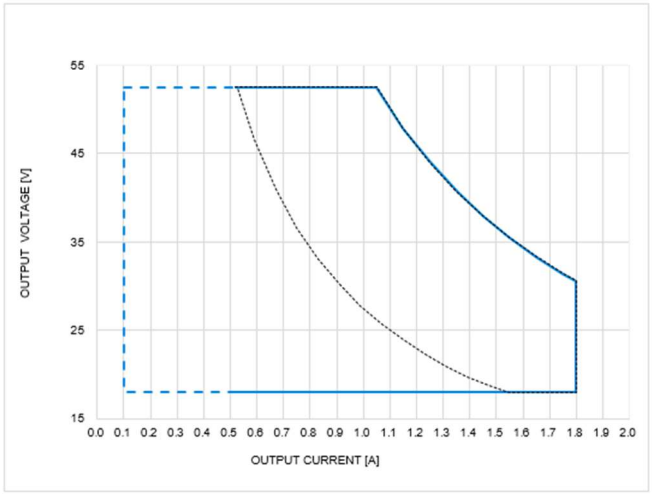
Absolute Maximum Voltage	± 20V
Source Current	100μA (typ)
Dimming Input Range	(1)1-10V for 10-100% dimming and 1V for 10% of Io_set and ≥ 8.5V is 100% of Io_set (2) Short is 10% of Io_set (or 100mA minimum) & Open is 100% (3)See 1-10V Dimming Curve

Default Settings of the Driver (can be changed with programmable tools)

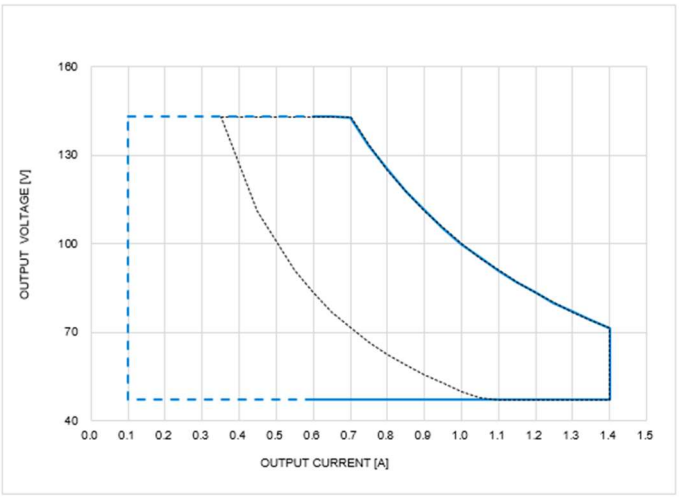
Adjustable Output Current (AOC)	1050mA	700mA	1050mA
Smart Timer DIM	Disabled Smart Time Dim		
Module Temperature Protection (MTP)	Disabled. Settable though programmable tools		
Constant Lumen Output (CLO)	Disabled. Settable though programmable tools.		
End of Life indication (EOL)	Disabled. Settable though programmable tools		

Operation Window for programing

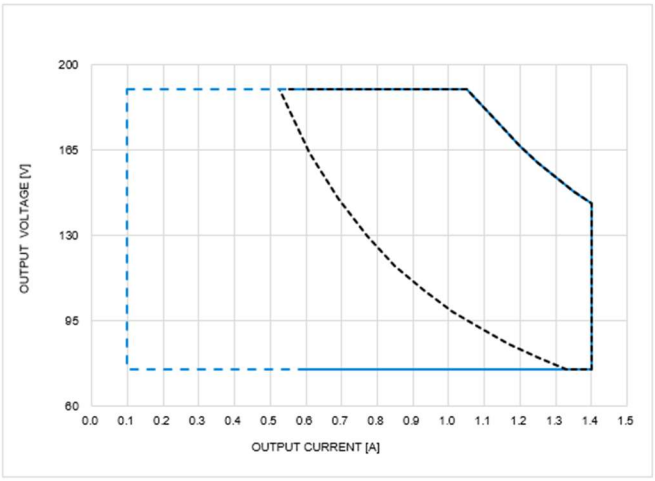
55W operating window



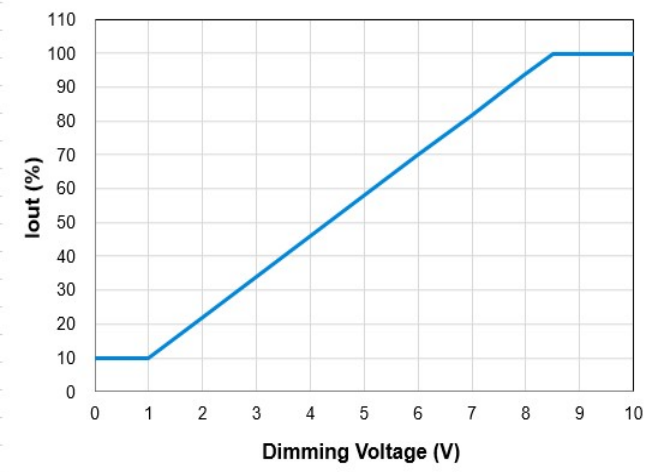
100W operating window



200W operating window



Dimming Curve



Note
Blue dot line for 0-10V range
Blue solid line for programming range
Black dot line for performance (PF>0.9V and THD<20%)

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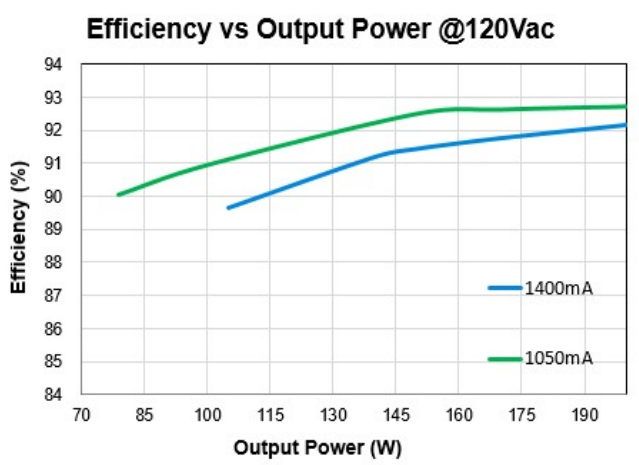
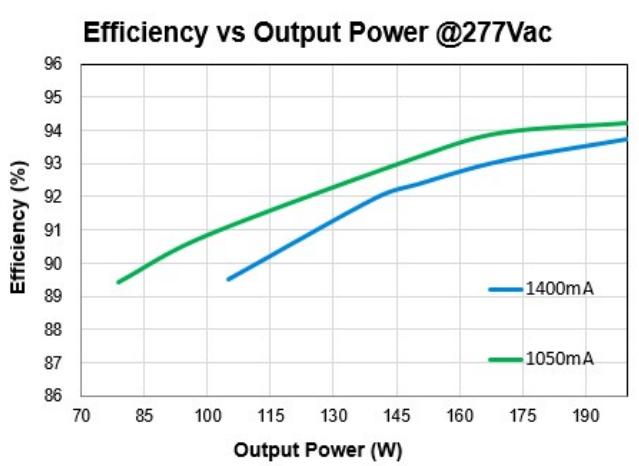
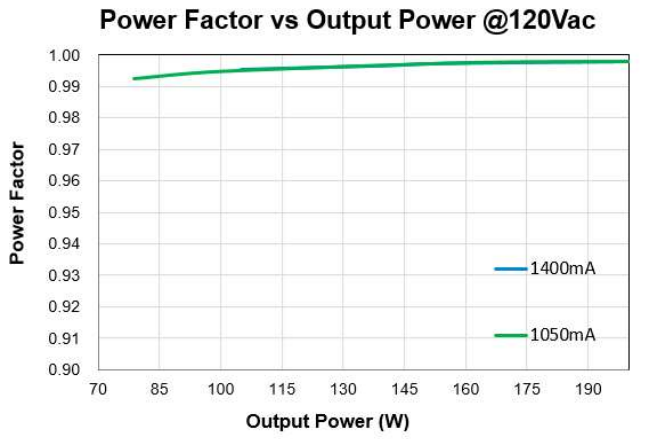
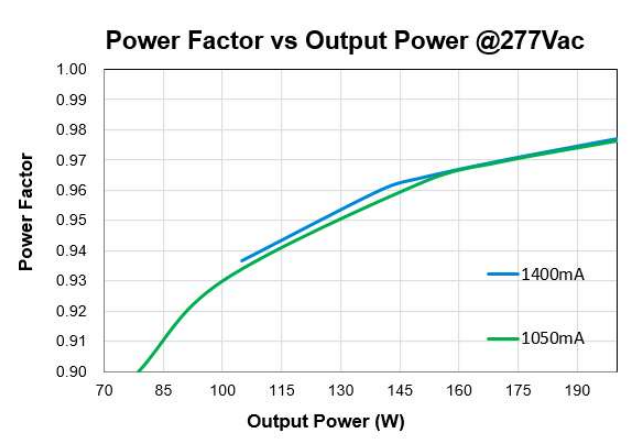
Efficiency VS Output Power

200W @ 120Vac	200W @ 277Vac
	

Power Factor VS Output Power

200W @ 120Vac	200W @ 277Vac
	

Total Harmonic Distortion VS Output Power

200W @ 120Vac	200W @ 277Vac

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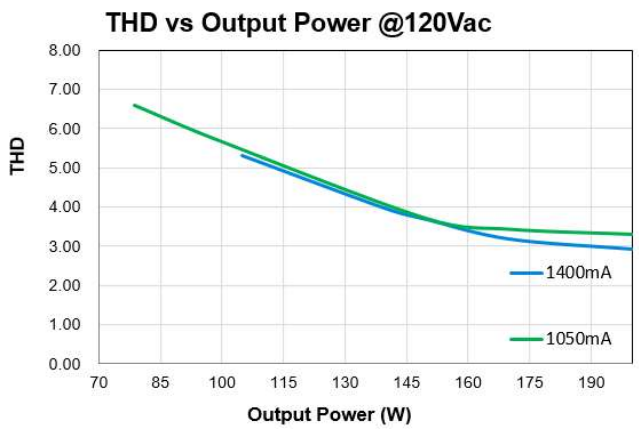
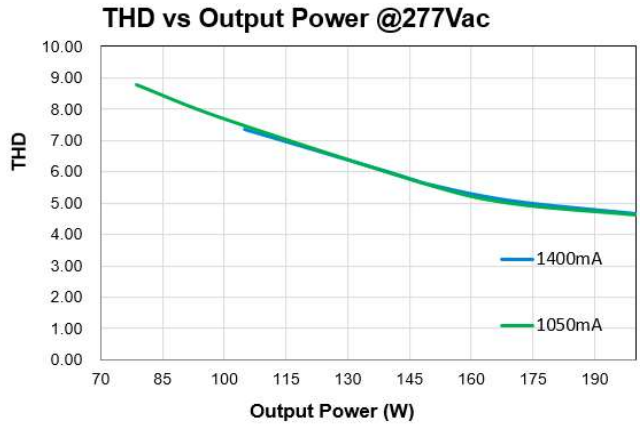
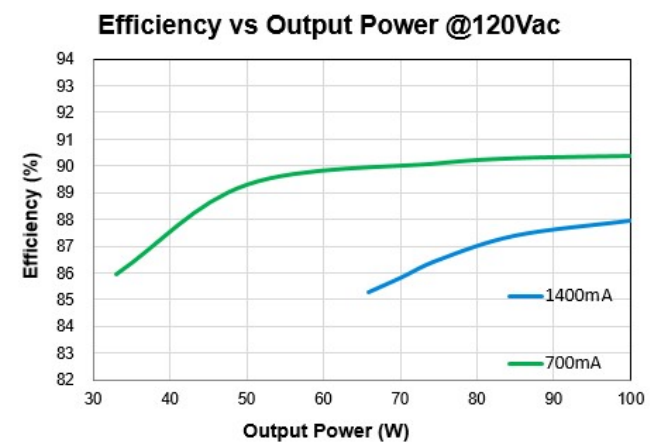
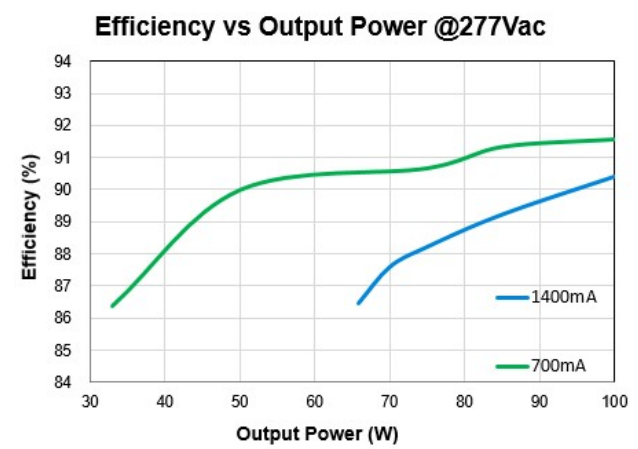




Efficiency VS Output Power

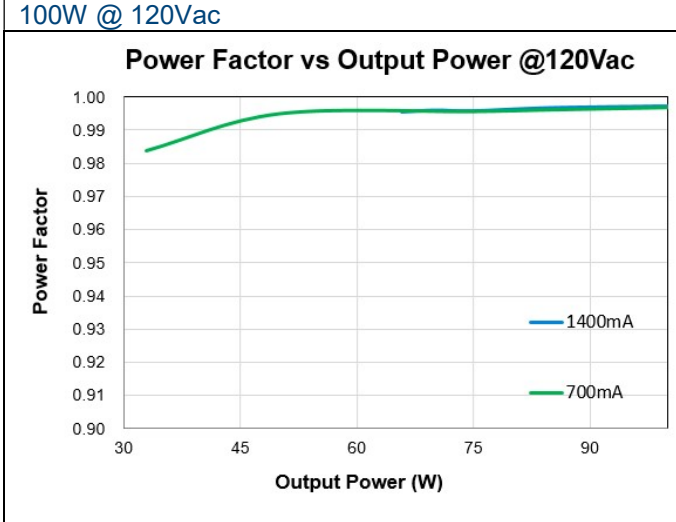
100W @ 120Vac	100W @ 277Vac

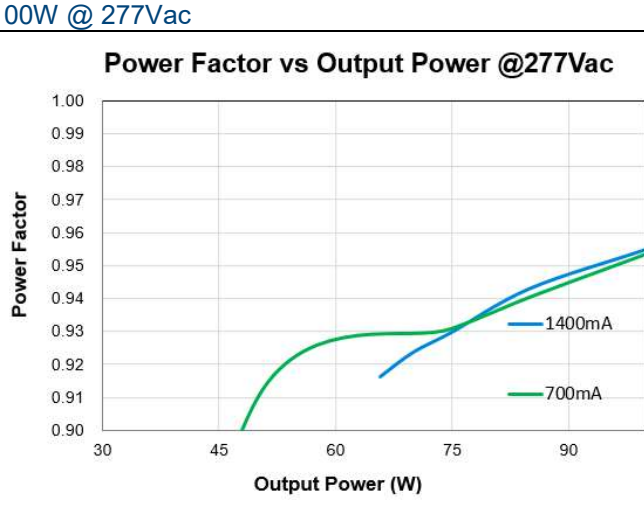




Power Factor VS Output Power

100W @ 120Vac	100W @ 277Vac





Total Harmonic Distortion VS Output Power

100W @ 120Vac	100W @ 277Vac

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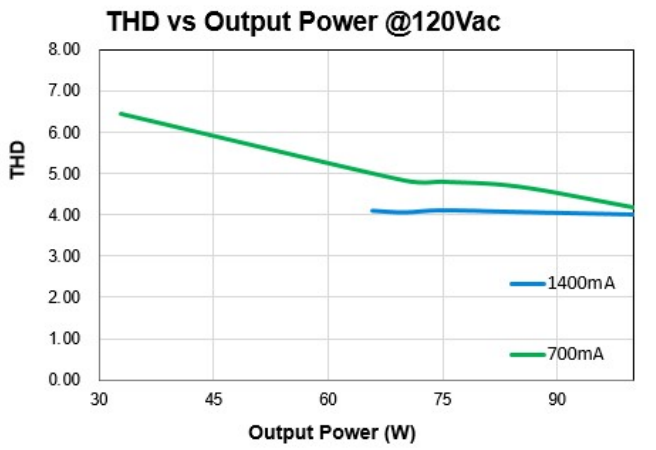
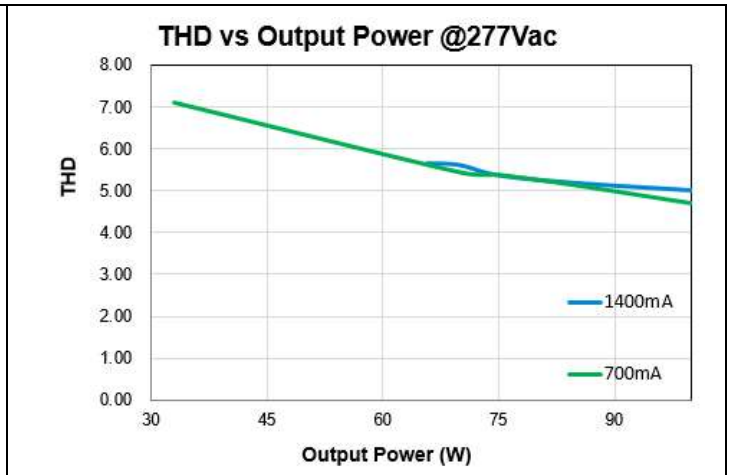
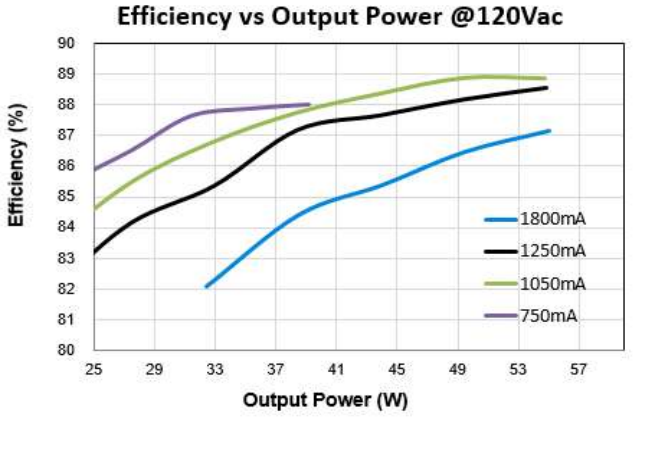


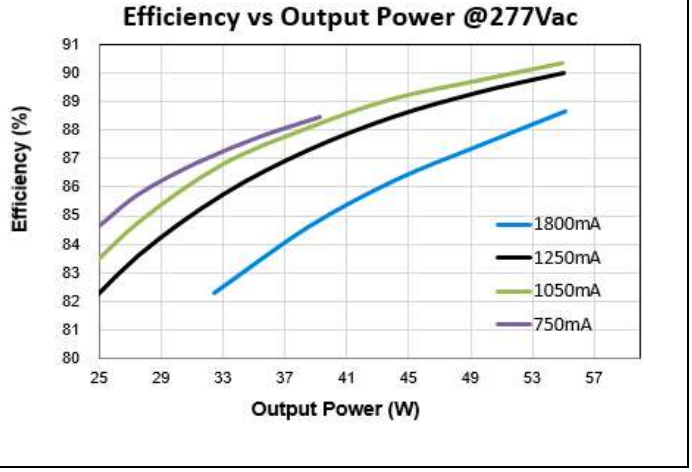


Efficiency VS Output Power

55W @ 120Vac

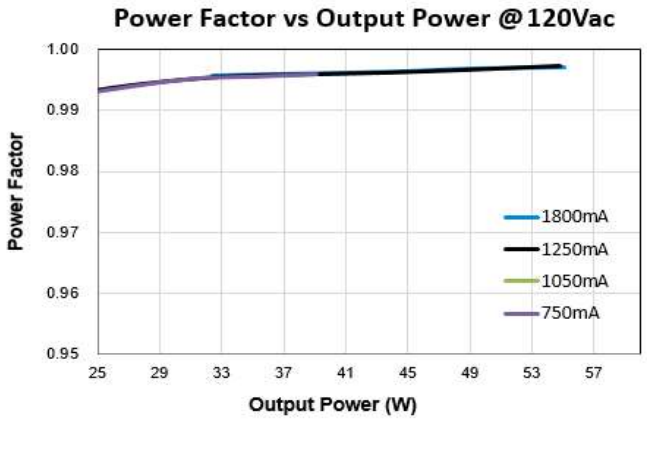


55W @ 277Vac

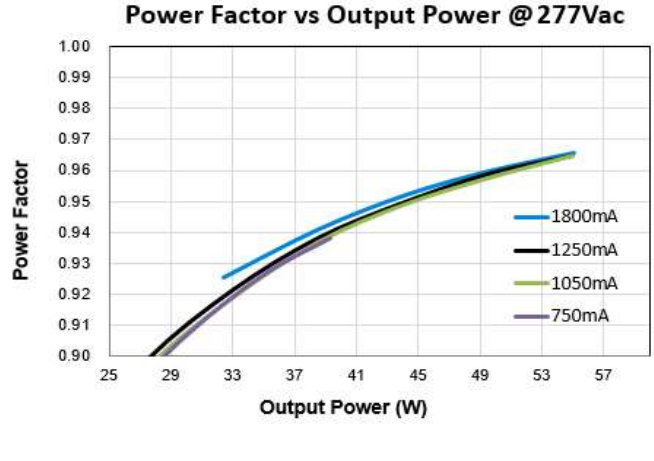


Power Factor VS Output Power

55W @ 120Vac



55W @ 277Vac



Total Harmonic Distortion VS Output Power

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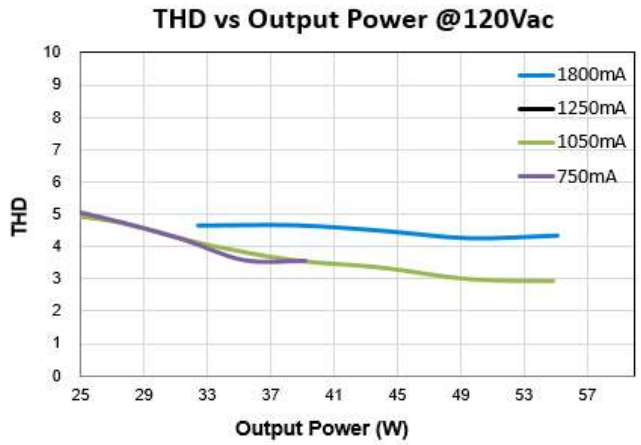
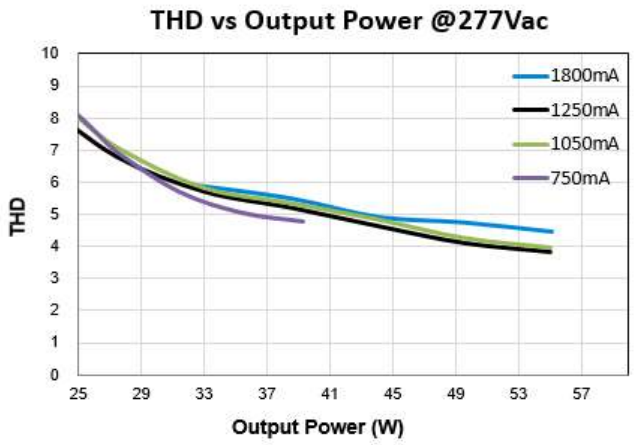
55W @ 120Vac

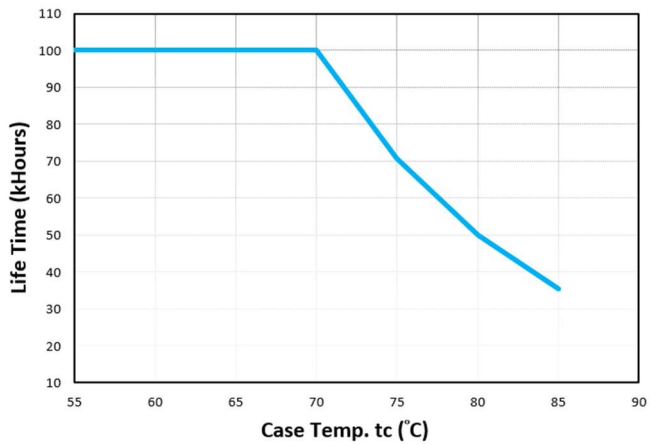


55W @ 277Vac

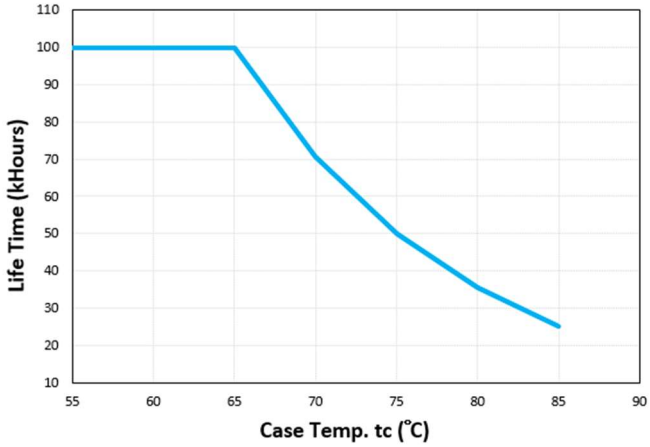


Lifetime VS Case Temperature

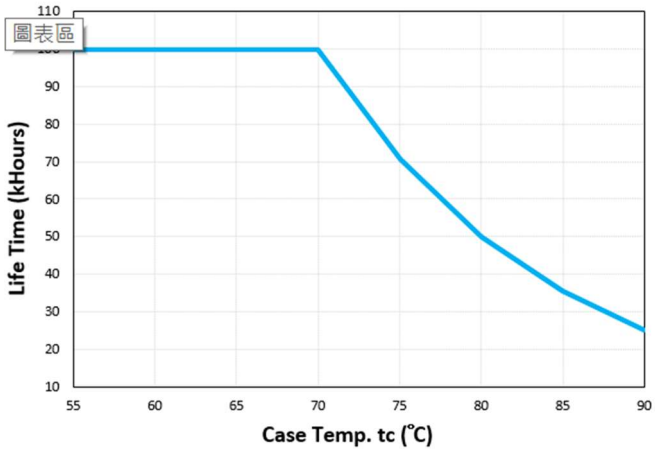
55W



100W

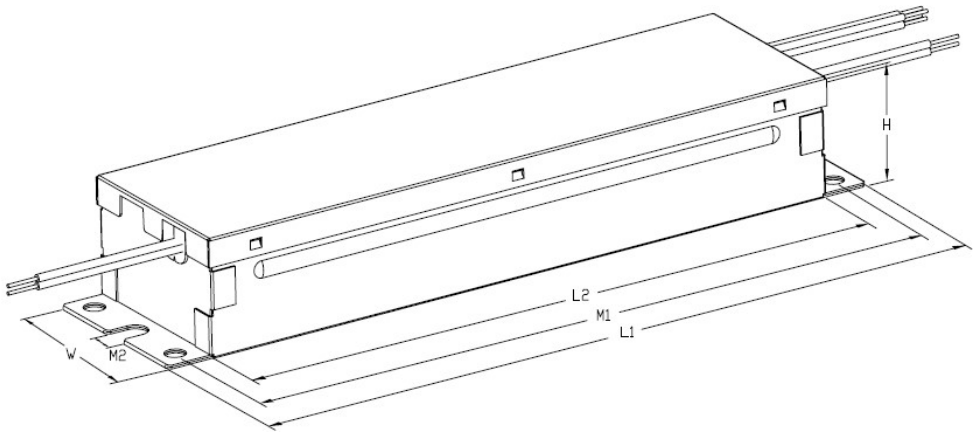


200W



Enclosure

	USC4-055180GB / USC4-100140GB inch [mm]	USC4-200140GB inch [mm]
Total length (L1)	6.59 [168]	9.45 [240]
Case length (L2)	5.48 [139.2]	8.39 [213.2]
Case width (W)	2.36 [60.0]	2.36 [60.0]
Case height (H)	1.5 [38.0]	1.5 [38.0]
Mounting length (M1)	6.03 [153.2]	8.9 [226]
Mounting hole diameter (M2)	0.32 [8.0]	0.32 [8.0]



Assembly & Installation

The device is not recommended to be placed on low thermal conductive surfaces. For example, plastics.

Base Mounting (Horizontal)

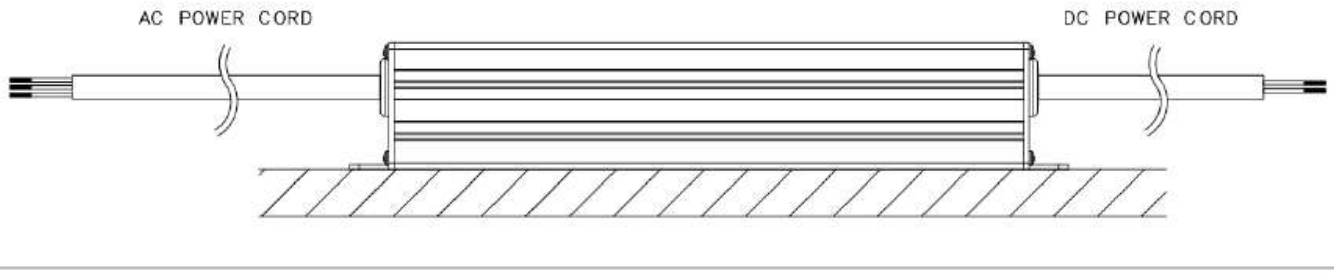


Fig. 2 Recommended Mounting Orientation

Safety Instructions

- ALWAYS switch mains of input power OFF before connecting and disconnecting the input voltage to the device. If mains are not turned OFF, there is risk of explosion / severe damage.
- To guarantee sufficient convection cooling, keep a distance of 50mm above and lateral distance to other units.
- DO NOT insert any objects into the device.
- The case of LED driver must be connected with grounding (PE).
- The current rating for the output cable must be rated higher than or equal to the output current of the power supply. Please refer to the product specifications..

Others

Warranty Policy

Please reach out our Warranty Policy should you require any further clarification.

Document Revision Record

Date	Item	Content Revised	Page Affected	Rev
2020/10/29	1	First Draft	All	00
2022/03/09	1	Add Warranty Policy	11	01
2022/03/15	1	Add 55W	All	02

Mouser Electronics

Authorized Distributor

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Delta Electronics:

USCI-055180GB