

LED Driver

USC4 LITE



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Highlights & Features

- Constant current design
- Programmable output current 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



Model Number: USC4-□□□□□□GB

Dimensions (L x W x H):

USC4-100140GB	6.59" x 2.36" x 1.5" (168.0 x 60.0 x 38.0mm)
USC4-200140GB	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 USC4 LITE series features program output current level. USC4 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

USC4 LITE LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Program Output Current	Constant Power Current
USC4-100140GB		50-143Vdc	600-1400mA	700-1400mA
USC4-200140GB		75-190Vdc	600-1400mA	1050-1400mA

Model Numbering

US	C	4	-	□□□	□□□	GB
Safety Approval - UL,	Constant current	Outdoor and High voltage input		Output Power 100:100W/ 200:200W	Max Output Current 140 – 1400mA	Programmable output current 1-10V dimming

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Specifications

Model Number	USC4-100140GB	USC4-200140GB
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Input Ratings / Characteristics

Normal Input Voltage	277-480Vac		
Input Voltage Range	254-528Vac		
Normal Input Frequency	50-60Hz		
Input Frequency Range	47-63Hz		
Max. Input Current	277Vac	0.45A	0.8A
	480Vac	0.23A	0.5A
Efficiency ¹⁾	277Vac	91.5%@0.7A	92.5%@1.05A
	480Vac	92.5%@0.7A	93.5%@1.05A
Inrush Current @ Cold Start	277Vac	100A/200uS	100A/200uS
	480Vac	200A/200uS	200A/200uS
Power Factor	> 0.9 @Full Load		
Total Harmonic Distortion	THD < 20% @Full Load		
Leakage Current	< 0.75mA peak		

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

Output Ratings / Characteristics

Output Voltage Range	50-143Vdc	75-190Vdc
Max. No Load Output Voltage	150Vrms	230Vrms
Output Power Range	100W	200W
Adjustable Output Current (AOC)	600-1400mA	600-1400mA
	With steps of 1mA, configurable via software	
Minimum Output Current	+/-10% dim level	
Current Accuracy	± 5% (@ Typical output current range)	
Line Regulation	± 1% (@ 277-480Vac input)	
Load Regulation	± 3% (@ Min-Max output voltage)	
Output Current LF Ripple	15% (ripple = peak-average/average) and Low frequency (≤120 Hz) content <5% @Full Load	
Start-up Time	1000ms max. @ 277-480Vac @Full Load	

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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: Blue; 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		+85°C	+90°C
Relative Humidity	Operating	10 to 85% RH (Non-Condensing)	
	Storage	5 to 95% RH (Non-Condensing)	
Environmental Locations	Dry & Damp		

Protections

Over Voltage	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	+75°C	+80°C

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Safety Standards / Directives

Electrical Safety	UL 8750 Class P & type "HL"			
Material and Parts	RoHS Directive 2011/65/EU Compliant			
Isolation	Main	Output	0-10V dim	Case
Main	N/A	2U + 1000V	2U + 1000V	2U + 1000V
Output	2U + 1000V	N/A	2U + 1000V	2U + 1000V
0-10V 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

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0-10V 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

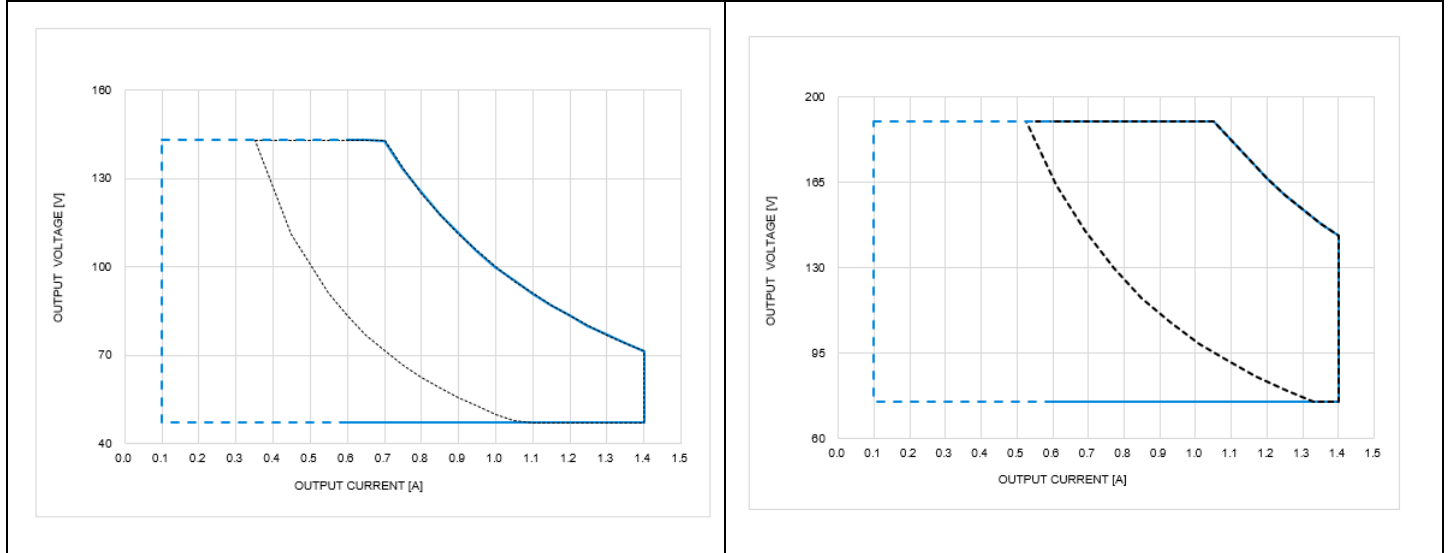
Default Settings of the Driver (can be changed with programmable tools)

Adjustable Output Current (AOC)	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	

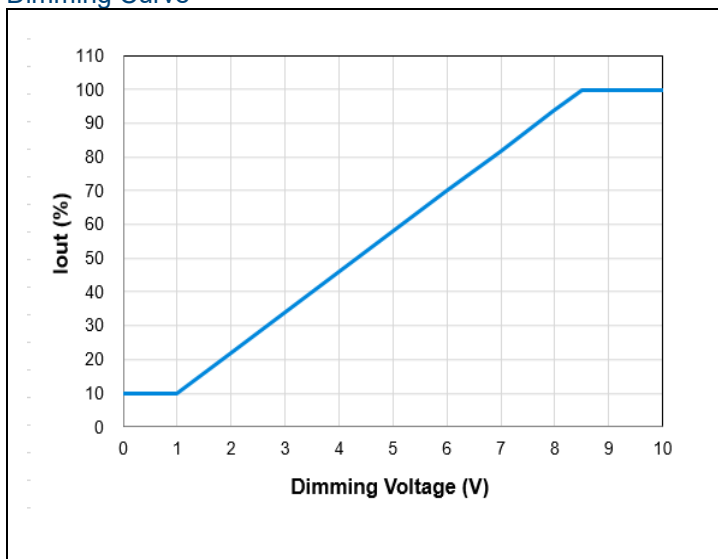
LED Driver

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Operation Window for programming



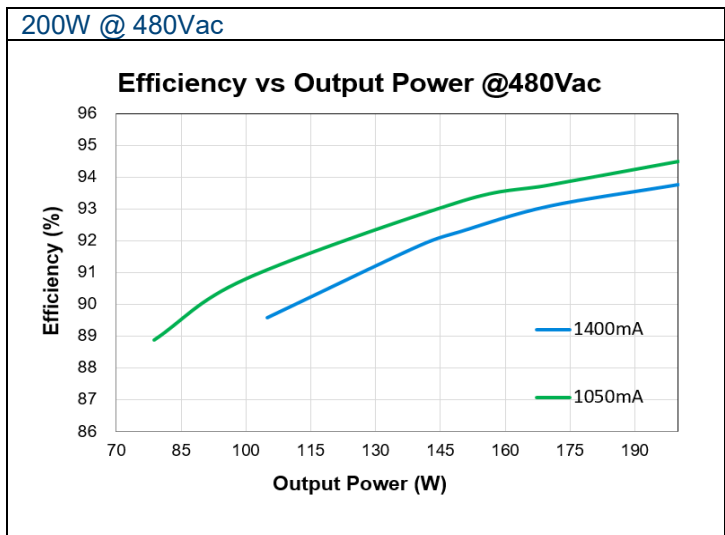
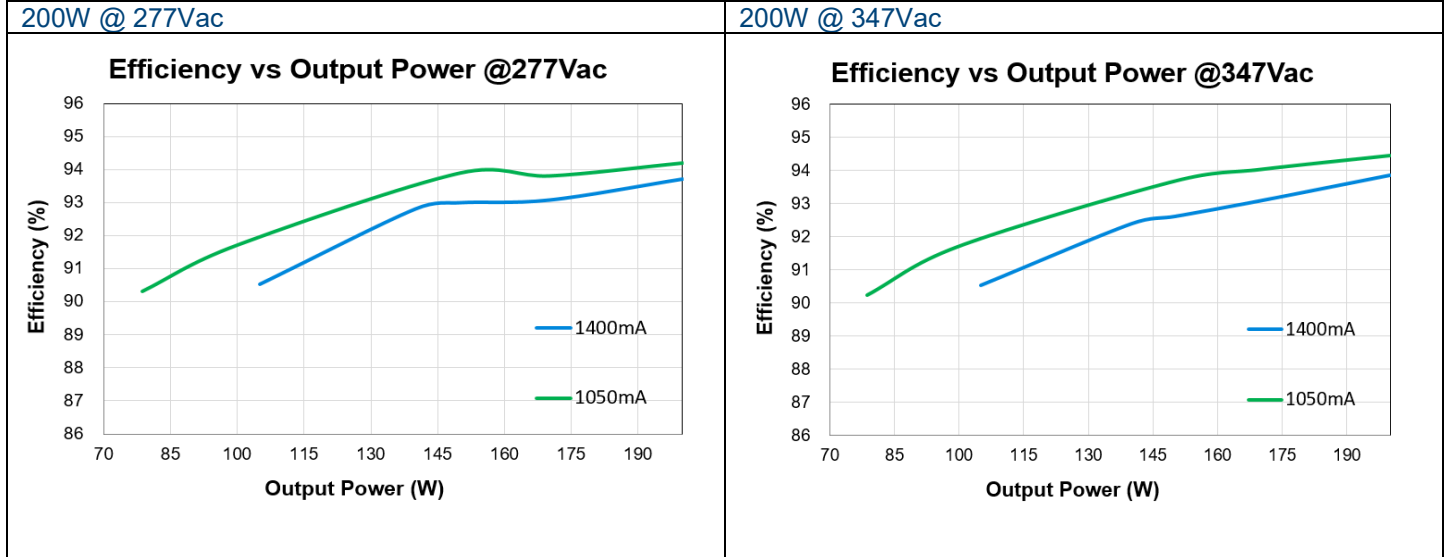
Dimming Curve



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Efficiency VS Output Power

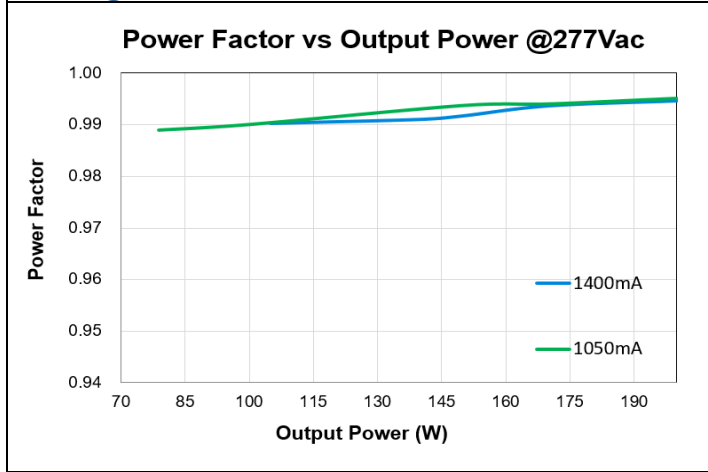


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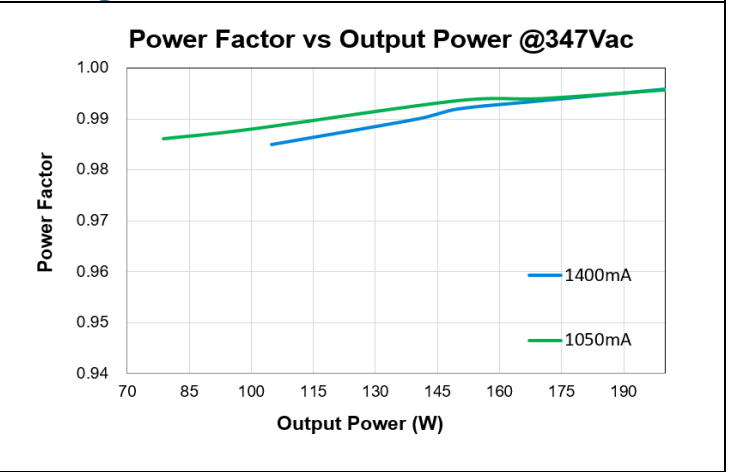
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Power Factor VS Output Powe

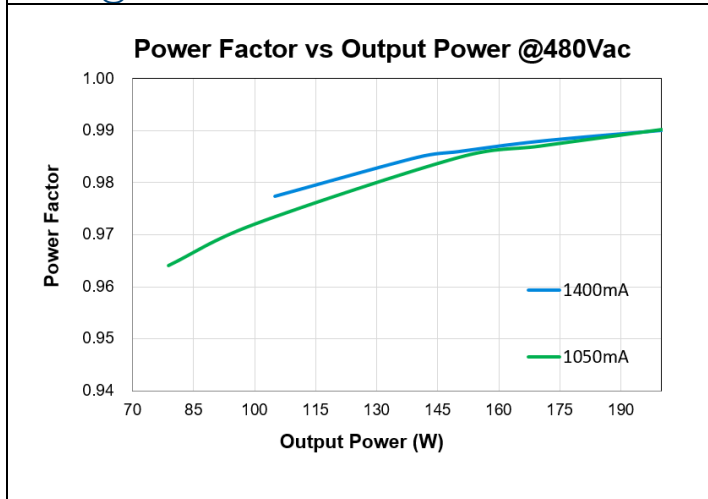
200W @ 277Vac



200W @ 347Vac



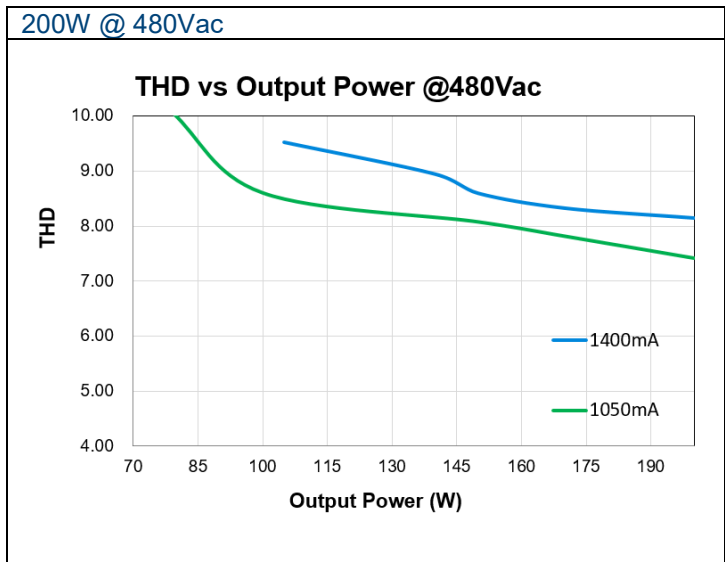
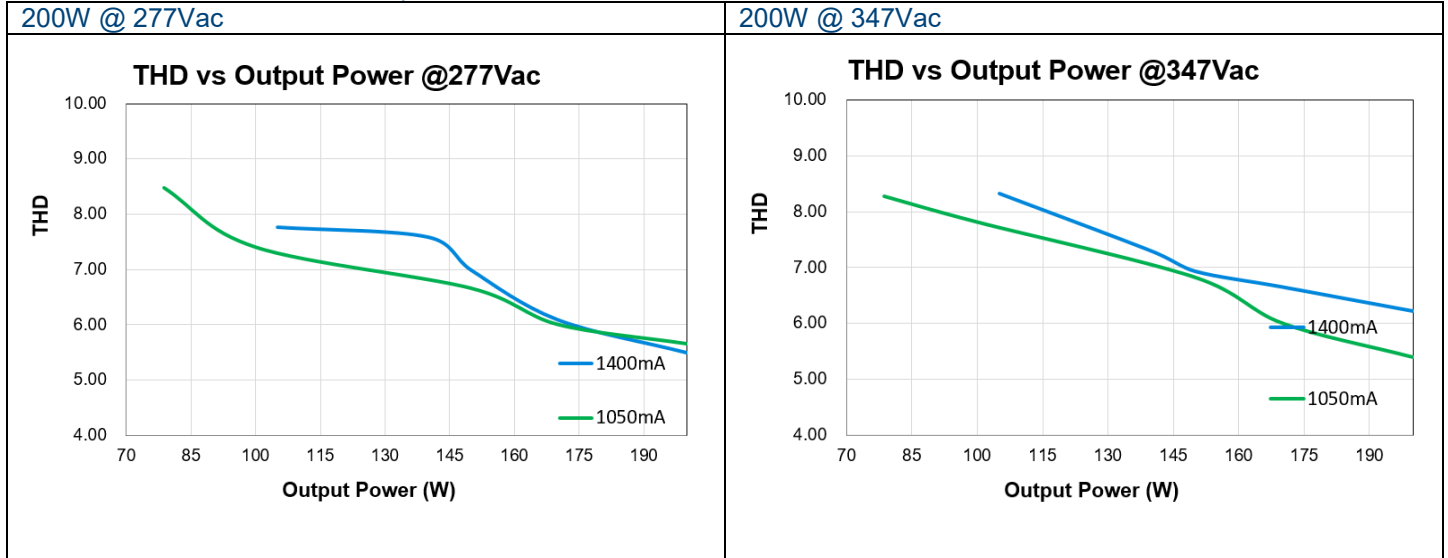
200W @ 480Vac



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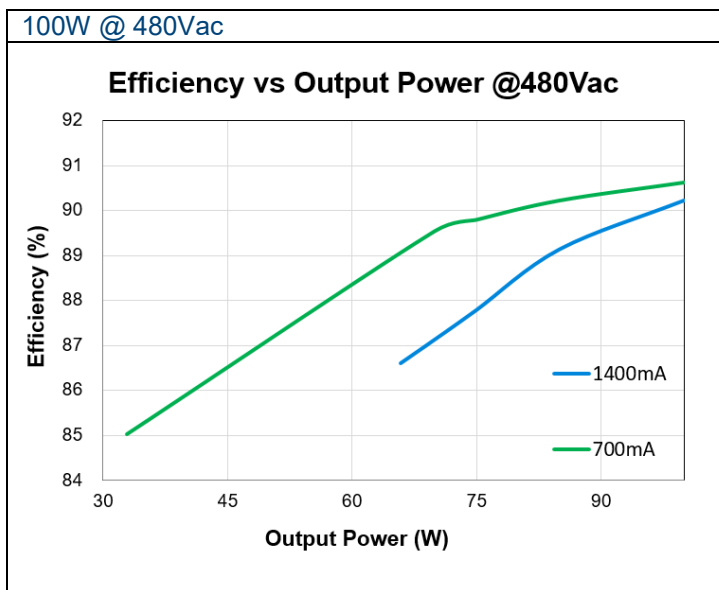
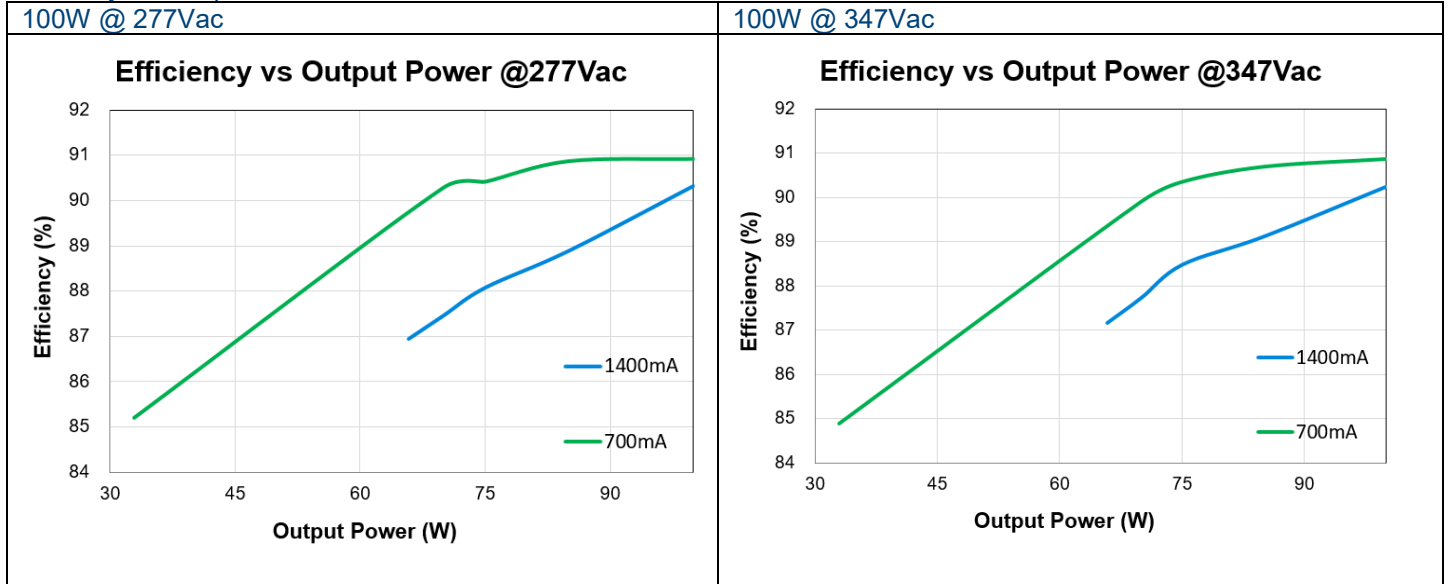
Total Harmonic Distortion VS Output Power



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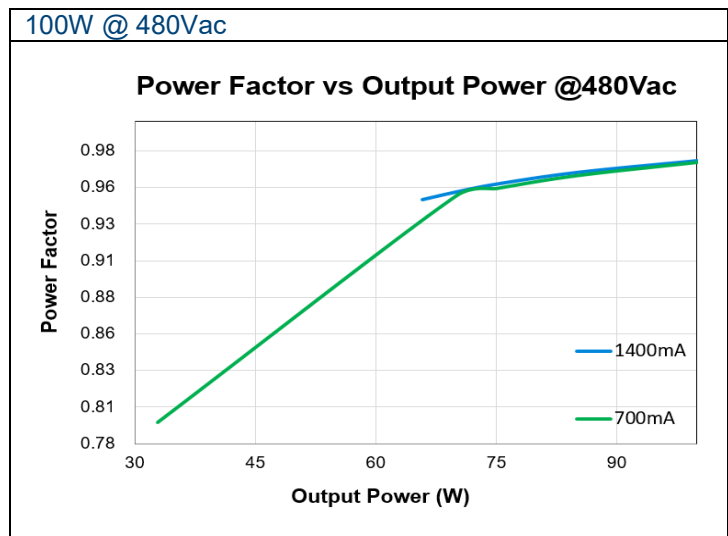
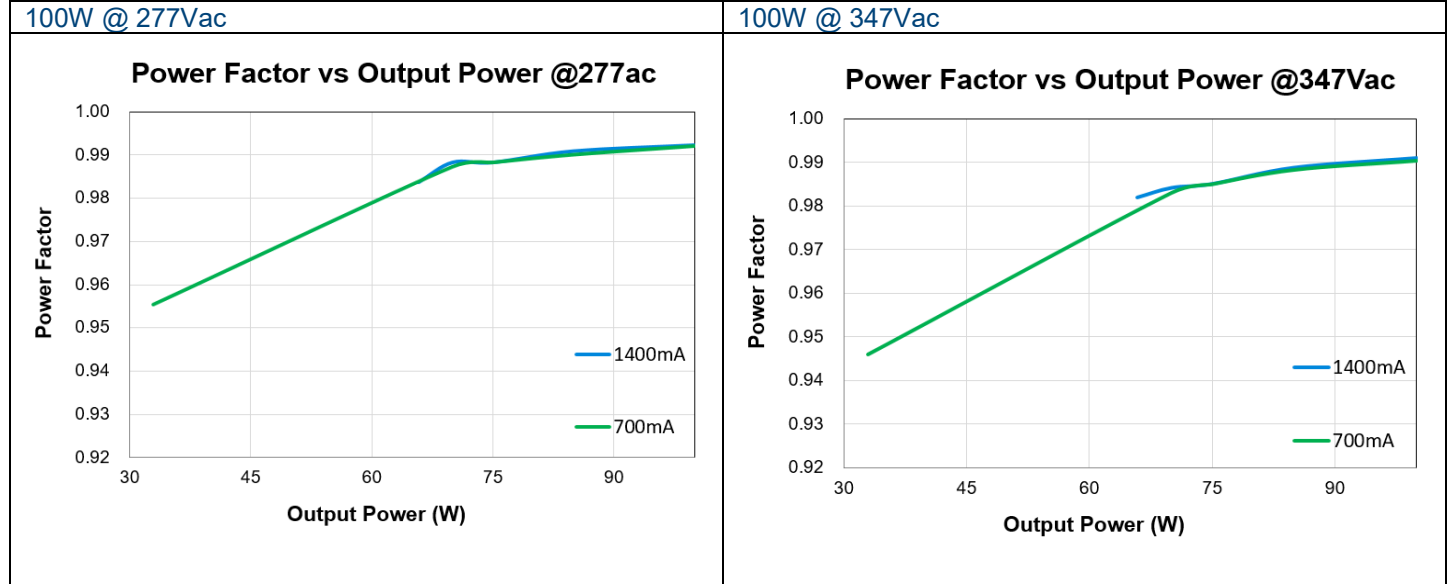
Efficiency VS Output Power



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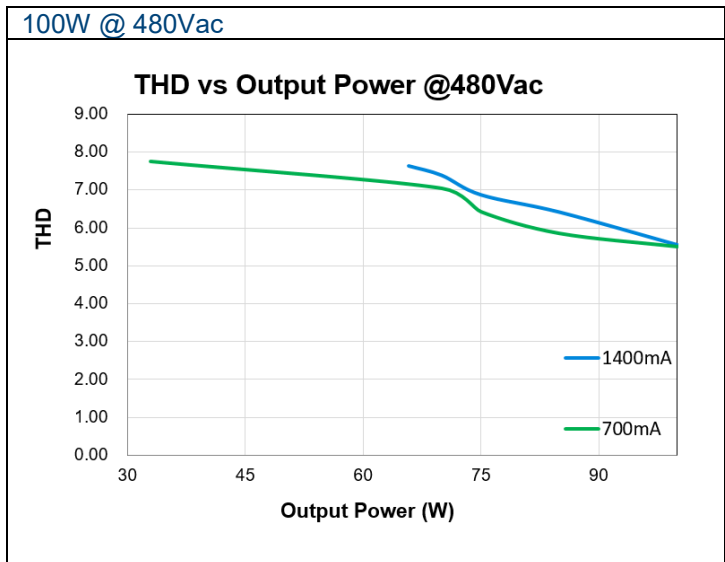
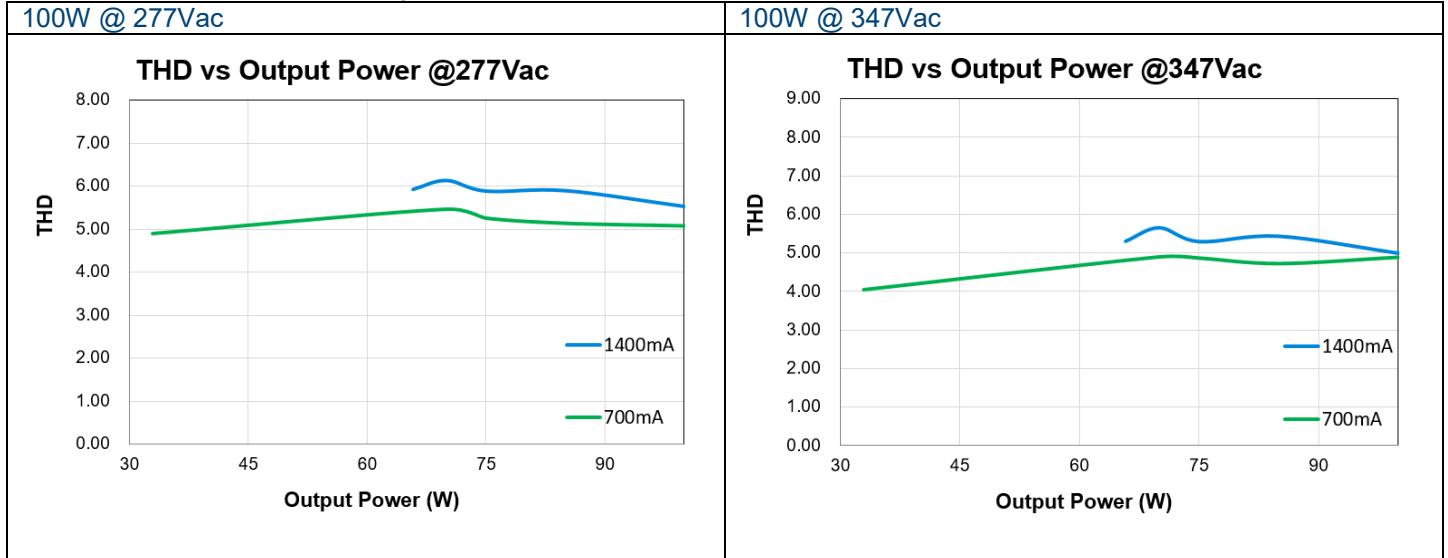
Power Factor VS Output Power



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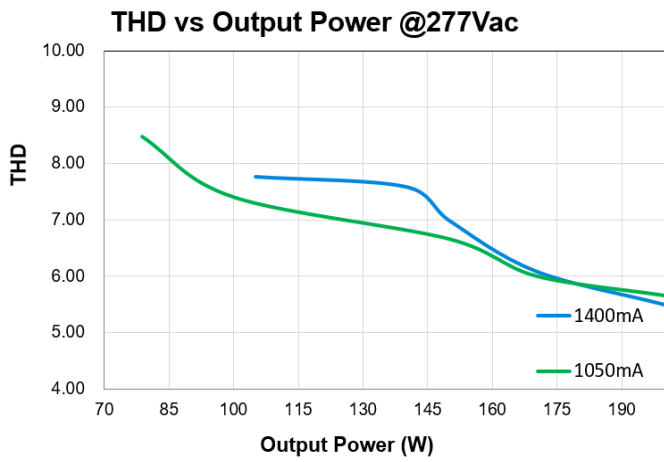
Total Harmonic Distortion VS Output Power



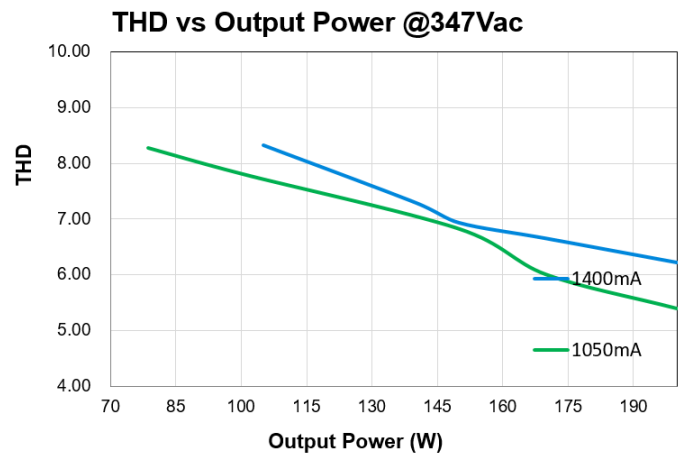
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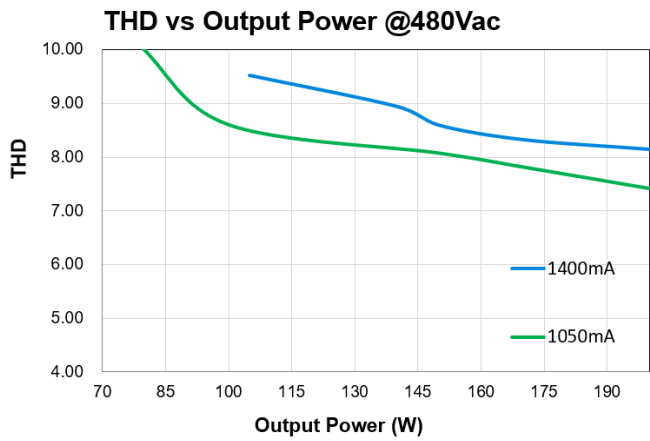
200W @ 277Vac



200W @ 347Vac



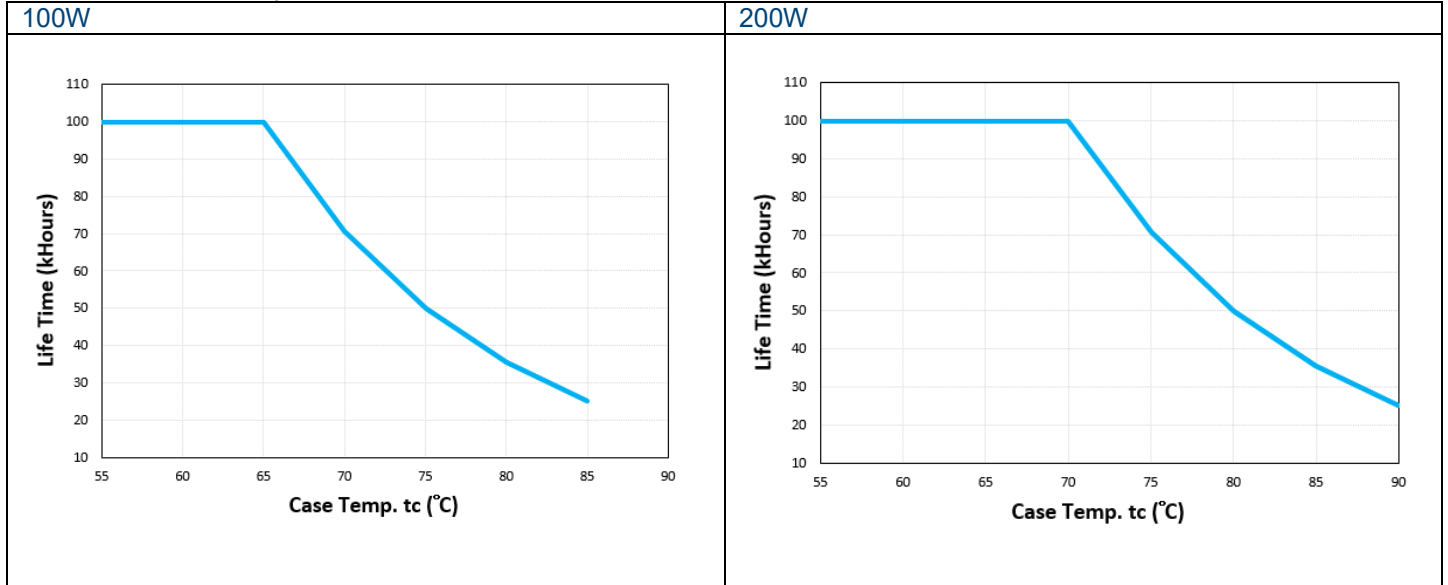
200W @ 480Vac



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Lifetime VS Case Temperature

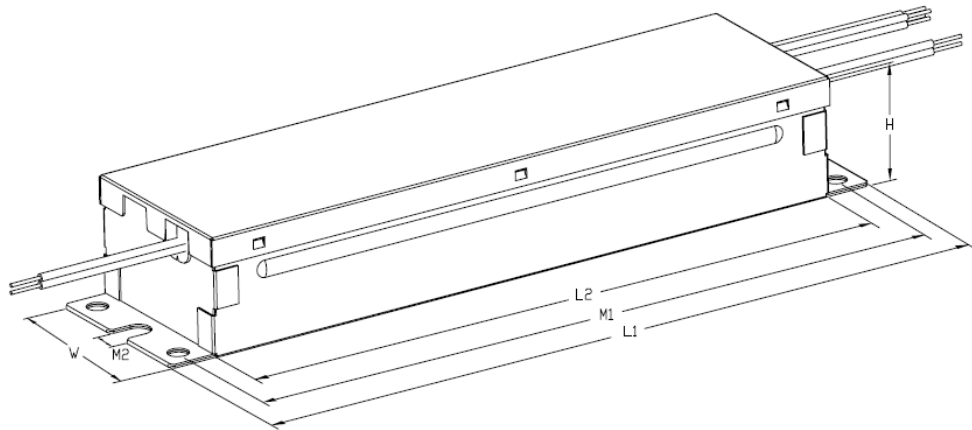


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Enclosure

	USC4-100140GB	USC4-200140GB
	inch [mm]	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]

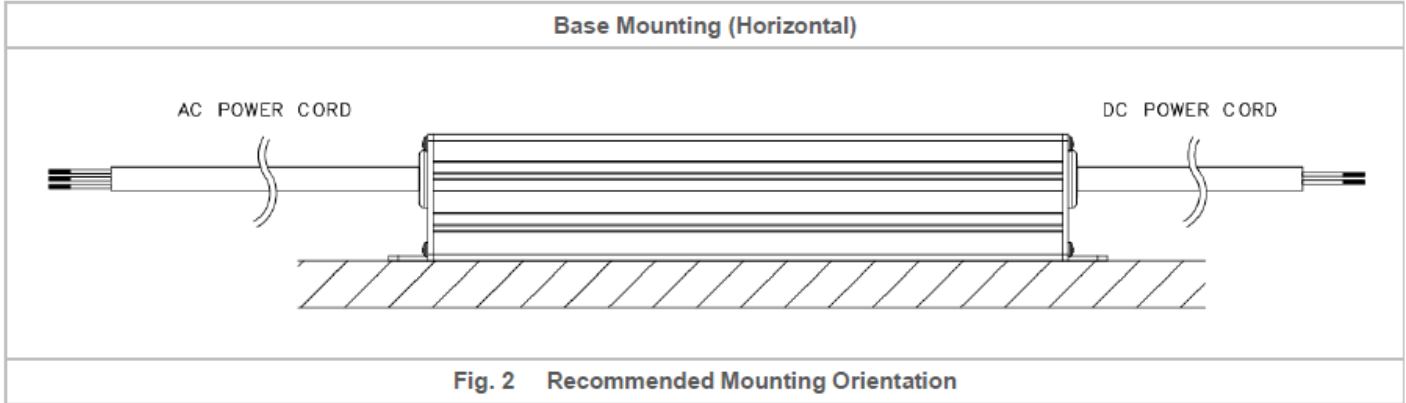


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Assembly & Installation

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



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.

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