

LED Driver

EUCI Panda 20W Series

EUCI Panda 20W



Highlights & Features

- Constant current design
- Input voltage from 220-240Vac
- Up to 89% efficiency
- Independent type
- Meets IEC/EN 61000-3-2, Class C
- Fixed output current
- IP20 assembly for indoor applications

Safety Standards



Dimensions (L x W x D):

115 x 45 x 29 mm (4.53 x 1.77 x 1.14 inch)

General Description

Delta EUCI-Panda 20W series of fixed output current LED drivers comes with affordable and reliable features. Compatible with COB and mid-power LEDs from any LED manufacturer. Independent type housing design for stand-alone installations. Various output current selection for different lumen application. Meet major Europe safety certifications and are compliant with EN55015 immunity/Emissions/Harmonic requirements. The products are designed and rigorously tested to work in various indoor LED lighting conditions.

Model Information

EUCI Panda 20W LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current
EUCI-020035FC	220-240Vac Typical 198-264Vac Range	42-57Vdc	350mA
EUCI-020035FA		31-42Vdc	350mA
EUCI-020040FA		31-42Vdc	400mA
EUCI-020050FA		31-42Vdc	500mA
EUCI-020060FA		21-28.6Vdc	600mA
EUCI-020070FA		21-28.6Vdc	700mA

Model Numbering

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Safety Approval CE ENEC	Constant Current	Indoor		Output Power 020 – 20W	Output Current 035 – 350mA 040 – 400mA 050 – 500mA 060 – 600mA 070 – 700mA	Function F – Fixed Output	Variable* A – Standard C – 42-57Vdc

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Specifications

Model Number	EUCI-020035FC	EUCI-020035FA	EUCI-020040FA	EUCI-020050FA	EUCI-020060FA	EUCI-020070FA
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Input Ratings / Characteristics

Normal Input Voltage	220-240Vac					
Input Voltage Range	198-264Vac					
Normal Input Frequency	50/60 Hz					
Input Frequency Range	47-63 Hz					
Normal Input Current	0.12A	0.09A	0.1A	0.12A	0.1A	0.12A
Efficiency ¹	230Vac	90.5%	89.5%	89.5%	89%	89.5%
No load Power Consumption	<0.6W at 230Vac					
Inrush Current (Apk / 50%-us) (Cold Start)	4A/50us @ 230Vac					
Max. no. of LED Driver for Circuit Breaker	B16	90 pcs				
Power Factor	>0.95 @ 230Vac/50Hz at >15W load					
Total Harmonic Distortion	< 20% @ 230Vac/50Hz at 100% load					
Leakage Current	< 0.7mA @ 230Vac					

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

Output Ratings / Characteristics

Nominal Output Current	350mA	350mA	400mA	500mA	600mA	700mA
Output Voltage Range	42-57Vdc	31-42Vdc	31-42Vdc	31-42Vdc	21-28.6Vdc	21-28.6Vdc
Max. No Load Output Voltage	75Vdc	60Vdc	60Vdc	60Vdc	50Vdc	50Vdc
Output Power Range	14.7-20W	10.9-14.7W	12.4-16.8W	15.5-21W	12.6-17.2W	14.7-20W
Output Current Tolerance	± 10%					
Line Regulation	± 5%					
Load Regulation	± 5%					
Output Current Ripple	Low frequency, 50% @max load, 60% @min load (ripple = (pk-avg)/avg)					
Rise Time	< 50ms @ 230Vac					
Start-up Time	< 200ms @230Vac					
Hold-up Time	0.5ms typ. @ 230Vac (100% load)					

Mechanical

Casing	Plastic, Color : White
Dimensions [mm]	115.0 x 45.0 x 29.0
(L x W x H) [inch]	4.53 x 1.77 x 1.14
Unit Weight [kg]	0.10
[lb]	0.20
Cooling System	Convection
Input connector :	Terminal, 2-pole (Line/Neutral), Conductor 0.75~1.5mm ² , Strip length 8.5...9.5mm
Output connector :	Terminal, 2-pole (LED+/LED-), Conductor 0.75~1.5mm ² , Strip length 8.5...9.5mm
Noise (30cm distance)	Sound Pressure Level (SPL) < 24dBA

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Environment

Ambient Temperature	Operating	-25 ~+50°C	-25 ~+55°C	-25 ~+55°C	-25 ~+50°C	-25 ~+55°C	-25 ~+55°C
	Storage	-25°C to +85°C					
Maximum Case Temperature		+75°C	+75°C	+75°C	+75°C	+75°C	+75°C
Lifetime Case Temperature		+75°C	+70°C	+70°C	+75°C	+70°C	+70°C
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)					
	Storage	5 to 95% RH (Non-Condensing)					

Protections

Over voltage	58-75Vdc	43-60Vdc	43-60Vdc	43-60Vdc	29-50Vdc	29-50Vdc
	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	N/A					
Ingress Protection classification	IP20					
Suitable for Luminaires Class	Class II. Insulation Class according to IEC60598					

Reliability Data

Lifetime	50,000 hours at lifetime case temperature
MTTF	500,000 hrs.@ta: +50°C (as per Telcordia SR-332 , total failure rate less than 10%)

Safety Standards / Directives

Electrical Safety	CB scheme to IEC 61347-1, IEC 61347-2-13 ENEC to EN 61347-1, EN 61347-2-13, EN 62384 SELV	
CE	In conformance with EMC Directive and Low Voltage Directive	
Material and Parts	RoHS Directive Compliant	
Galvanic Isolation	Input to Output	3.75kVac

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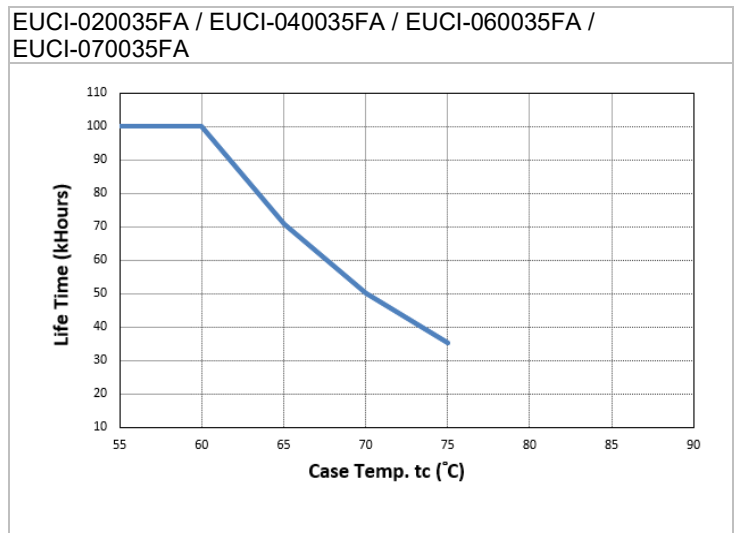
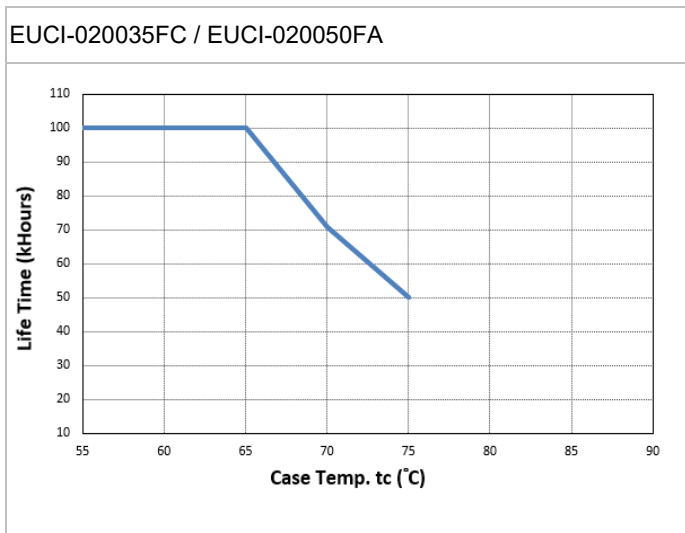
EMC

Emissions (CE & RE)	Compliance to EN 55015 Class B;	
Immunity	Compliance to EN 61547	
Electrostatic Discharge	IEC 61000-4-2	ESD, Criteria A ¹⁾ or B ²⁾ Air Discharge: 8kV Contact Discharge: 4kV
Radiated Disturbance	IEC 61000-4-3	RS, Criteria A ¹⁾ 80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% AM Modulation
Electrical Fast Transient / Burst	IEC 61000-4-4	EFT, Criteria A ¹⁾ or B ²⁾ 1kV
Surge	IEC 61000-4-5	Criteria A ¹⁾ or B ²⁾ Common Mode ³⁾ : 1kV; Differential Mode ⁴⁾ :0.5kV 1.2/50µs, 8/20µs Combination Wave with 2ohms (L-N), 12ohms (L-PE & N-PE) source impedance
Conducted Disturbance	IEC 61000-4-6	CS, Criteria A ¹⁾ 150kHz-80MHz, 3Vrms
Power Frequency Magnetic Fields	IEC 61000-4-8	PFMF, Criteria A ¹⁾ 3A/Meter
Voltage Dips	IEC 61000-4-11	Criteria A ¹⁾ or B ²⁾ ; 100% dip; 0.5 cycle; Self Recoverable 30% dip; 10 cycle; Self Recoverable
Harmonic Current Emission	IEC 61000-3-2	Class C (230Vac @ 100% load)
Voltage Fluctuation & Flicker	IEC 61000-3-3	Pst ≤ 1.0 ; dmax ≤ 4% ; Plt ≤ 0.65 ; dc ≤ 3.3% ; Tmax ≤ 500ms

- 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)

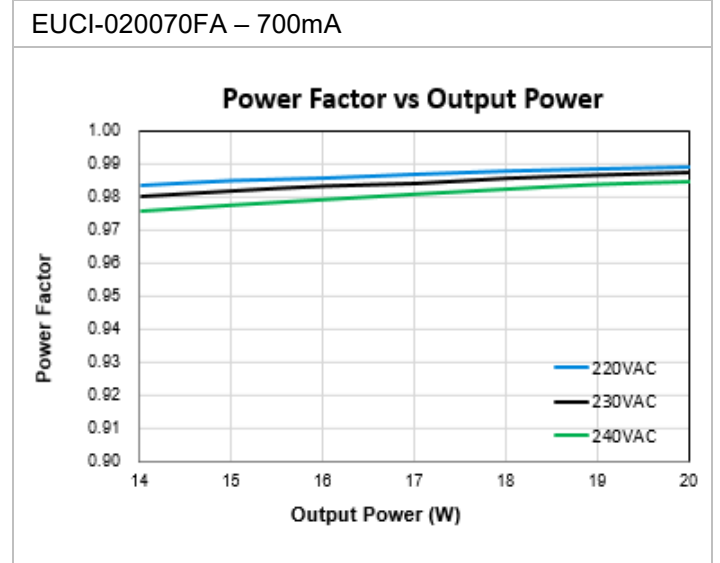
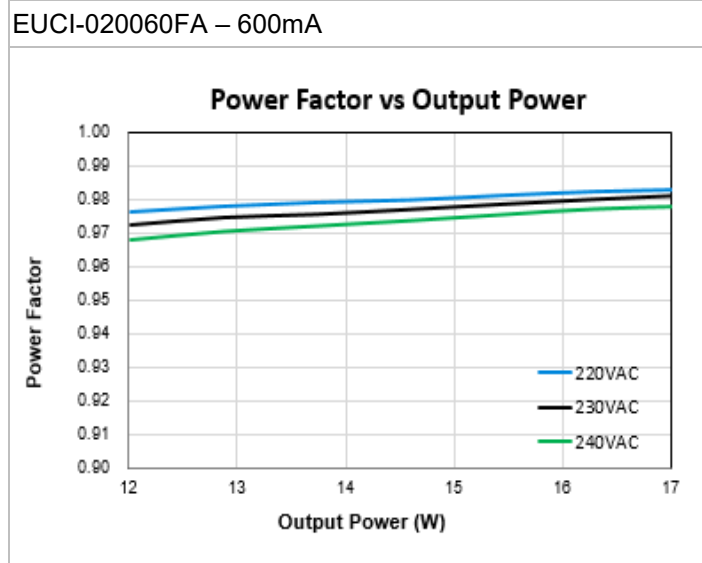
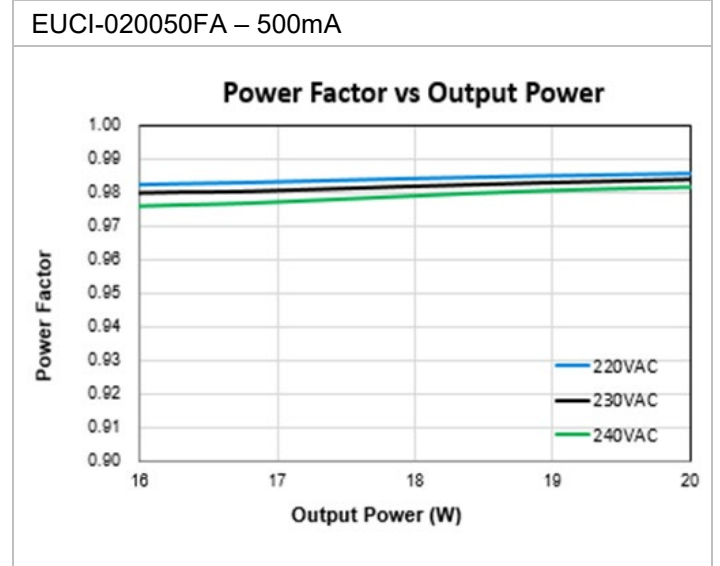
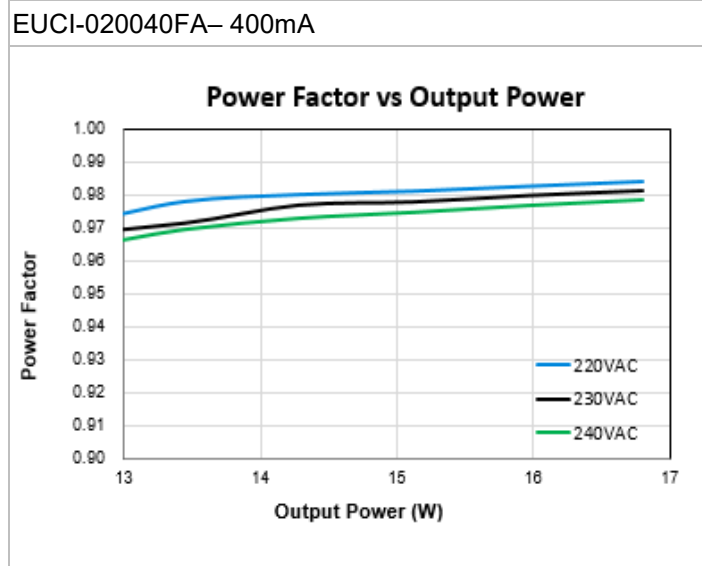
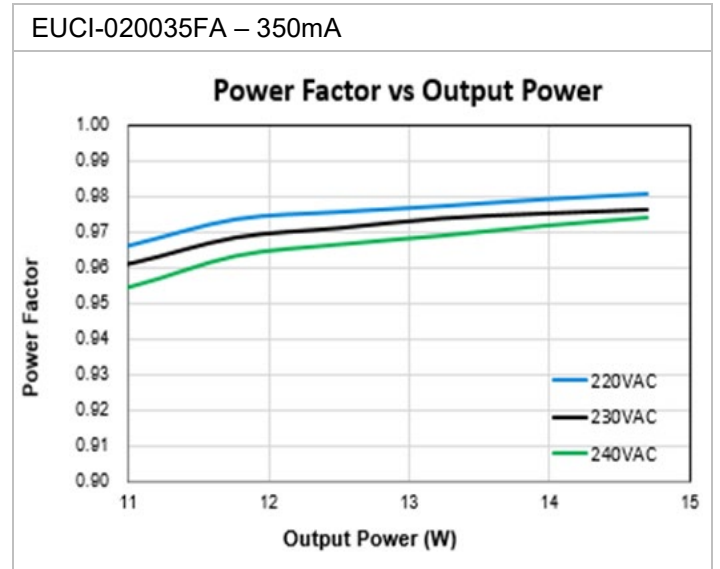
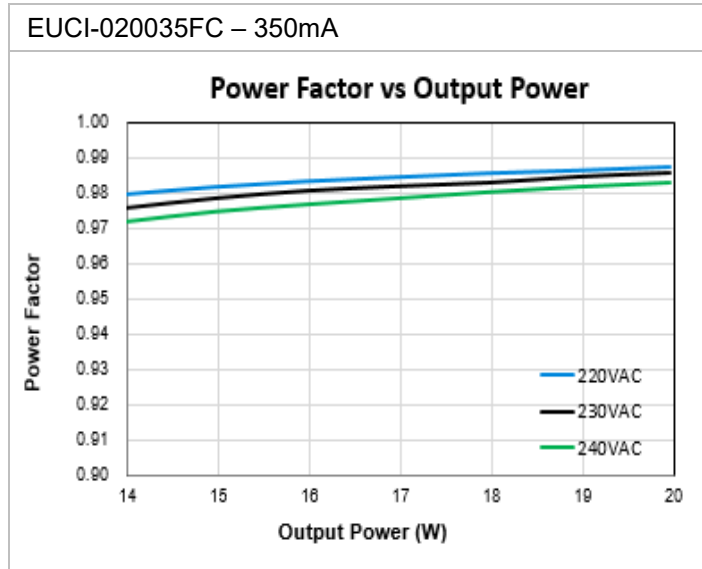
Lifetime VS Case Temperature



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Power Factor VS Output Power

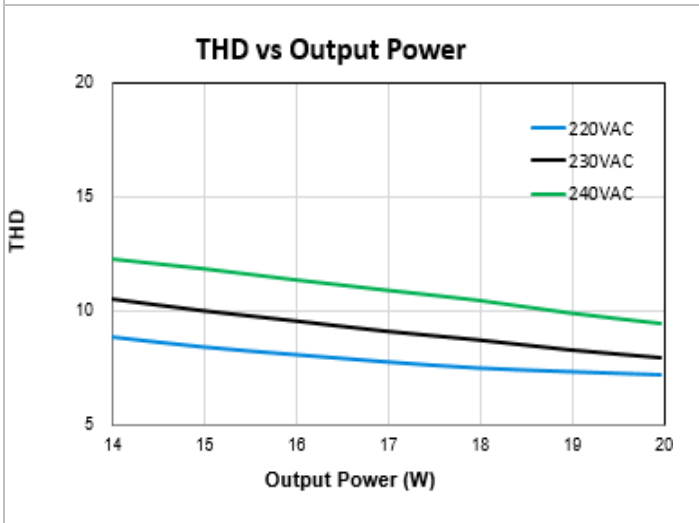


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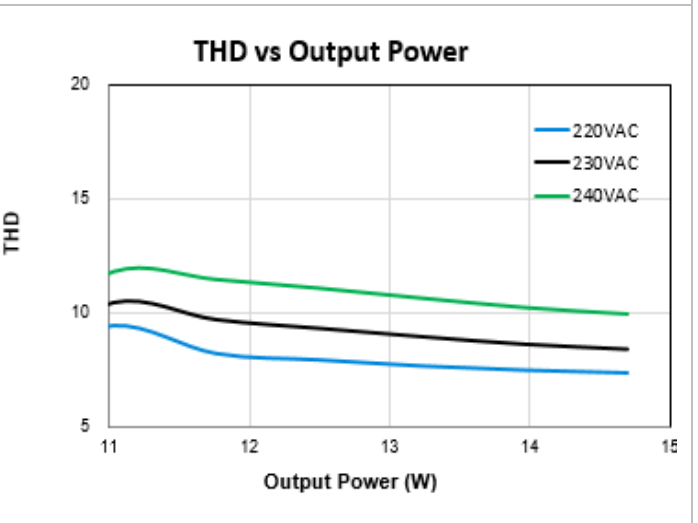
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Total Harmonic Distortion VS Output Power

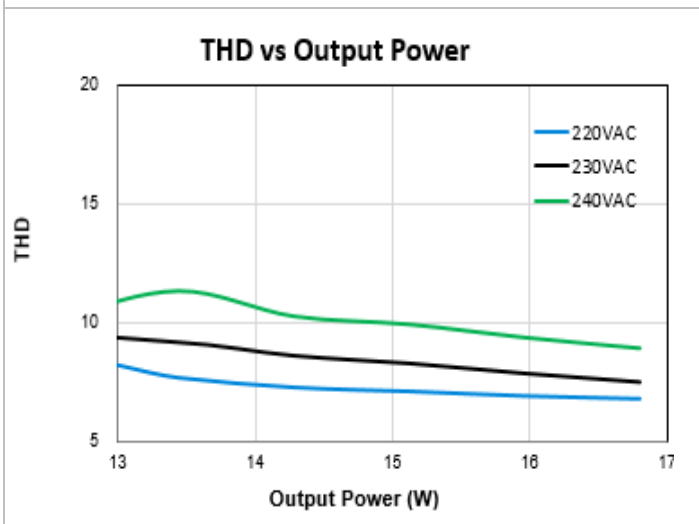
EUCI-020035FC – 350mA



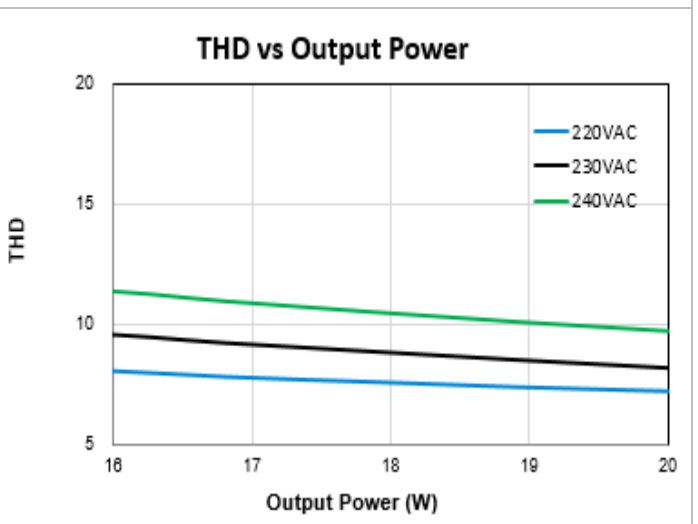
EUCI-020035FA – 350mA



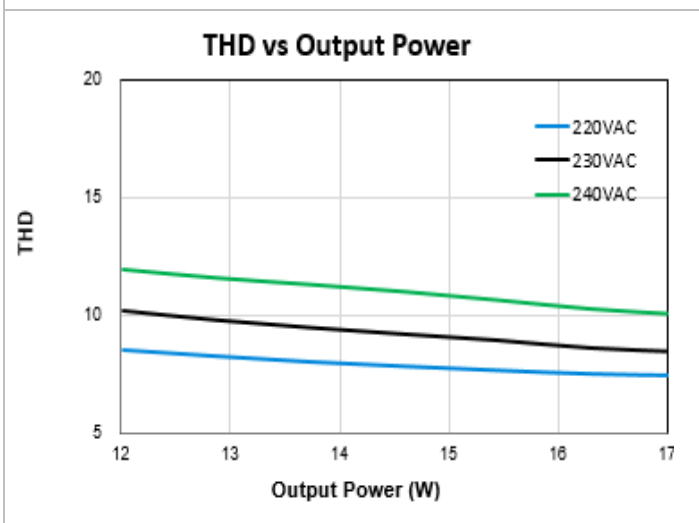
EUCI-020040FA – 400mA



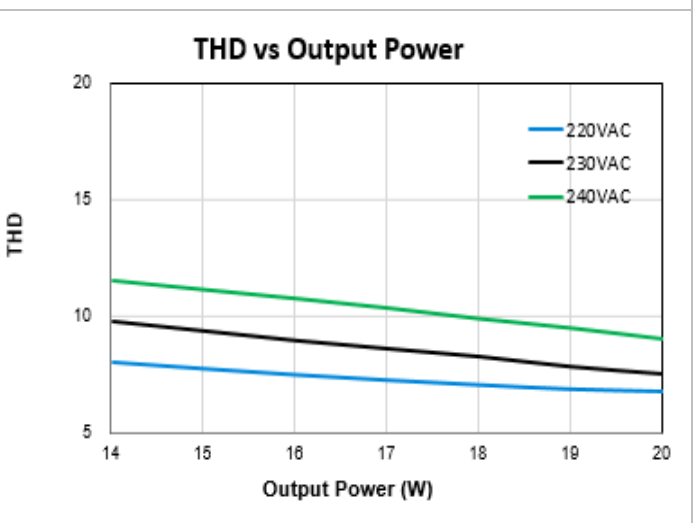
EUCI-020050FA – 500mA



EUCI-020060FA – 600mA



EUCI-020070FA – 700mA

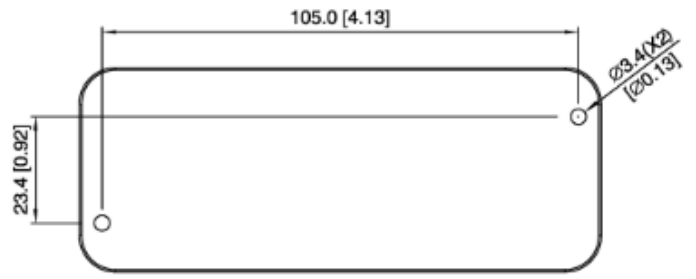
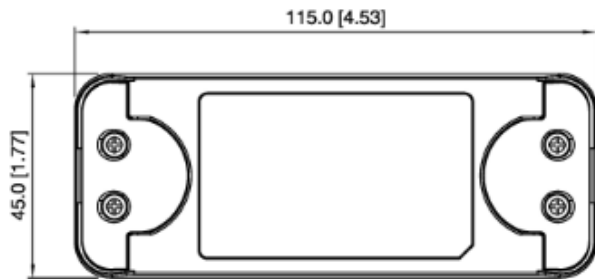


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Dimensions

EUCI-020035FC & EUCI-020035FA & EUCI-020040FA & EUCI-020050FA & EUCI-020060FA & EUCI-020070FA



(BOTTOM SIDE)

