

LED Driver

EUCI Panda 40W Series



EUCI Panda 40W

Highlights & Features

- Constant current design
- Input voltage from 220-240Vac
- Up to 90.5% 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 40W 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 40W LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current
EUCI-040050FB	220-240Vac Typical 198-264Vac Range	39-57Vdc	500mA
EUCI-040060FB		39-57Vdc	600mA
EUCI-040070FB		39-57Vdc	700mA

Model Numbering

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Safety Approval CE ENEC	Constant Current	Indoor		Output Power 040 – 40W	Output Current 050 – 500mA 060 – 600mA 070 – 700mA	Function F – Fixed Output	Variable* B – Standard

LED Driver

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Specifications

Model Number	EUCI-040050FB	EUCI-040060FB	EUCI-040070FB
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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	0.2A	0.22A	0.25A
Efficiency ¹	230Vac	89.5%	90%
No load Power Consumption	<0.6W at 230Vac		
Inrush Current (Apk / 50%-us) (Cold Start)	10A/250us @ 230Vac		
Max. no. of LED Driver for Circuit Breaker	B16	45 pcs	
Power Factor	> 0.95 @ 230Vac/50Hz at >25W load		
Total Harmonic Distortion	< 20% @ 230Vac/50Hz at >25W load		
Leakage Current	< 0.7mA @ 230Vac		

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

Output Ratings / Characteristics

Nominal Output Current	500mA	600mA	700mA
Output Voltage Range	39-57Vdc	39-57Vdc	39-57Vdc
Max. No Load Output Voltage	63Vdc	63Vdc	63Vdc
Output Power Range	19.5-28.5W	23.4-34.2W	27.3-40W
Output Current Tolerance	± 10%		
Line Regulation	± 5%		
Load Regulation	± 7%	± 5%	± 5%
Output Current Ripple	Low frequency, 30% @max load, 40% @28W load (ripple = (pk-avg)/avg)		
Rise Time	< 80ms @ 230Vac		
Start-up Time	< 300ms @230Vac		

Mechanical

Casing	Plastic, Color : White
Dimensions [mm] (L x W x H) [inch]	115.0 x 45.0 x 29.0 4.53 x 1.77 x 1.14
Unit Weight [kg] [lb]	0.18 0.40
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 (Line/Neutral), 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 ~+55°C	-25 ~+55°C	-25 ~+50°C
	Storage	-25°C to +85°C		
Maximum Case Temperature		+85°C	+85°C	+85°C
Lifetime Case Temperature		+80°C	+80°C	+85°C
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)		
	Storage	5 to 95% RH (Non-Condensing)		

Protections

Over voltage	58-63Vdc	58-63Vdc	58-63Vdc
	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		
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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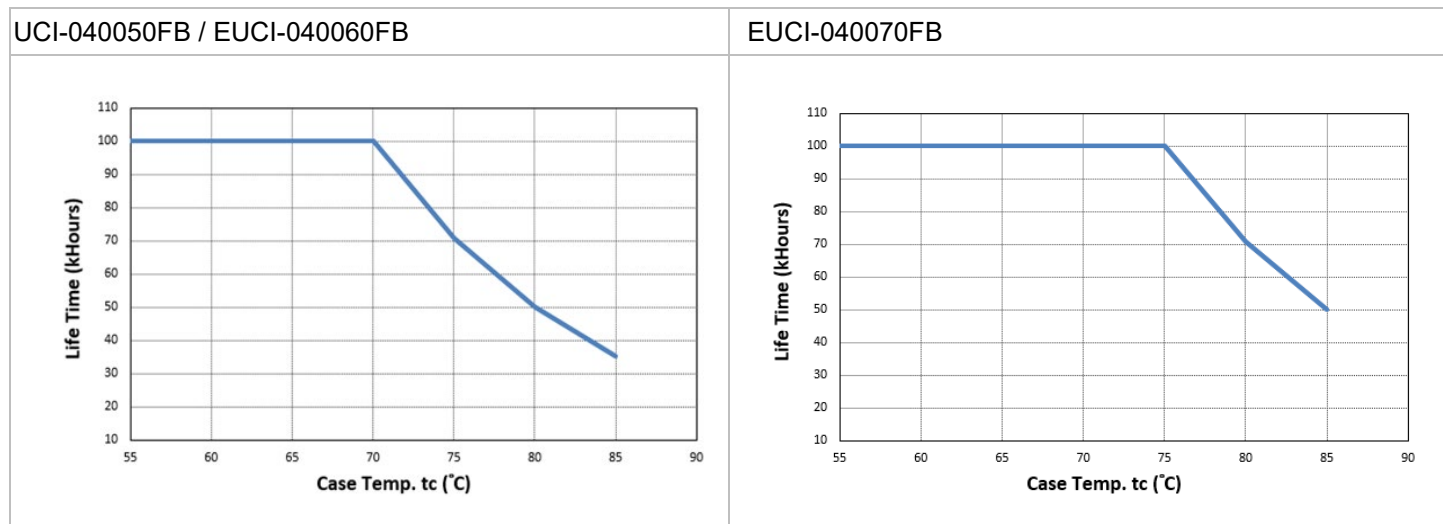
EMC

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 lin

Lifetime VS Case Temperature

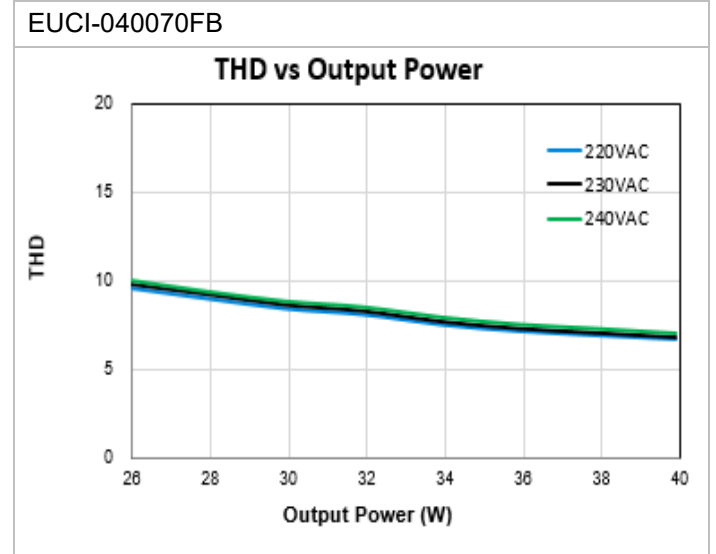
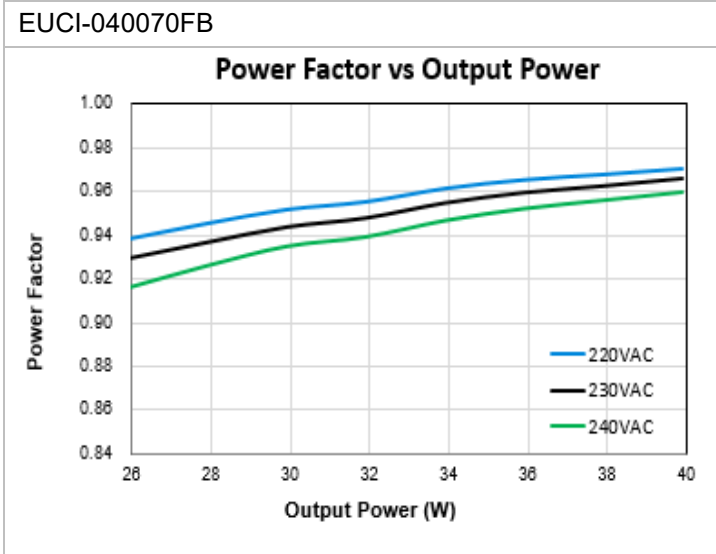
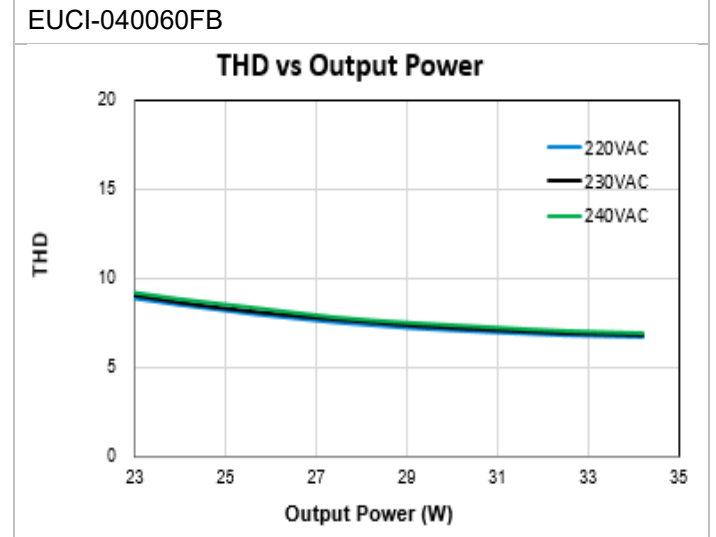
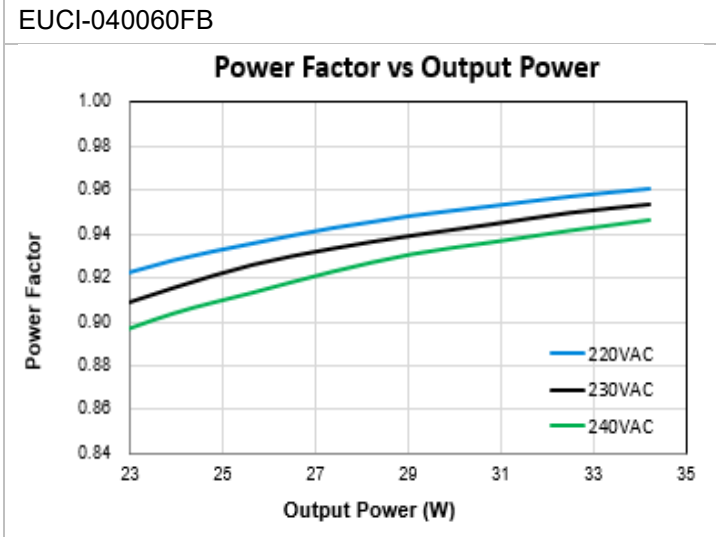
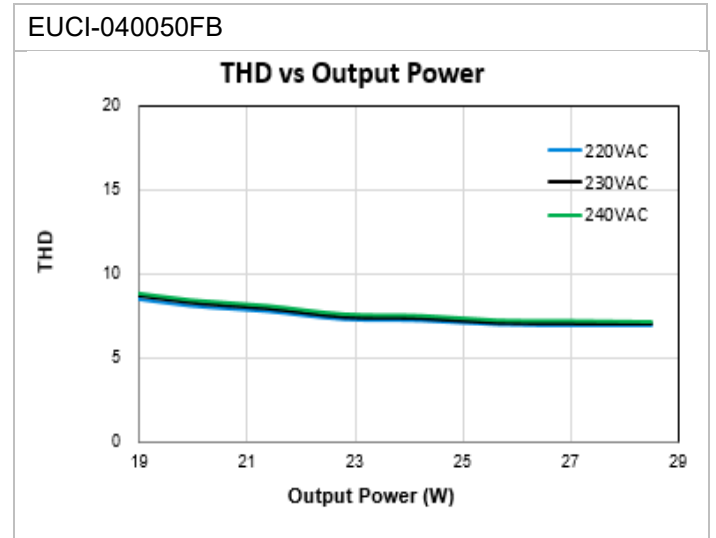
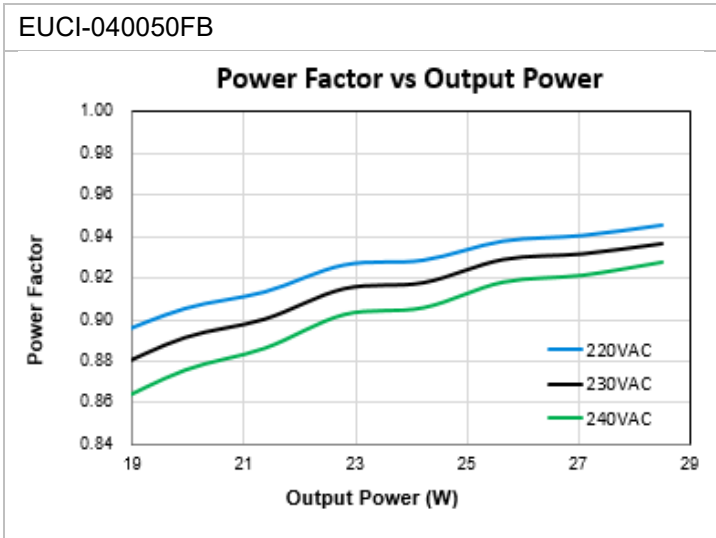


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Power Factor VS Output Power

Total Harmonic Distortion VS Output Power



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Dimensions

EUCI-40050FB & EUCI-040060FB & EUCI-040070FB

