40W High Efficiency Driver

1. Product description

Isolated LED driver suitable for class II LED luminaires.

Category: typical AC100-277V plastic case series.
Product properties: active PFC, high performance, high efficiency, low THD.
Application: commercial, residential and decorative lighting.
Warranty: 5 years (please refer to the warranty condition)

2. Technical data (1)

	Full model number	FSP040IUCS042P(80)	FSP040IUCS042P(90)	FSP040IUCS042P(95)	FSP040IUCS042P(1A)
Output	Output voltage	27-42 VDC	27-42 VDC	27-42 VDC	27-42 VDC
	Output current	800mA	900mA	950mA	1000mA
	Ripple voltage	＜5V			
	Current tolerance	±5%			
	Time to light	100Vac <1S，230Vac <0.5S，277Vac <0.5S			
	Temperature drift	±10%			
	Output Line regulation	±5%			
Input	Input Line regulation	±5%			
	Input voltage	100-240 Vac, 277 Vac（Max input voltage: 90-305Vac）			
	Frequency	47Hz-63Hz			
	Input current	0.7A Max			
	Power factor	≥0.97/100Vac	≥0.97/100Vac	≥0.97/100Vac	≥0.97/100Vac
		≥0.93/230Vac	≥0.94/230Vac	≥0.96/230Vac	≥0.96/230Vac
		≥0.90/277Vac	≥0.91/277Vac	≥0.95/277Vac	≥0.95/277Vac
	THD	≤18%			
	Efficiency	≥88%/100Vac	≥88%/100Vac	≥88%/100Vac	≥88%/100Vac
		≥88%/230Vac	≥88%/230Vac	≥89%/230Vac	≥89%/230Vac
		≥87%/277Vac	≥87%/277Vac	≥88%/277Vac	≥88%/277Vac
	In-rush current (peak /duration)	I<60A/350uS@230Vac			
	Typ. power input on stand-by	Pin<1W			
Protective features	No-load	Max. output voltage (no-load voltage) 55V			
	Short-circuit	Hiccup mode (auto-recovery)			
Environment condition	Working temperature	-30℃ ~ +50℃			
	Working humidity	20-90%RH (no condensation)			
	Storage temperature/humidity	-40℃ ~ +80℃ (6 months under the class I environment); 10-90%RH (no condensation)			
	Atmospheric pressure	86-106KPa			
Safety and norms	Certifications	UL, FCC, ENEC, TUV_GS, CE, CB, RCM, SAA			
	Hi-pot test	I/P-O/P: 3.75KVac, <5mA, 60S			
	Insulation resistance	I/P-O/P: 500VDC, >100MΩ			
	Surge level	Comply with IEC61000-4-5(L/N: 1KV)			
	EMI	Comply with EN55015，EN61000-3-2.			
	EMS	Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547.			
Others	Packing (weight)	Net weight: 150g±5%/pc; 66pcs/carton; 10.8KG±5%/carton. Carton size: 39 x 29 x 21 cm (L xWxH).			
	IP level	IP20			
	Warranty condition	5 years (Max. case temperature must not exceed 70℃).			

Test conditions	The parameters above including the power factor, THD, efficiency are all tested under the ambient temperature 25℃ and humidity 50%, AC input 230V and 90% output load.
Additional Remark	1. In the power supply circuit, it is recommended that the customer should install an over-under-voltage protection and surge protection device to ensure the safety of using electricity. 2. The PC cover, shell, end caps used together with the LED driver inside the LED lamp must meet the UL94V-0 fire rating level or above. 3. As a part of the LED lamp, the LED driver is not the only factor determining the EMC performance of the LED lamp. And the EMC performance is also related to the LED lamp's structure and the wire routing. Thus we strongly recommend the manufacturer of the finished LED lamp must re-confirm the EMC of the LED lamps.

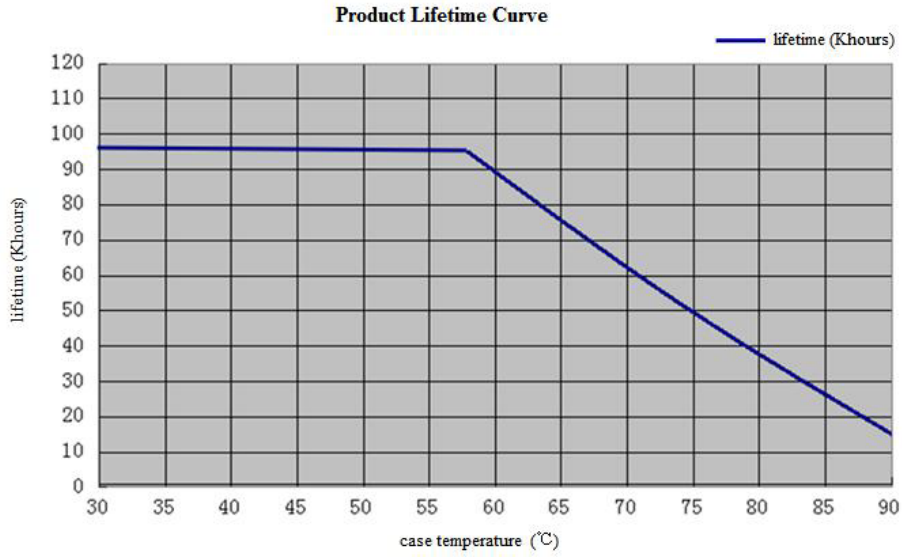
Technical data (2)

	Full model number	FSP040IUCS055P(70)	FSP040IUCS035P(A2)		
Output	Output voltage	35-55 VDC	27-35 VDC		
	Output current	700mA	1200mA		
	Ripple voltage	< 5.5V	< 4V		
	Current tolerance	±5%			
	Time to light	100Vac <1S，230Vac <0.5S，277Vac <0.5S			
	Temperature drift	±10%			
	Output Line regulation	±5%			
Input	Input Line regulation	±5%			
	Input voltage	100-240 Vac, 277 Vac（Max input voltage: 90-305Vac）			
	Frequency	47Hz-63Hz			
	Input current	0.7A Max			
	Power factor	≥0.97/100Vac	≥0.97/100Vac		
		≥0.93/230Vac	≥0.94/230Vac		
		≥0.90/277Vac	≥0.91/277Vac		
	THD	≤20%			
	Efficiency	≥86%/100Vac	≥86%/100Vac		
		≥88%/230Vac	≥88%/230Vac		
		≥87%/277Vac	≥87%/277Vac		
	In-rush current (peak /duration)	I<60A/350uS@230Vac			
	Typ. power input on stand-by	Pin<1W			
Protective features	No-load	Max. output voltage (no-load voltage) 70V	Max. output voltage (no-load voltage) 50V		
	Short-circuit	Hiccup mode (auto-recovery)			
Environment condition	Working temperature	-30℃ ~ +50℃			
	Working humidity	20-90%RH (no condensation)			
	Storage temperature/humidity	-40℃ ~ +80℃ (6 months under the class I environment); 10-90%RH (no condensation)			
	Atmospheric pressure	86-106KPa			
Safety and norms	Certifications	CE compliant, do not apply the certification			
	Hi-pot test	I/P-O/P: 3.75KVac, <5mA, 60S			
	Insulation resistance	I/P-O/P: 500VDC, >100MΩ			
	Surge level	Comply with IEC61000-4-5(L/N: 1KV)			
	EMI	Comply with EN55015，EN61000-3-2.			
	EMS	Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547.			
Others	Packing (weight)	Net weight: 150g±5%/pc; 66pcs/carton; 10.8KG±5%/carton. Carton size: 39 x 29 x 21 cm (L xWxH).			
	IP level	IP20			
	Warranty condition	5 years (Max. case temperature must not exceed 70℃).			
Test conditions	The parameters above including the power factor, THD, efficiency are all tested under the ambient temperature 25℃ and humidity 50%, AC input 230V and 90% output load.				
Additional	1. In the power supply circuit, it is recommended that the customer should install an over-under-voltage protection and surge				

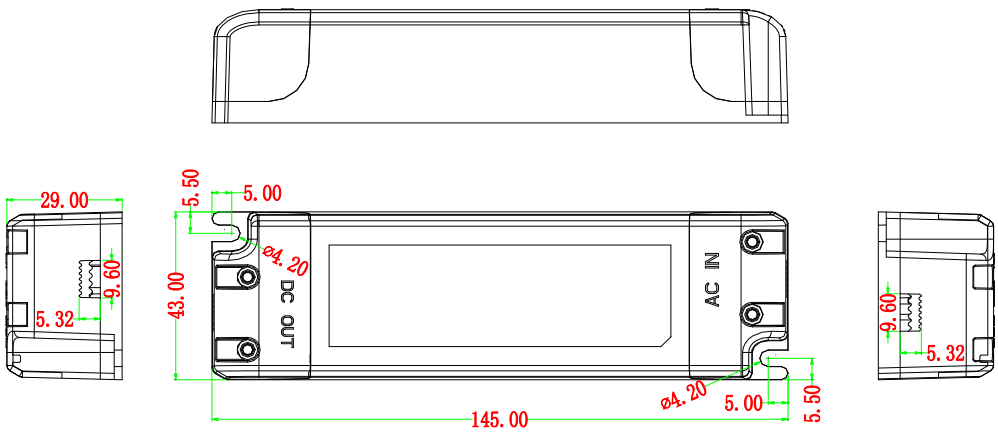
Remark	protection device to ensure the safety of using electricity. 2. The PC cover, shell, end caps used together with the LED driver inside the LED lamp must meet the UL94V-0 fire rating level or above. 3. As a part of the LED lamp, the LED driver is not the only factor determining the EMC performance of the LED lamp. And the EMC performance is also related to the LED lamp's structure and the wire routing. Thus we strongly recommend the manufacturer of the finished LED lamp must re-confirm the EMC of the LED lamps.

3. Product Referenced Lifetime Curve

The curve below illustrates the driver's lifetime data when the LED driver's Max. case temperature reaches 40℃, 50℃, 60℃, 70℃, 80℃, 90℃.



4. Dimensional Drawing (unit: mm)



5. Wire Connection Diagram: