

Light is OSRAM



IT DIM 12/220-240/300 CS I

Constant Current LED Power Supply

70/120/150/180/200/230/250/300mA

ICUTRONIC® LED Power Supply fits in light fixtures for office, shop lighting or other indoor applications that require high quality of light

Benefits:

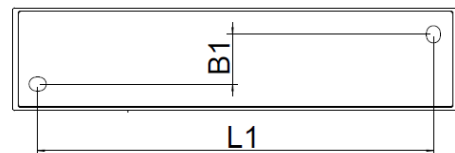
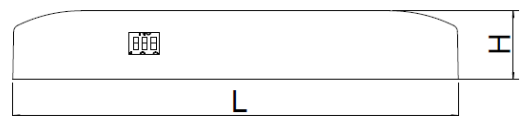
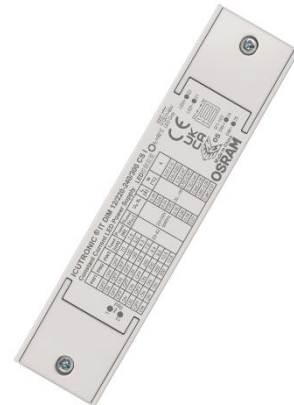
- High compatibility with COBs and discrete LEDs;
- High quality of light with ripple current $\leq 3\%$
- Safe and reliable
- Safety ensured by OSRAM (SELV)

Applications

- Downlights, Spotlights, Panel lights
- Other Indoor LED luminaries
- For class II luminaires, independent installations

Approval marks

(Under preparation if not on the label)



L	130 mm
L1	115.5 mm
B	30 mm
B1	14.5 mm
H	20 mm

Product Features

- Output currents: 70/120/150/180/200/230/250/300mA
- Output voltage: 23V_{DC} – 42V_{DC}
- Output power: 2.3W – 12.6W
- Input voltage : 220 – 240 V_{AC}
- Suitable for class II luminaires
- 50'000 h lifetime at T_{max} 75 °C
- 0-10V dimming, dim-to-off
- Typ. Efficiency: 83%
- SELV
- Ambient temp range, ta: -20°C to +50°

Electrical Specifications

	Item	Value	Unit	Remarks
Input	Nominal Voltage	220 – 240	Vac	
	Nominal frequency	50/60	Hz	
	AC voltage range	198 – 264	Vac	Permitted voltage range
	DC voltage range	NA	V	
	Maximum voltage	300	V	2hrs
	Nominal current	70	mA	230V
	Total Harmonic Distortion (THD)	<10%	%	Full load, 230 V, 50 Hz / see graphs
	Power factor	>0.9		Full load, 230 V, 50 Hz / see graphs
	Efficiency	83	%	Full load, 230 V, 50 Hz, typical / see graphs
	No-load power	n/a	W	Load switching on output side is not permitted
	Power loss	2.3	W	@230V, Input power max. 14.9W
	Protection class	II		
	Inrush current	19.6	A	t _{width} = 1.9 μs typical (measured at 50% I _{peak})
	Max. units per circuit breaker	B10: 100 B16: 160 C10: 100 C16: 160		
	Leakage current	< 0.7	mA	Output floating
Output	Nominal voltage range	23 – 42	V _{DC}	
	Maximum voltage	60	V _{DC}	Open circuit
	Nominal current range	70/120/150/180/ 200/230/250/300	mA	Current selection by dip switch
	Current accuracy	± 5 / ± 7.5	%	70/120/150/180mA ±7.5 % 200/230/250/300mA ±5%
	Current ripple	< =3	%	Ripple / average @ 100 Hz
	Pst LM	≤ 1		
	SVM	≤ 0.4		
	Nominal power range	2.3 -12.6	W	Partial Load.
	Maximum power	12.6	W	T _a ≤ 50°C
	Galvanic isolation	SELV		3, 75 kVrms. Output to mains - Touch current < 0.7 mA
Dim	Dimming control	0-10V		0-10V
	Dimming range	1-100	%	
	Dimming to off	Yes. Standby power <0.5W		Dim up:0.8V ON, Dim down:0.65V OFF; ± 0.1V
	Dimming technique	NA		
	Frequency	NA	Hz	
	Isolation input to dimming	Double		
	Isolation output to dimming	Basic		
Environment	Ambient temperature range t _a	-20 ...+50	°C	
	Max. case temperature t _c max	75	°C	Measured on t _c point indicated on the product label.
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-40 ...+85	°C	Cool down before operating
	Relative humidity	5 ... 95	%	Not condensing
	Surge transient protection	1 2	kV	L/N LN/PE acc. IEC 61547 Clause 5.7
	Environmental rating	Indoor		
	IP rating	IP 20		
Mains switching cycles	> 100'000			

Expected lifetime	50'000	hrs	@tcmax = 75°C, max. 10% failure rate
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Protection

Overload

Automatic, reversible

No load

Automatic, reversible

Short-circuit

Automatic, reversible

Input overvoltage

Maximum allowed input voltage 300V AC/ 2hr

Output overvoltage

Yes, limitation of Output voltage <= 60V

Output under voltage

NA

Table 1 - Rated output power and current sets									
I_{out} [A]	70	120	150	180	200	230	250	300	
U min [V]	23	23	23	23	23	23	23	23	23
U max [V]	42	42	42	42	42	42	42	42	42
P min [W]	1.61	2.76	3.45	4.14	4.6	5.29	5.75	6.9	
P max [W]	2.94	5.04	6.3	7.56	8.4	9.66	10.5	12.6	
T_a [°C]	50	50	50	50	50	50	50	50	50
T_c [°C]	75	75	75	75	75	75	75	75	75
Line Current, nominal @230V [mA]	30	40	40	50	50	60	60	70	
Max Power Loss @230V [W]	1.0	1.24	1.43	1.31	1.7	1.88	2.0	2.3	
Input Power @230V [W]	3.94	6.28	7.73	8.87	10.10	11.5	12.50	14.9	

PIN1	PIN2	PIN3	I_{out}(mA)
OFF	OFF	OFF	70
ON	OFF	OFF	120
OFF	ON	OFF	150
OFF	OFF	ON	180
ON	ON	OFF	200
ON	OFF	ON	230
OFF	ON	ON	250
ON	ON	ON	300

Current selection by DIP-switch

Wiring Diagram

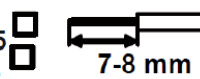
Terminal: Push in terminals

Max. cable length 2m

Weight: 72g

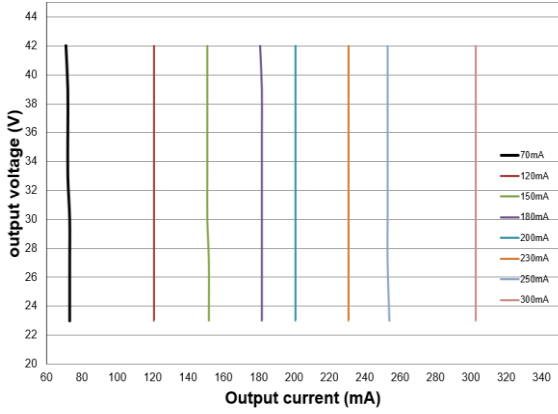
wire preparation:

push in
s:0.75--1.5
f:0.75--1.5

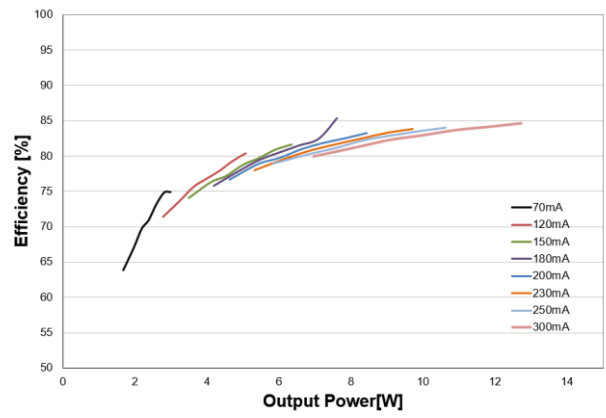


Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs

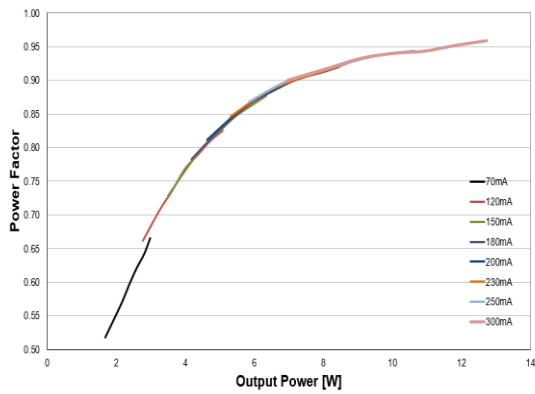
Typical Operating window



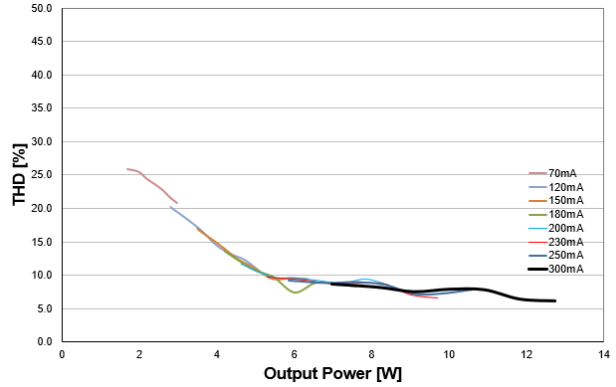
Typical Efficiency Vs load



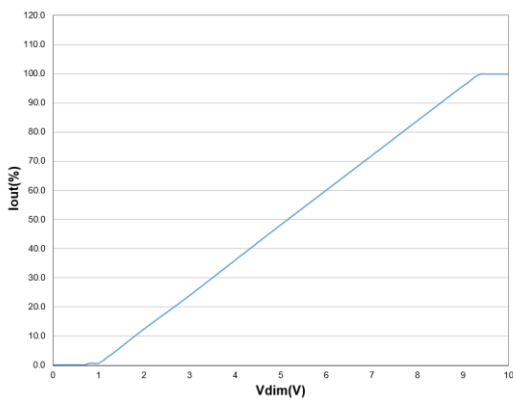
Typical Power factor Vs load



Typical THD Vs load



0-10V Dimming Curve:



Standards

Safety: IEC 61347-1, IEC 61347-2-13

Performance: IEC 62384

Harmonic content: IEC 61000-3-2

Immunity: IEC 61547

IEC 61000-3-3

EAN10	Product name	Units/ box
4062172321334	IT DIM 12/220-240/300 CS I	20

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