

Light is OSRAM



IT DIM 20/220-240/500 CS I

Constant Current LED Power Supply

150/200/250/300/350/400/450/500mA

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

Benefits:

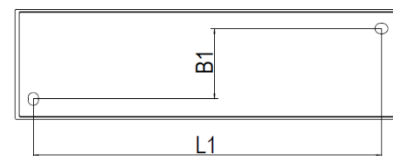
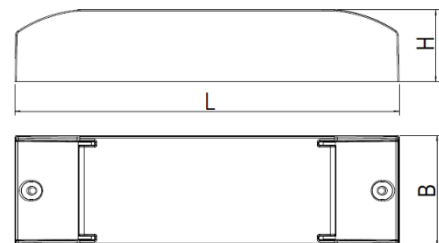
- High compatibility with COBs and discrete LEDs;
- High quality of light with ripple current $\leq 3\%$
- Safe and reliable
- Safety ensured by OSRAM (SELV)

Applications

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

Approval marks

(Under preparation if not on the label)



L	150 mm
L1	136 mm
B	43 mm
B1	27.5 mm
H	28 mm

Product Features

- Output currents: 150/200/250/300/350/400/450/500mA
- Output voltage: 23V_{DC} – 42V_{DC}
- Output power: 3.5W – 21W
- Input voltage : 220 – 240 V_{AC}
- Suitable for class II luminaires
- 50'000 h lifetime at tc max 75°C
- 0-10V dimming, dim-to-off
- Typ. Efficiency: 84%
- 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	140	mA	230V
	Total Harmonic Distortion (THD)	<15%	%	Full load, 230 V, 50 Hz / see graphs
	Power factor	>0.9		Full load, 230 V, 50 Hz / see graphs
	Efficiency	84	%	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	3.8	W	@230V, Input power max. 24.8W
	Protection class	II		
	Inrush current	26.4	A	twidth = 1.4 μ s typical (measured at 50% Ipeak)
	Max. units per circuit breaker	B10: 50 B16:80 C10:50 C16:80		
	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	150/200/250/300/350/400/450/500	mA	Current selection by dip switch
	Current accuracy	\pm 5	%	
	Current ripple	< 5	%	Ripple / average @ 100 Hz
	Pst LM	\leq 1		
	SVM	\leq 0.4		
	Nominal power range	3.5-21	W	Partial Load.
	Maximum power	21	W	Ta \leq 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; \pm 0.1V
	Dimming technique	NA		
	Frequency	NA	Hz	
	Isolation input to dimming	Double		
	Isolation output to dimming	Basic		
Environment	Ambient temperature range ta	-20 ...+50	°C	
	Max. case temperature tc max	75	°C	Measured on tc 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]	150	200	250	300	350	400	450	500	
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]	3.45	4.6	5.75	6.9	8.05	9.2	10.35	11.5	
P max [W]	6.3	8.4	10.5	12.6	14.7	16.8	18.9	21	
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]	50	60	80	90	100	110	120	140	
Max Power Loss @230V [W]	1.8	2.1	2.3	2.6	2.9	3.1	3.4	3.8	
Input Power @230V [W]	8.1	10.5	12.8	15.2	17.6	19.9	22.3	24.8	

PIN1	PIN2	PIN3	I_{out}(mA)
OFF	OFF	OFF	150
OFF	OFF	ON	200
OFF	ON	OFF	250
OFF	ON	ON	300
ON	OFF	OFF	350
ON	OFF	ON	400
ON	ON	OFF	450
ON	ON	ON	500

Current selection by DIP-switch

Wiring Diagram

Terminal: Push in terminals

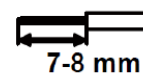
Max. cable length 2m

Weight: 115g

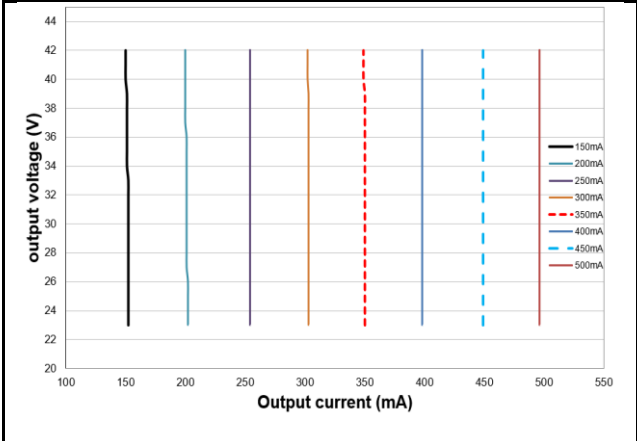
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs

wire preparation:

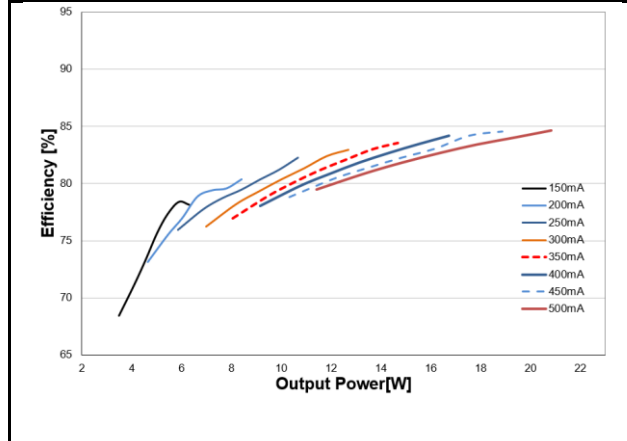
push in
s:0.75--1.5
f:0.75--1.5



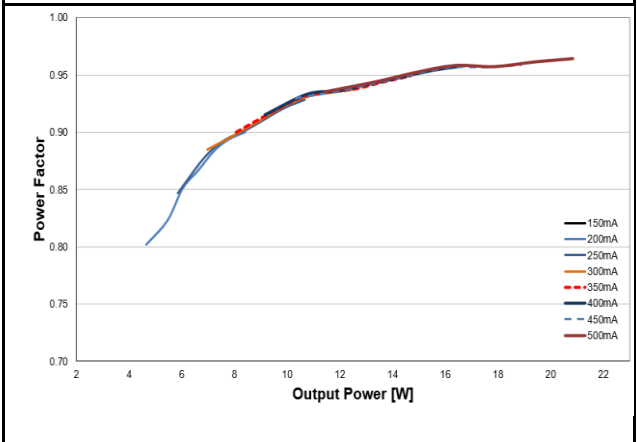
Typical Operating window



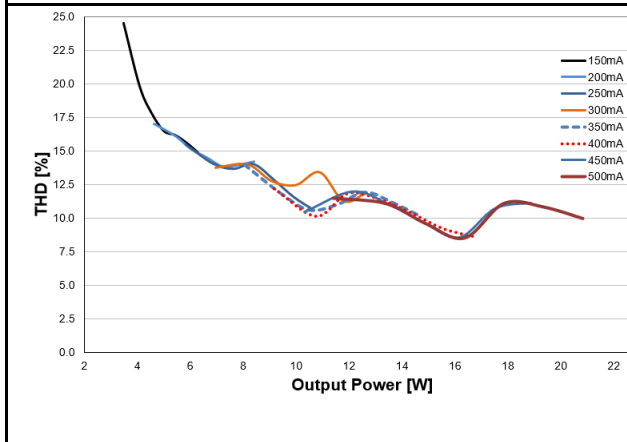
Typical Efficiency Vs load



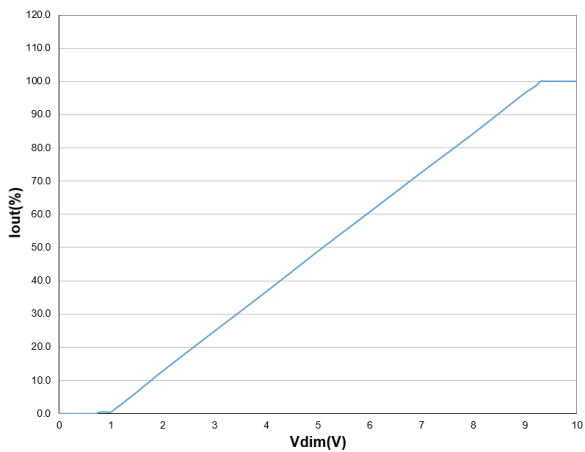
Typical Power factor Vs load



Typical THD Vs load



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
4062172321402	IT DIM 20/220-240/500 CS I	20

[OSRAM GmbH](#)

Head office:

Marcel-Breuer-Strasse 6
80807 Munich, Germany
Phone +49 89 6213-0
www.osram.com

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