

Light is OSRAM

OSRAM

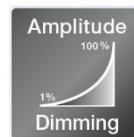
OTi DALI 50/220-240/1A4 LT2 FAN

SELV Constant current LED driver
Wide operating area up to 1.4 A – dimmable

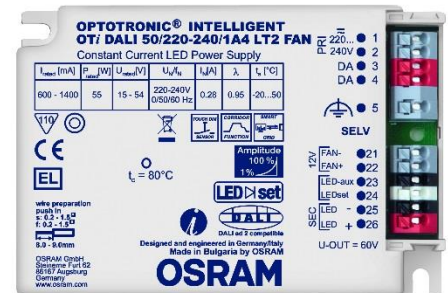
The reliable choice for the energy saving lighting:
DALI dimmable, constant lumen output. Digitally
programmable. Automatic current set through the
LEDSet interface.

Benefits

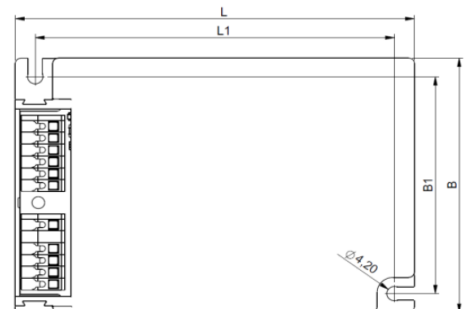
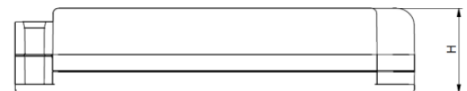
Wide operating range: 0.6 – 1.4 A
Mobile camera friendly (Amplitude-dimming)
DALI ed 2 compatible
Soft switch off- function
Low standby < 150 mW
Suitable for emergency lighting: EL-sign
Auxiliary 12V output for driving active cooling



Approvals



L	110mm
B	75mm
H	25.7mm



In preparation, if not already printed on product label

Housing material: plastic, white.

Product Features

- Output current range 0.6 – 1.4 A
- Amplitude dimming down to 1%
- Fully digitally programmable
- SELV U_{out} : 15 – 54 V
- Output power up to 55 W
- Suitable for emergency lighting
- Mains voltage 220 – 240 V
- Overload, Overtemp. protection
- 12V Aux output
- Load hot plug protection
- 100'000 h lifetime at $t_c = 70^\circ\text{C}$
- $t_c \text{ max} = 80^\circ\text{C}$
- Wide t_a range -20 – +50 °C
- 5 years guarantee

Electrical Specifications

	Item	Value	Unit	Remarks
INPUT	Nominal Voltage	220 - 240	V	
	Nominal frequency	0 / 50 / 60	Hz	Incl. DC or pulse DC
	AC voltage range	198 – 264	V	
	DC voltage range	176 - 276	V	DC or pulse DC
	Maximum voltage	320	V _{AC}	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	0.28	A	
	Total Harmonic Distortion (THD)	<10	%	Full load, 220 – 240 V, 50 Hz
	Power factor	> 0.95		Full load, 220 – 240 V, 50 Hz
	Efficiency	Up to 0.91	%	Full load, 220 – 240 V, 50 Hz
	Power losses	7.5	W	Maximum, full load, max. current
	No-load power	n/a	W	Load switching on output side is safe but not permitted
	Stand-by power	<150	mW	
	Protection class	II		FE can be connected to terminal, Suitable for class I and II luminaires
	Inrush current	30	A pk	Max, th = 200 µs
	Max. units per circuit breaker	B16: 20; B10: 12		I max = 30 A Th = 200 µs
OUTPUT	PE current	< 0.5	mA	Through PE, output floating
	Nominal voltage range	15-54	V	
	Maximum voltage	60	V _{DC}	No load protection, restart trials every 4 s
	Nominal current	600-1400	mA	LEDset open: 300 mA; LEDset short: 1.05 A (digitally programmable)
	Current accuracy	+/- 3	%	Digital programming. +/- 5% through the LEDset interface.
	Current ripple	< 2	%	Ripple / average @ 100 Hz
	Nominal power range	22 – 55	W	Dimmable down to 0.22W
	Maximum power	55+1	W	LED output + 1W Aux output
	Galvanic isolation	SELV		Output to mains - Touch current < 0.7 mA
DIM	Aux. output (FAN)	12V (+0,1/-0,9V) 1W		short circuit and overload protected, ta max = 45°C @ full load.
	Dimming control	Yes		DALI ed 2 compatible
	Dimming range	1 – 100	%	Of selected nominal current;
	Dimming technique	Amplitude		
ENVIRONMENT	Galvanic isolation	basic / double		Basic DALI to primary / Double Primary to Functional earth / DALI to secondary
	Ambient temperature range t _a	-20...+50	°C	
	Maximum case temperature t _c	80	°C	Measured on t _c point indicated of the product label; for MM-approval (mounting on easily inflammable surfaces) acc. DIN 57710 t _c max = 75°C permitted
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-25...+85	°C	
	Relative humidity	5...85	%	Not condensing
	Surge transient protection	112	kV	L/N LN/FE acc to. EN 61547-5.7
	Environmental rating	Indoor		
	IP rating	IP 20		
	Mains switching cycles	> 100'000		
	Expected lifetime	50'000 100'000	h	t _c = 80°C, 0.2% / 1'000 h failure rate t _c = 70°C, 0.1% / 1'000 h failure rate

Protections

Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

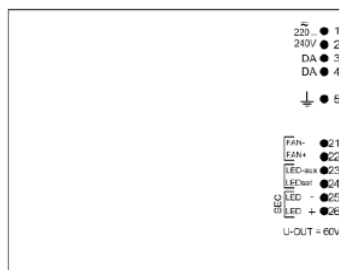
12V FAN output: ShortCircuit, OverCurrent, Open circuit protected

See remarks on page 4.

Wiring Diagram

Input

- Gray 1 – Mains
- Gray 2 – Mains
- Red 3 – DALI / N
- Red 4 – DALI / L
- Gray 5 – Functional Earth



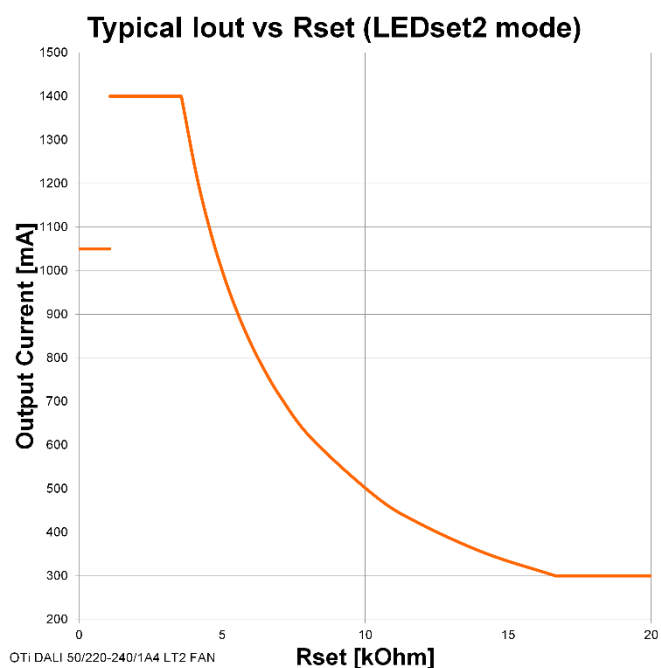
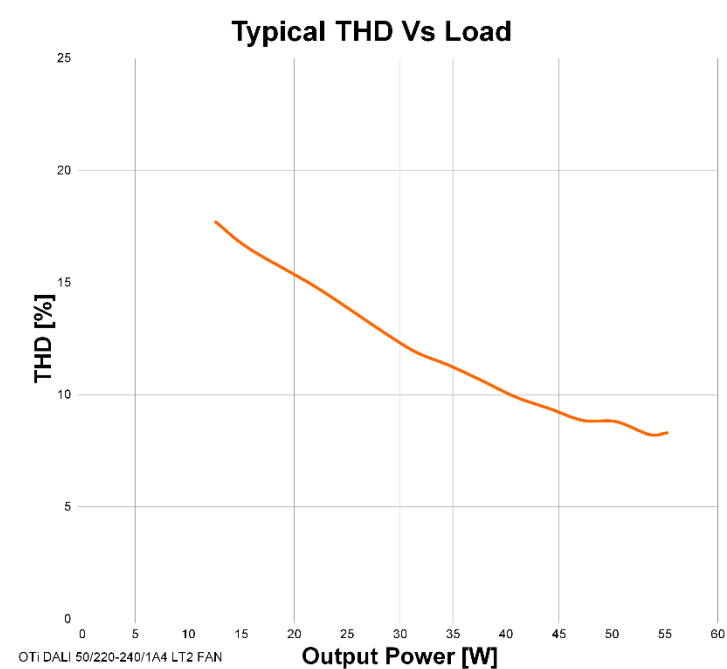
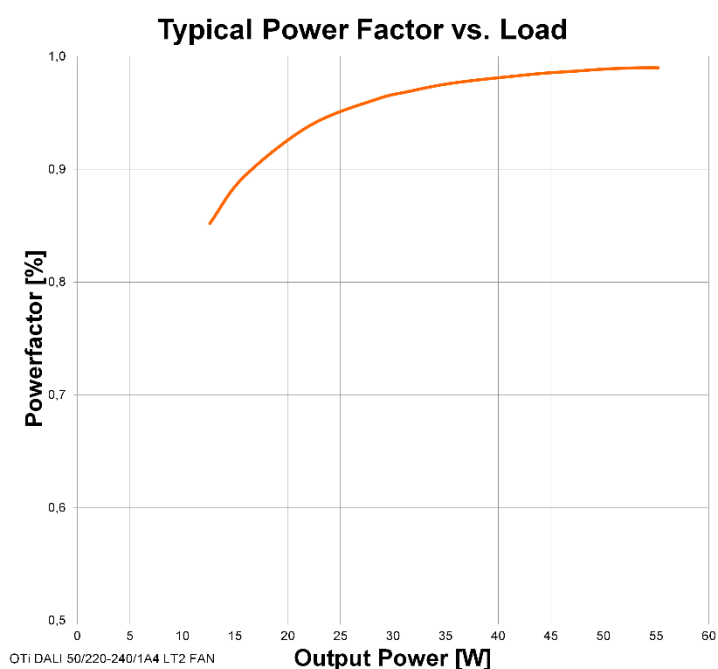
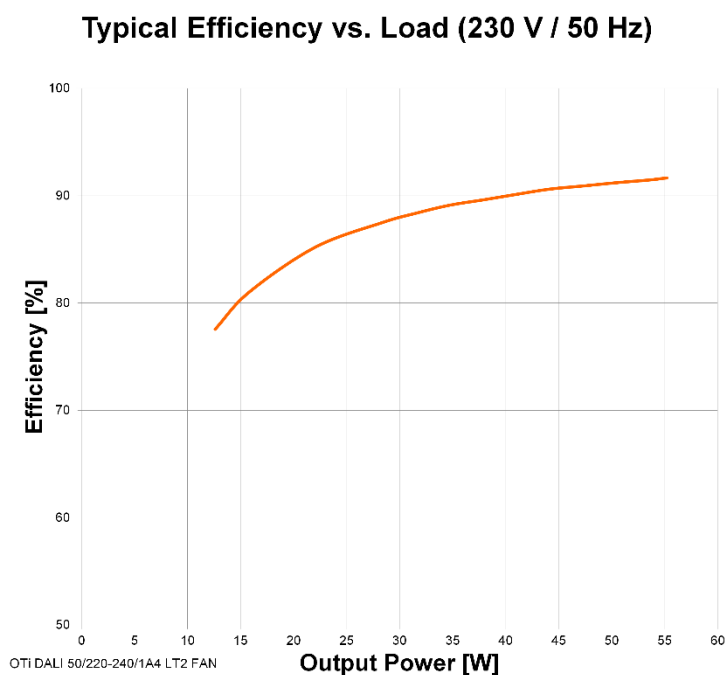
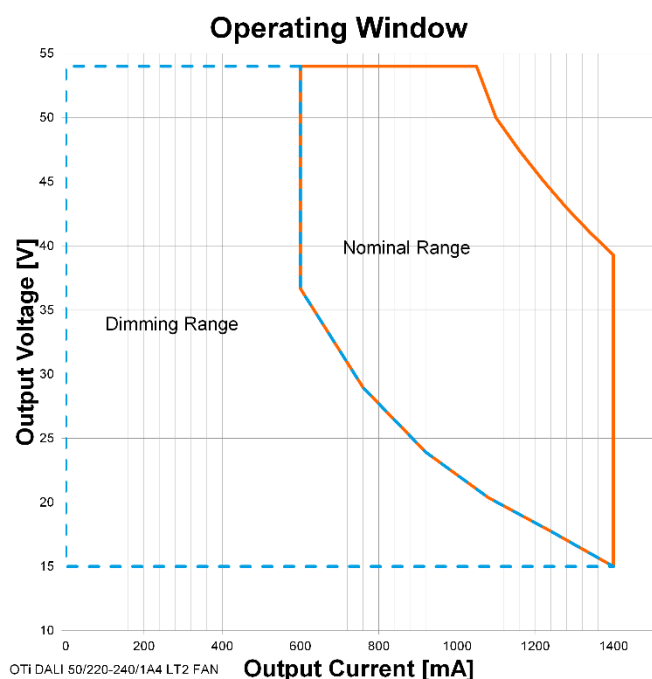
Output

- Gray 21 - FAN -
- Gray 22 - FAN +
- Black 23 - LEDset- (Aux-)
- White 24 - LEDset
- Black 23 - LED -
- Red 24 - LED +

Load wires length: 2m max.

— Wires cross section: massive leads 0.2-1.5 mm² / flexible leads 0.2 – 1.5 mm²

— Wire peeling length: 8-9 mm

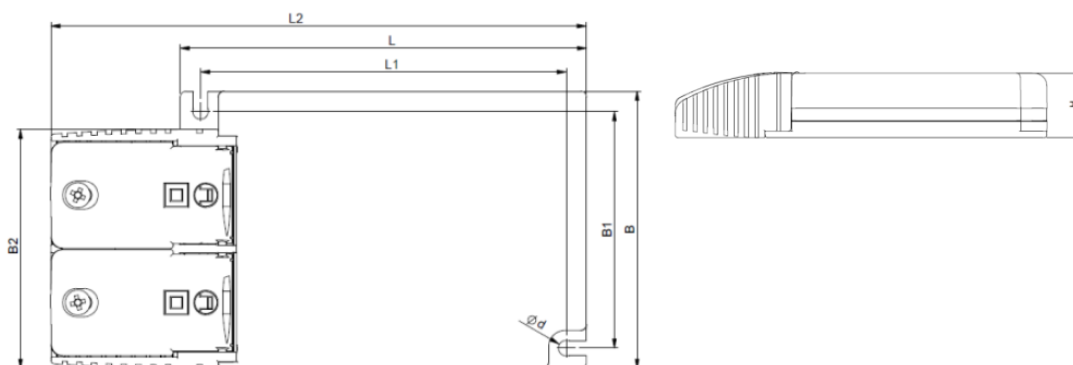


R_{SET} formula and standard I_{OUT} values

$$I_{OUT[A]} = \frac{5V}{R_{set[\Omega]}} \times 1000$$

I _{OUT} [mA] nominal	I _{OUT} [mA] actual	R _{SET} [kOhm] E48 series
600	610	8.2
700	699	7.15
1050	1078	4.64
1400	1400	3.48

L	110mm
L1	99mm
L2	145mm
B	75mm
B1	64mm
B2	64,7mm
H	25mm



Remarks

- **Input over voltage protection:** mains up to **320 Vac**, for 2 hours maximum, will not destroy both the unit and the load; shut down of load might occur in this condition.
- **Output short circuit / under voltage protection:** shut down of load happens if U_{out} is below 15V (typ. 12V); the unit automatically tries to switch on the load again every 4-5 s for 0.1 s delivering the selected nominal current.
- **Output overload protection:** the unit automatically reduces the output current to keep the output power below 55W .
- **Output over voltage protection:** shut down of load happens if U_{out} exceeds 54V (typ. 56V); the unit automatically tries to switch on the load again every 4-5 s for 0.1 s delivering the selected nominal current.
- **No load operation:** the unit automatically tries to switch on the load every 4-5 s for 0.1 s delivering the selected nominal current; despite this operation mode is safe for both unit and load, it is not recommended. Do not put a switch between load and unit.
- **Over temperature protection:** the unit is protected against temporary overheating by automatic reduction of the output current (up to a complete power off) when $t_c > 80^\circ\text{C}$ (typ. 85°C). The protection is self restoring.
- **Touch current:** lower than 0.7 mA, according to EN 60598-1 ann. G and EN 61347-a ann. A
- **Switchover time:** lower than 0.5 s, both AC and DC mains.
- **Output power hold time:** > 4 ms, in case of mains dips.
- **Emergency lighting:** this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22
- **HOT Plug/Deplug:** connection/disconnection of LED on secondary is allowed without damage of LED. No restart necessary.
- **FAN output:** No influence of the FAN state to the light output. When the FAN output is switched off due to an overload, the LED current will not be reduced. FAN output is switched off when LED are off (DALI light level 0).
- For DALI LED drivers (version **DALI ed 2 compatible**), the **corridor function is not available when the Touch Dim function is activated**. To Switch from corridor function to Touch DIM function is only by use of T4T software possible.

Standards

EN 61347-1	Product name	EAN10	EAN40	NAED	Piece s/ box
EN 61347-2-13	OTi DALI 50/220-240/1A4 LT2 FAN	4052899488182	4052899488199	n/a	20
EN 55015	OT CABLE CLAMP A-STYLE		4052899089587	n/a	20
EN 61547	OT CABLE CLAMP A-STYLE TL	4052899325982	405289918359	n/a	20
EN 61000-3-2					
EN 62384					

Disclaimer (Engineering Samples)

This product is a demonstration model from our development laboratories made available for your information only. The model is not binding in respect to its fitness for use, i.e. service life, luminous flux, color temperature and performance. Prior to production the design, including dimensions, is subject to modification. You will, therefore, appreciate that at this stage of development we are unable to assume any liability also for damages which may be caused by this product. Should you urgently require binding information for the preparation of construction data for your applications, please contact our marketing department.

OSRAM GmbH

Head Office:

Marcel-Breuer-Strasse 6
80807 Munich, Germany
Phone +49 89 6213-0
Created on: 12.04.2017
www.osram.com

OSRAM