

**OTi DALI 50/220-240/1A4 LT2 L**

SELV Constant current LED driver

Wide operating area up to 1.4 A - dimmable

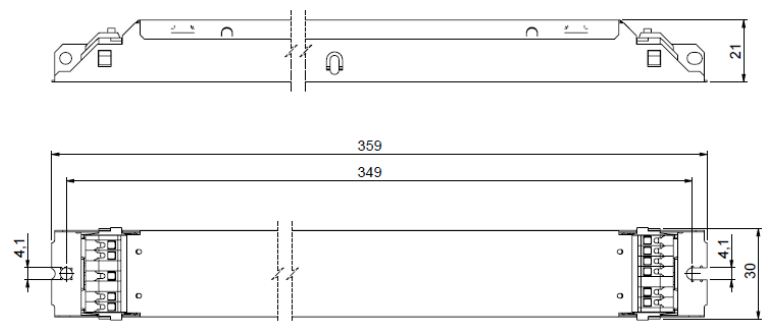
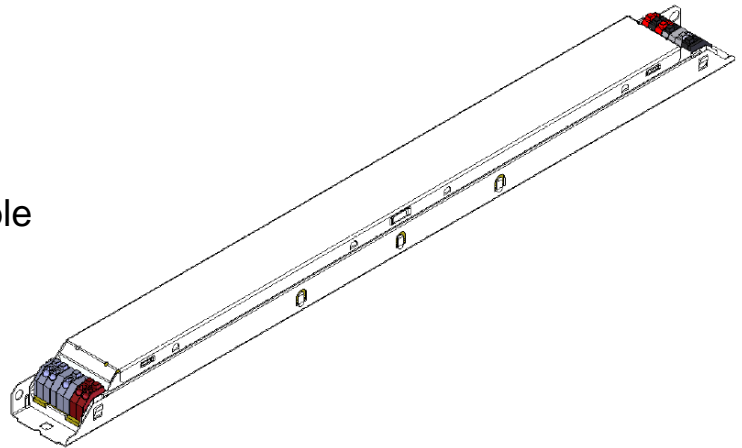
The reliable choice for the energy saving lighting:  
DALI dimmable, embedded corridor functionality  
and advanced Touch Dim with daylight harvesting,  
constant lumen output. Digitally programmable.  
Automatic current set through the LEDSet interface.

**Benefits**

Wide operating range: 0.6 – 1.4 A  
Adjustable current via LEDset or via software.  
Long lasting and high reliability.  
Slim white metal housing 30 x 21 mm.  
Double output connectors (parallel connection).  
Suitable for emergency lighting units.

**Applications**

Linear and area lighting.  
Office – industrial - shop



Housing material: metal, white painted.

**Approval marks**

In preparation, if not already printed on product label

**Product Features**

- Output current range 0.6 – 1.4 A
- Smart dimming down to 1%
- Very low output current ripple
- SELV equivalent U<sub>out</sub>: 27 – 54 V
- Output power up to 54 W
- Mains voltage 220 – 240 V
- Suitable for emergency lighting
- Overload protection
- Overtemperature protection
- Fully digitally programmable
- 100'000 h lifetime at t<sub>c</sub> = 65°C
- t<sub>c</sub> max = 75 °C
- Wide t<sub>a</sub> range -25 – +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	350	Vac	2 h maximum, unit might not operate in this abnormal condition	
	Nominal current	0.28	A		
	Total Harmonic Distortion (THD)	< 18	%	Full load, 220 – 240 V, 50 Hz / see graphs	
	Power factor	> 0.95		Full load, 220 – 240 V, 50 Hz / see graphs	
	Efficiency	up to 90	%	Full load, 220 – 240 V, 50 Hz / see graphs	
	Power losses	7.3	W	Maximum, full load, steady operation	
	No-load power	n/a	W	Load switching on output side is safe but not permitted	
	Stand-by power	< 500	mW		
	OUTPUT	Protection class	I		PE can be connected either to terminal or housing
Inrush current		53	A pk	Max, th = 200 µs	
Max. units per circuit breaker		B16: 13; B10: 8		I max = 53 A Th = 200 µs	
PE current		< 0.5	mA	Through PE, output floating	
OUTPUT		Nominal voltage range	27 – 54	V	
		Maximum voltage	60	V	No load protection, restart trials every 2-3 s
		Nominal current range	600 – 1400	mA	LEDset open: 300 mA; LEDset short: 1.4 A (digitally programmable)
		Current accuracy	+/- 5	%	
		Current ripple	< 200	mA <sub>pk</sub>	High frequency ripple (peak); low freq. ripple is negligible
		Nominal power range	20 – 54	W	Dimmable down to 0.2W
		Maximum power	54	W	
		Galvanic isolation	SELV equivalent		Output and LEDset to mains - Touch current < 0.7 mA
DIMMING		Dimming control	yes		DALI and TouchDIM
	Dimming range	1 – 100	%	Of selected nominal current	
	Dimming technique	mixed		1 – 30% PWM, 30 – 70% amplitude	
	Frequency	> 450	Hz	1 – 30%;	
	Galvanic isolation	basic / double		Basic DALI to primary-earth / Double DALI to secondary	
ENVIRONMENT	Ambient temperature range t <sub>a</sub>	-25 ...+50	°C		
	Maximum case temperature t <sub>c</sub>	75	°C	Measured on t <sub>c</sub> point indicated of the product label	
	Max. case temp. in fault condition	110	°C		
	Storage temperature range	-25 ...+85	°C		
	Relative humidity	5 ... 85	%	Not condensing	
	Surge transient protection	1   2	kV	L/N   LN/PE 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 <sub>c</sub> = 75°C, 0.2% / 1'000 h failure rate, 14 h ON / 10 h Stan-by per day t <sub>c</sub> = 65°C, 0.1% / 1'000 h failure rate, 14 h ON / 10 h Stan-by per day	

### Protections

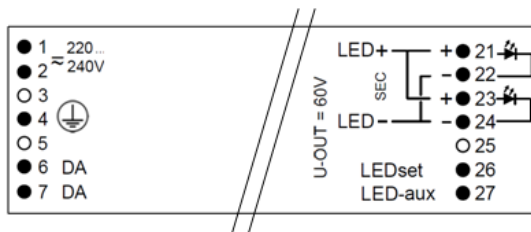
Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

See remarks on page 4.

### Wiring Diagram

#### Input:

- 1 220...
- 2 ≈ 240V
- 3
- 4
- 5
- 6 DA
- 7 DA



#### Output:

- Red 21 – LED +
- Black 22 – LED –
- Red 23 – LED +
- Black 24 – LED –
- White 25 – n/a
- White 26 – LEDset
- Black 27 – LEDset-aux

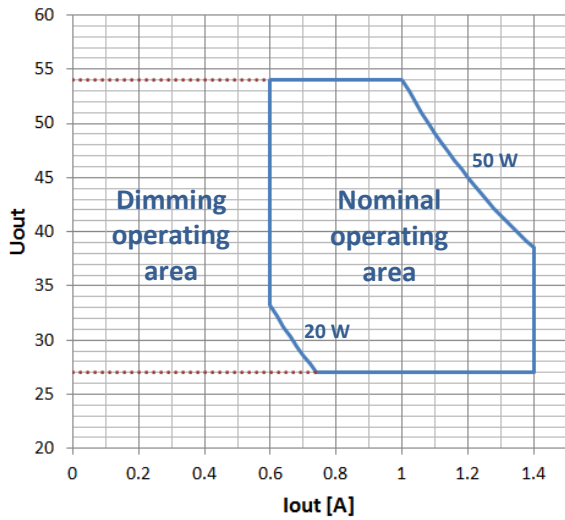
**21 & 23 internally connected**  
**22 & 24 internally connected**

Load wires length: 2 m max

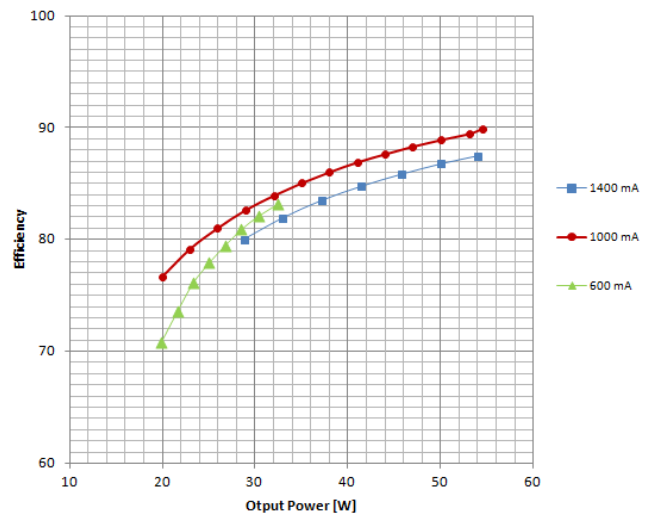
- Connectors type, both input and output: Wago 250
- Wires cross section: massive leads 0.5 – 1.5 mm<sup>2</sup> / flexible leads 0.5 – 1.5 mm<sup>2</sup>
- Wires peeling length: 8.5 – 9.5 mm

Two or more units cannot be connected together on secondary side with any or more of the 21 ... 27 terminals.

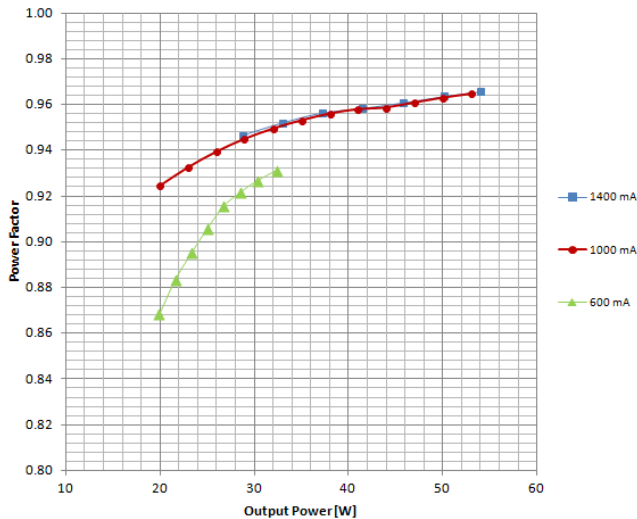
### Typical Operating window



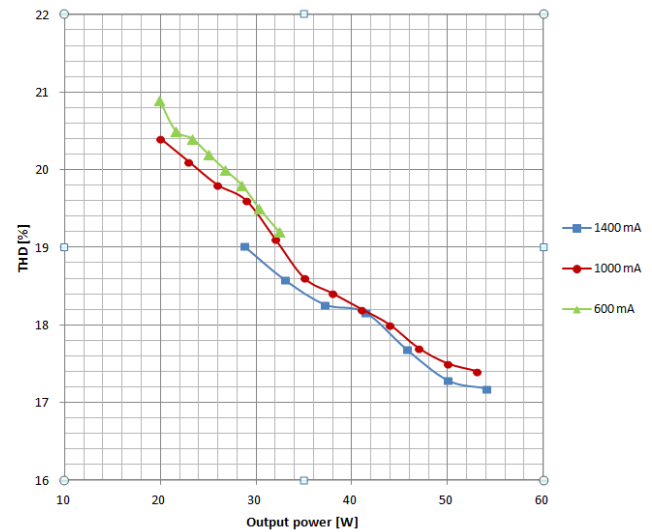
### Typical Efficiency vs load



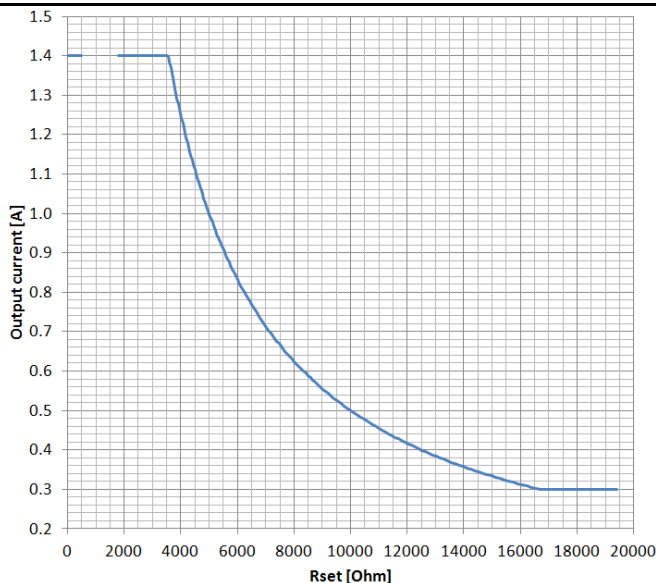
### Typical Power factor vs load



### Typical THD vs load



### Typical Iout vs Rset



### Rset formula and standard Iout values

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

Iout [mA] nominal	Iout [mA] set, +/-5%	Rset [kOhm]
600	610	8.2 (E24)
	606	8.25 (E48)
700	735	6.8 (E24)
	699	7.15 (E48)
1050	1064	4.7 (E24)
	1027	4.87 (E48)
1400	1400	3.3 (E24)
	1400	3.48 (E48)

Refer to the LEDset application note for further details.

**Remarks**

- **Input over voltage protection: mains up to 350 Vac**, for one hour maximum, will not destroy both the unit and the load; shut down of load might occur in this condition.
- **Output short circuit / undervoltage protection:** shut down of load happens if Uout is below 27V (typ. 25V); the unit automatically tries to switch on the load again every 2-3 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 54W .
- **Output over voltage protection:** shut down of load happens if Uout exceeds 54V (typ. 55V); the unit automatically tries to switch on the load again every 2-3 s for 0.1 s delivering the selected nominal current.
- **No load operation:** the unit automatically tries to switch on the load every 2-3 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 when 75°C < tc < 95°C typ., and by automatic power off if 95°C < tc < 100° typ. The protection is self restoring.
- **Touch current:** lower than 0.7 mA, according to EN 60598-1 ann. G and EN 61347-1 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; EOF<sub>1</sub> = 1% - 100% according to EN61347-2-13 ann J. Continuous output power at ta = 80°C up to 30W.

**Standards**

EN 61347-1  
 EN 61347-2-13  
 EN 55015  
 EN 61547  
 EN 61000-3-2  
 EN 62384  
 EN 62386

**Ordering information**

Product name	Type	EAN10	EAN40	NAED	Pieces / box
OTi DALI 50/220-240/1A0 LT2 L	AA53234	4052899028098	4052899028104	n/a	20

**Manufacturer's address:**

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[www.osram.com](http://www.osram.com)

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