

Light is OSRAM



Product data sheet: OTi DALI 25/220-240/700 LT2 G2

SELV Constant current LED driver

Wide operating area up to 700mA - 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: 180 – 700 mA.
- Mobile camera friendly (Amplitude-dimming)
- DALI ed 2 compatible
- Soft switch off- function
- Low standby power < 100 mW
- Suitable for emergency lighting: EL-sign



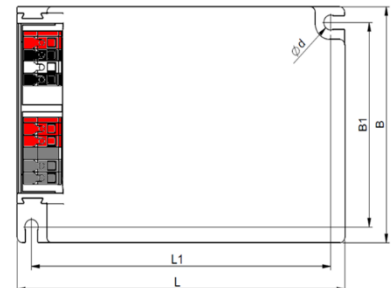
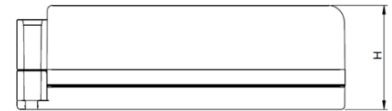
Approvals: in preparation



Applications

- Downlight and spot.
- Office – industrial – shop

Housing material: plastic, white.



L	103 mm
B	67 mm
H	29.5 mm

Product Features

- Output current range 180-700 mA
- Amplitude dimming down to 1%
- Fully digitally programmable
- SELV, U_{out}: 12- 54 V_{DC}
- Output power up to 27 W
- Mains voltage 220-240 V
- Overload protection
- Over temperature protection
- Load hot plug protection
- 100`000 h lifetime at t_c = 65°C
- t_c max = 75°C
- Wide t_a range -20...+50°C

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	280	V _{AC}	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	0.14	A	
	Total Harmonic Distortion (THD)	< 20	%	Full load, 220-240V, 50Hz / see graphs
	Power factor	> 0.95		Full load, 220-240V, 50 Hz / see graphs
	Efficiency	Typical 88	%	Full load, 220-240V, 50Hz / see graphs
	Power losses	4.5	W	Maximum, full load
	No-load power	n/a	W	Load switching on output side is safe but not permitted
	Stand-by power	<100	mW	
	Protection class	II		Suitable for class I and II luminaires
Inrush current	< 20	A pk	Max, th = 100 µs	
Max. units per circuit breaker	B16: 80 B10: 45			
OUTPUT	Nominal voltage range	12 - 54	V	
	Maximum voltage	60	V	No load protection, restart trials every 4s
	Nominal current range	180 - 700	mA	LEDset open: 90 mA; LEDset short: 500 mA (digitally programmable)
	Current accuracy	+/- 3	%	Digital programming. +/- 5% through the LEDset interface.
	Current ripple	< 1	%	Ripple / average @ 100 Hz; Full load
	Nominal power range	7 – 27	W	
	Maximum power	27	W	LED output
Galvanic isolation	SELV		Output to earth – Touch current < 0.7 mA	
DIM	Dimming control	Yes		DALI ed 2 compatible, TouchDIM
	Dimming range	1-100	%	Of selected nominal current
	Dimming technique	Amplitude		
	Galvanic isolation	Basic/Double		Basic DALI to Primary/ Double DALI to Secondary
ENVIRONMENT	Ambient temperature range t _a	-20...+50	°C	
	Maximum case temperature t _c	75	°C	Measured on t _c point indicated of the product label, tc not exceeded
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-25...+85	°C	
	Relative humidity	5...85	%	Not condensing
	Surge transient protection	1	kV	L/N acc to EN 61547
	Environmental rating	Indoor		
	IP rating	IP 20		
	Mains switching cycles	> 100'000		10 sec on, 10 sec off
Expected lifetime	50'000	hrs	t _c = 75°C, 0.2% / 1'000 h failure rate	
	100'000		t _c = 65°C, 0.1% / 1'000 h failure rate	

Protections

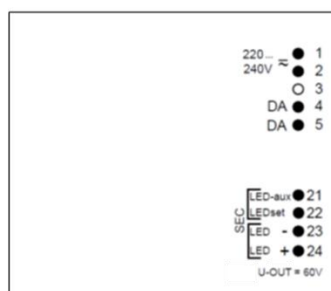
Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

See remarks on page 4.

Wiring Diagram

Input

Gray	1 - Mains
Gray	2 - Mains
RED	4 - DALI
RED	5 - DALI

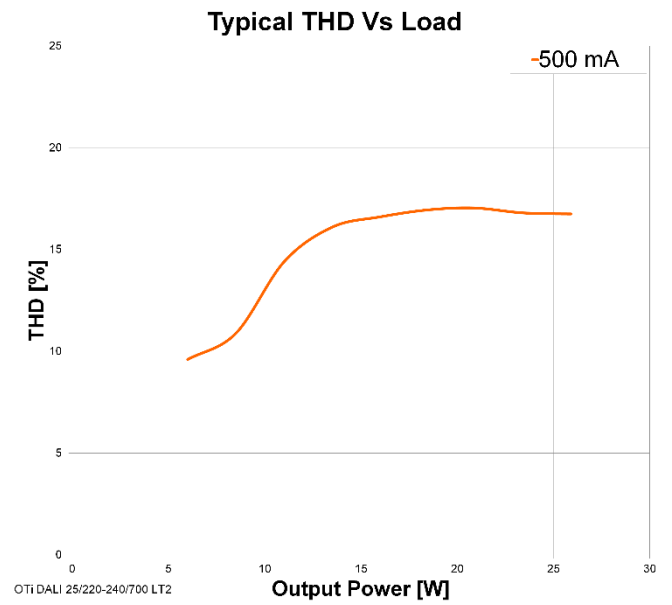
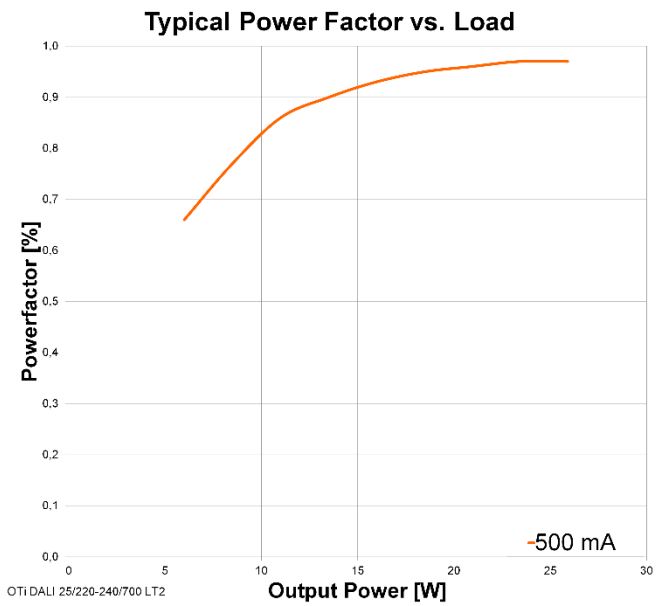
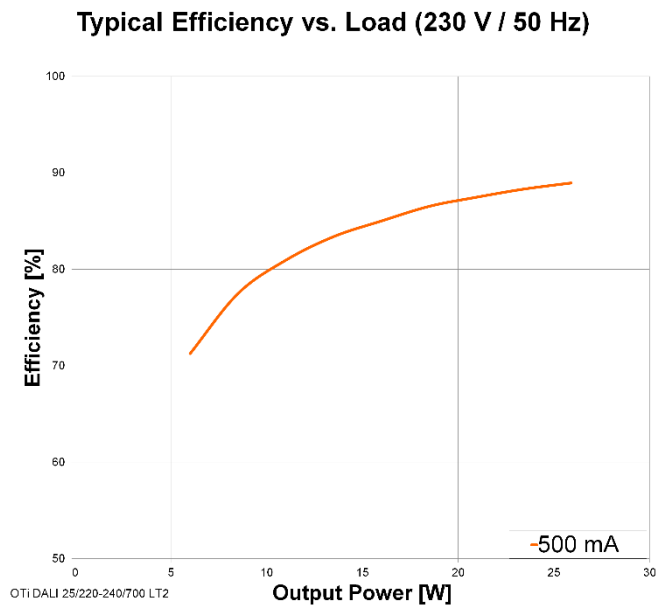
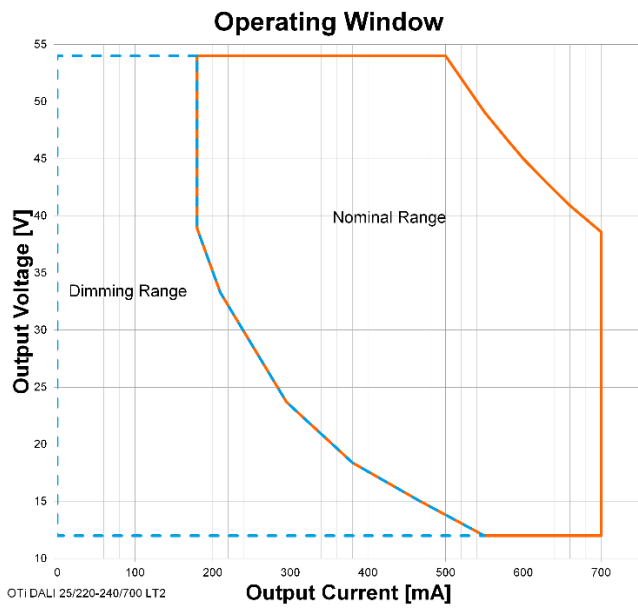


Output

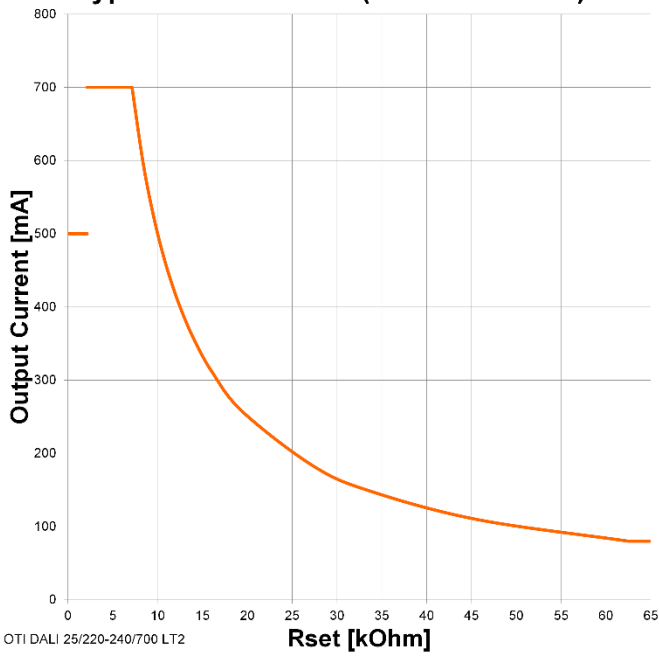
Black	21 – LED aux
White	22 - LEDset
Black	23 - LED -
Red	24 - LED +

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



Typical I_{out} vs R_{set} (LEDset2 mode)



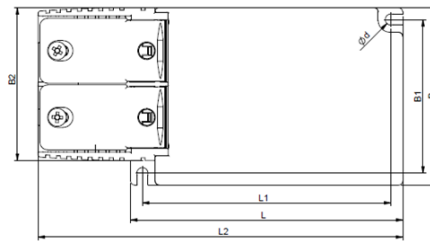
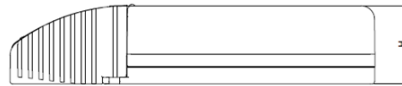
OTI DALI 25/220-240/700 LT2

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
180	180	27.7
350	357	14
500	500	10
700	699	7.15

L	103mm
L1	94mm
L2	138mm
B	67mm
B1	58mm
B2	57,7mm
H	29,5mm
d	Ø4,2



Remarks

- **Input over voltage protection: mains up to 280 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_{rated} is below 12V (typ. 9V); 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 27W.
- **Output over voltage protection:** the unit tries to stabilize the voltage by reducing the current as necessary down to 50%, if U_{rated} still exceeds 54V (typ. 58V) a shutdown will occur; the unit tries automatically 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; this operation mode is safe for the unit but 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 $t_c > 75\text{ °C}$ (typ. 80 °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 Max. 2 ECG per luminaire, each ECG supplying separately its load (two or more units cannot be connected together on secondary side).
- **Switchover time:** lower than 0.5 s, both AC and DC mains.
- **Emergency lighting:** this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22, with emergency output factor $EOF_1 = 0,15$ (default value, can be programmed up to $EOF_1 = 1$) and related duration time of 10 h at least. Function in emergency is ensured up to $t_a = 80\text{ °C}$ and $t_c = 92\text{ °C}$.
- **HOT Plug: connection of LED on secondary** is allowed without damage of LED. LED turns on automatically
- 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

EN 61347-2-13

EN 55015

EN 61547

EN 61000-3-2

EN 62384

EN 62386

Product name	EAN10	EAN40	NAED	Pieces / box
OTi DALI 25/220-240/700 LT2	4052899488144	4052899488151	n/a	20
OT Cable Clamp B-style	4052899077881	4052899077898		20
OT Cable Clamp B-style TL	4052899948051	4052899268227		20

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