

Light is OSRAM

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

SELV Constant current LED driver

Wide operating area up to 700mA - dimmable

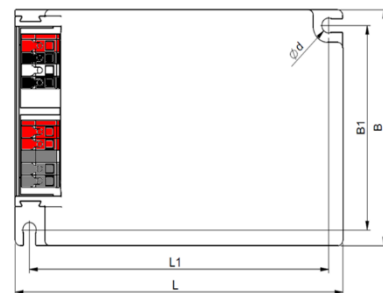
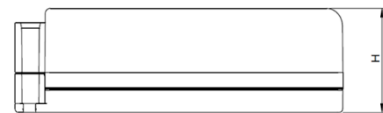
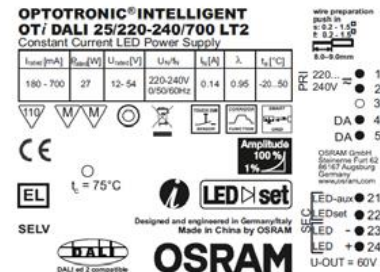
The reliable choice for the energy saving lighting:  
DALI dimmable, embedded corridor functionality  
and advanced Touch Dim with daylight harvesting,  
constant lumen output. Digitally programmable.  
Automatic current set through the LEDset interface.

**Benefits**

Wide operating range: 180 – 700 mA.  
Mobile camera friendly (Amplitude-dimming)  
DALI ed 2 compatible  
Soft switch off- function  
Low standby < 150 mW  
Built-in and independent mounting (with opt. kit).  
Suitable for emergency lighting: EL-sign

**Approvals****Applications**

Downlight and spot.  
Office – industrial – shop



L	103 mm
B	67 mm
H	29.5 mm

Housing material: plastic, white.

**Product Features**

- Output current range 180-700mA
- Smart dimming down to 1%
- Fully digital programmable
- SELV,  $U_{out}$ : 12 – 54 V<sub>DC</sub>
- Output power up to 27 W
- Mains voltage 220-240 V
- Overload protection
- Overload temperature protection
- Load hot plug protection
- 100'000 h lifetime at  $t_c = 65^\circ\text{C}$
- $T_c \text{ max} = 75^\circ\text{C}$
- 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 <sub>AC</sub>	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: 50		
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 <sub>a</sub>	-20...+50	°C	
	Maximum case temperature t <sub>c</sub>	75	°C	Measured on t <sub>c</sub> 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	50'000 100'000	hrs	t <sub>c</sub> = 75°C, 0.2% / 1'000 h failure rate t <sub>c</sub> = 65°C, 0.1% / 1'000 h failure rate

## Protections

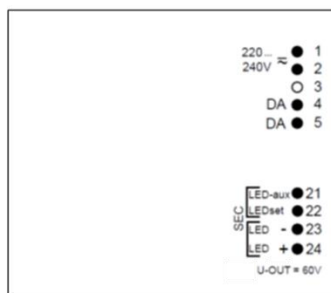
Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

See remarks on page 4.

## Wiring Diagram

### Input

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



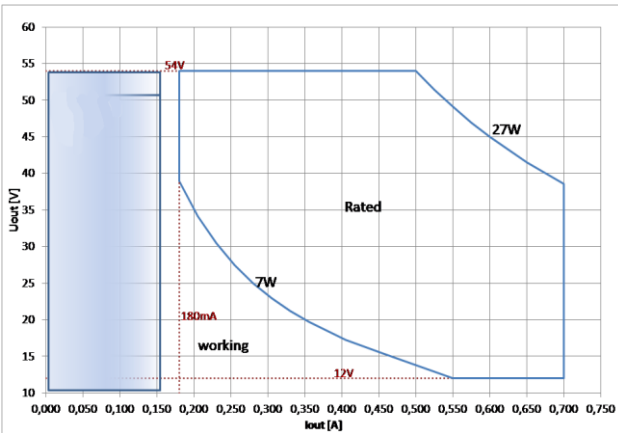
### Output

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

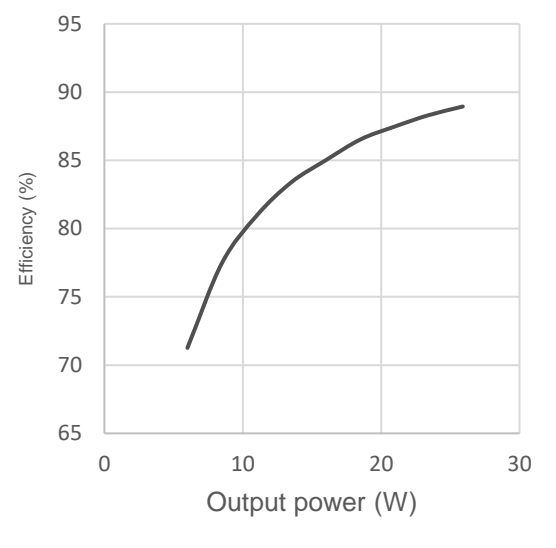
Load wires length: 2m max.

- Wires cross section: massive leads 0,2-1,5 mm<sup>2</sup> / flexible leads 0,2 – 1,5 mm<sup>2</sup>
- Wire peeling length: 8-9 mm

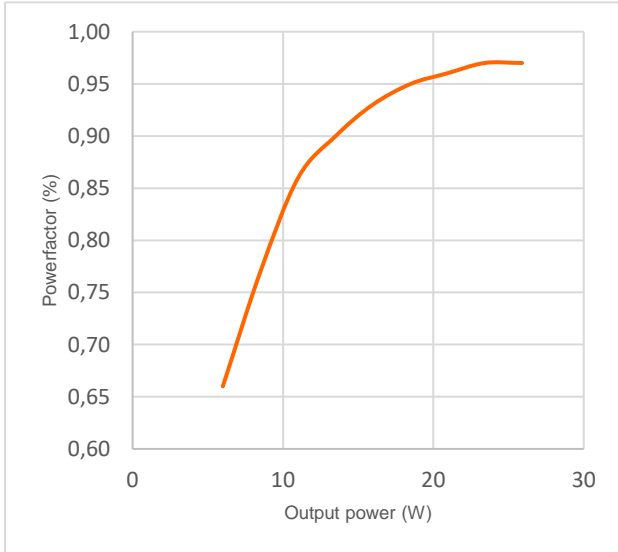
### Typical Operating window



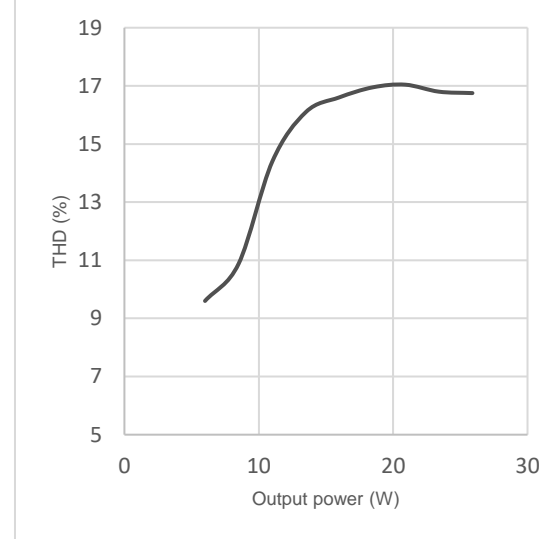
### Typical Efficiency vs Load (230V/ 50hz)



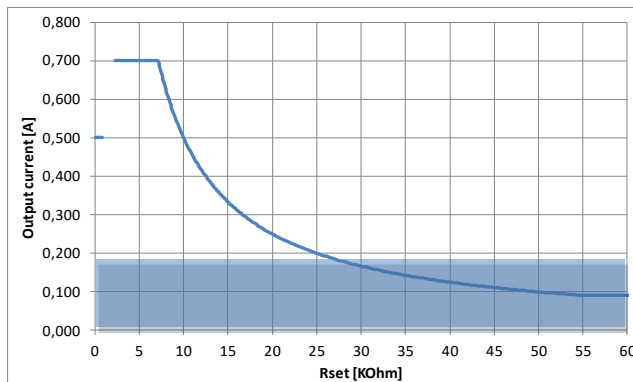
### Typical Powerfactor vs Load



### Typical THD vs Load



## Typical Iout vs Rset

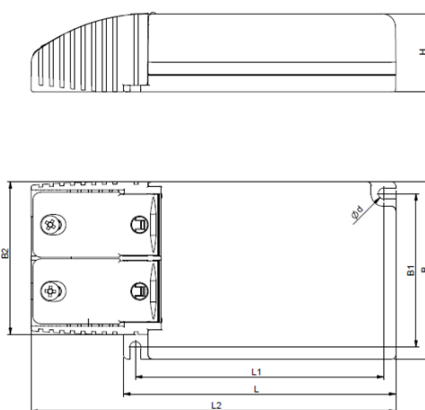


## Rset formula and standard Iout values

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

Iout [mA] nominal	Iout [mA] actual	Rset [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  $t_c > 75^\circ\text{C}$  (typ.  $80^\circ\text{C}$ ). 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  $EOF_I = 0,15$  ( default value, can be programmed up to  $EOF_I = 1$ ) and related duration time of 10 h at least. Function in emergency is ensured up to  $t_a = 80^\circ\text{C}$  and  $t_c = 92^\circ\text{C}$ .
- **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

**Ordering information**

Product name	Type	EAN10	EAN40	NAED	Pieces / box
OTi DALI 25/220-240/700 LT2	AA62434	4052899919457	4052899919525	n/a	20
OT Cable Clamp B-style	AA62261	4052899077881	4052899077898		20
OT Cable Clamp B-style TL	AB32534	4052899948051	4052899268227		20

OSRAM GmbH

Head Office:

Marcel-Breuer-Strasse 6  
80807 Munich, Germany  
Phone +49 89 6213-0  
[www.osram.com](http://www.osram.com)

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