

OTi DALI 15/220-240/1A0 LT2

SELV Constant current LED driver
Wide operating area up to 1050mA - 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.

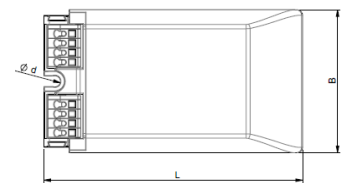
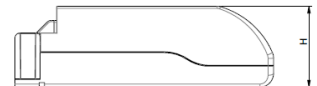


L	95mm
L2	119mm
B	53mm
H	30mm

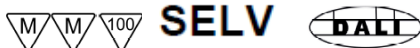
Benefits

Wide operating range: 150 – 1050 mA
Amplitude (analog) dimming (No PWM)
Adjustable current via LEDset or via software
Long lasting and high reliability

Built-in and independent mounting (with opt. kit)
Suitable for emergency lighting units



Approvals (Under preparation if not shown on label)



Applications

Downlight and spot.
Office – industrial - shop

Product Features

- Output current range 150 – 1050 mA
- Smart dimming down to 1%
- Fully digitally programmable
- SELV, U_{rated} : 7,5 – 54 V_{DC}
- Mains voltage 220 – 240 V
- Suitable for emergency lighting
- Overload Overtemperature protection
- Ready for DALI ed. 2
- 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
- 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	280	Vac	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	0,12	A	
	Total Harmonic Distortion (THD)	< 10	%	Full load 350mA, 220 – 240 V, 50 Hz / see graphs
	Power factor	> 0.98		Full load 350mA, 220 – 240 V, 50 Hz / see graphs
	Efficiency	typical 88	%	Full load 350mA, 220 – 240 V, 50 Hz / see graphs
	Power losses	2,4	W	Maximum, full load 350mA
	No-load power	n/a	W	Load switching on output side is not permitted
	Stand-by power	≤ 270	mW	
	Protection class	II		Suitable for class I and II luminaires
	Inrush current	5	A pk	Max, Th = 45 µs
OUTPUT	Max. units per circuit breaker	B16: 130 B10: 80		
	Nominal voltage range	7,5 – 54	V	
	Maximum voltage	60	V	No load protection, restart trials every 4 s
	Nominal current range	150-1050	mA	LEDset open: 75 mA; LEDset short: 350mA;(digitally programmable)
	Current accuracy	+/- 3	%	Digital programming. +/- 5% through the LEDset interface.
	Current ripple	< 1	%	Ripple / average @ 100 Hz; Full load
	Nominal power range	3 – 18	W	
	Maximum power	18	W	LED output
DIMMING	Galvanic isolation	SELV		Output to earth - Touch current < 0.7 mA
	Dimming control	Yes		DALI (Ready for DALI ed.2), TouchDIM
	Dimming range	1 – 100	%	Of selected nominal current in the whole operating window
	Dimming technique	AM		Analog amplitude dimming (without PWM)
ENVIRONMENT	Galvanic isolation	basic / double		Basic DALI to Primary / Double DALI to Secondary
	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, t_a not exceeded
	Max. case temp. in fault condition	100	°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		
	Expected lifetime	50'000 100'000	h	$t_c = 75^{\circ}\text{C}$, 0.2% / 1'000 h failure rate $t_c = 65^{\circ}\text{C}$, 0.1% / 1'000 h failure rate

Protections

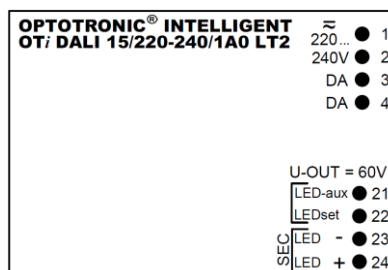
Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

See remarks on page 5.

Wiring Diagram

Input

Gray	1 – Mains
Gray	2 – Mains
RED	3 – DALI or N
RED	4 – DALI or L



Output

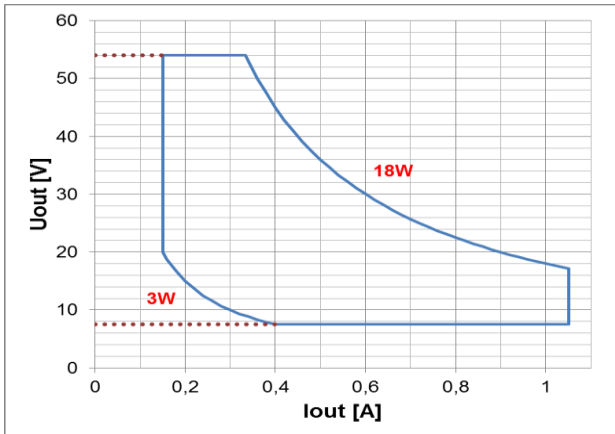
Black	21 - LED-
aux	
White	22 - LEDset
Black	23 - LED -
Red	24 - LED +

Load wires length: 2m max.

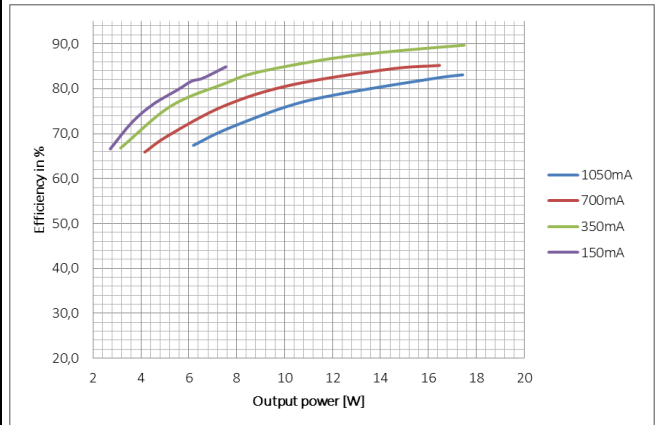
Wire preparation (Push in)	
Built in	Independent
s: 0,2-1,5 mm ²	s: 0,2-1,5 mm ²
f: 0,2-1,5 mm ²	f: 0,2-1,5 mm ²

8-9 mm

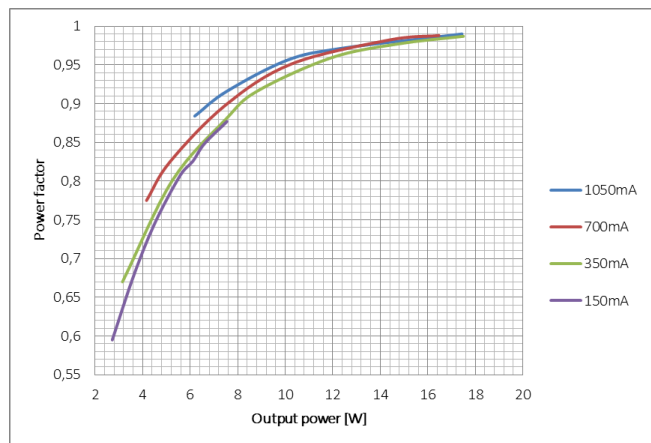
Typical Operating window



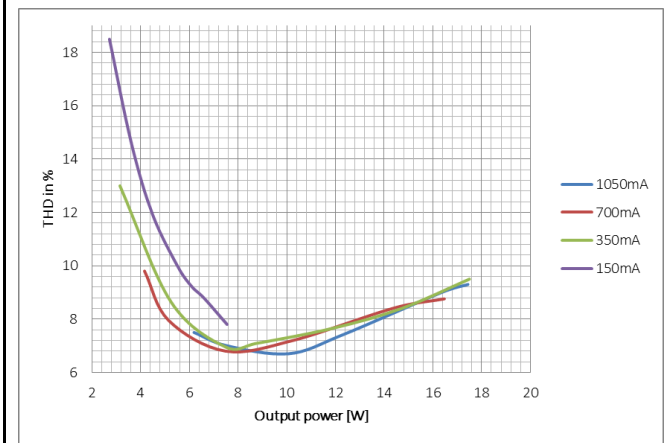
Typical Efficiency vs load



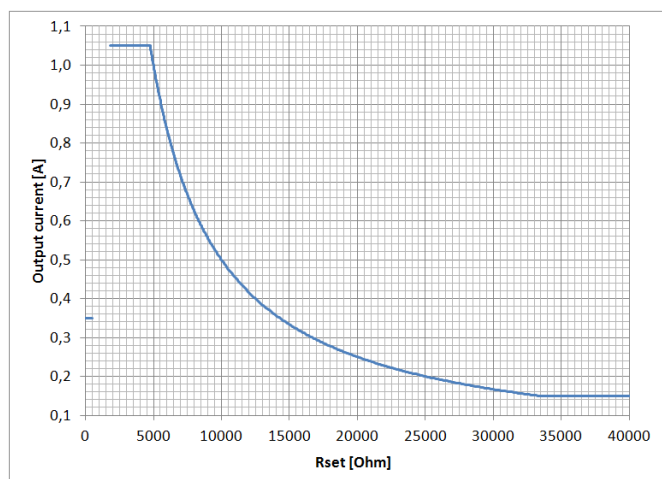
Typical Power factor vs load



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] actual	Rset [kOhm] E48 series
150	151	33,2
350	357	14
500	500	10
700	699	7.15
1050	1027	4.87

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 7.5V (typ. 6.5V); 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 18W.
- **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. 56V) 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
- **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

Standards

Ordering information

	Product name	Type	EAN10	EAN40	NAED	Pieces / box
EN 61347-1	OTi DALI 15/220-240/1A0 LT2		4052899324879	4052899324886		20
EN 61347-2-13						
EN 55015	OT Cable Clamp F-Style		4052899325555	4052899325562		20
EN 61547						
EN 61000-3-2						
EN 62384						
EN 62386						

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.

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