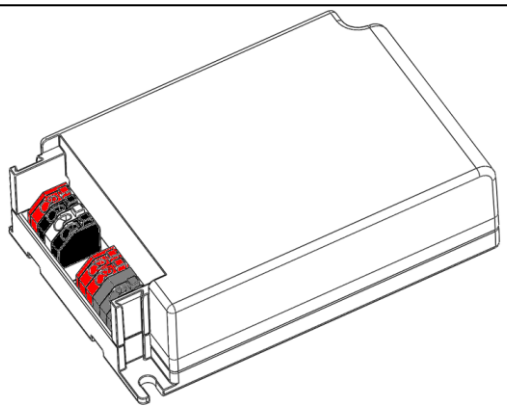
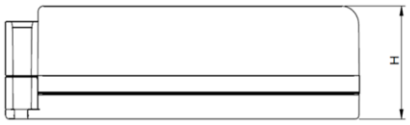
OTi DALI 35/220-240/1A0 LT2

SELV Constant current LED driver

Wide operating area up to 1 A - dimmable



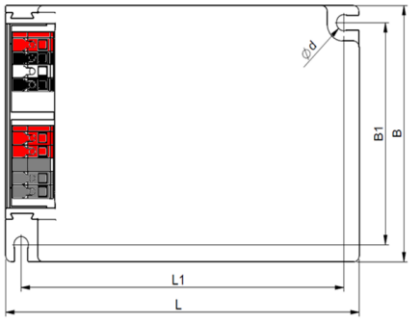
The reliable choice for the energy saving lighting: DALI dimmable, embedded corridor functionality and advanced Touch Dim with daylight harvesting, constant lumen output. Digitally programmable. Automatic current set through the LEDSet interface.



L	103mm
B	67mm
H	29,5mm

Benefits
Wide operating range: 0.35 – 1 A
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.

Applications
Downlight and spot.
Office – industrial - shop



Approval marks

SELV equivalent

In preparation,

Housing material: plastic, white.

Product Features

- Output current range 0.35 – 1 A
- Smart dimming down to 1%
- Fully digitally programmable
- SELV-equivalent, Uout: 15 – 54 V_{DC}
- Output power up to 35 W
- Mains voltage 220 – 240 V
- Suitable for emergency lighting
- Overload protection
- Overtemperature 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
- 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	0.18	A	
	Total Harmonic Distortion (THD)	< 10	%	Full load, 220 – 240 V, 50 Hz / see graphs
	Power factor	> 0.95		Full load, 220 – 240 V, 50 Hz / see graphs
	Efficiency	typical 86%	%	Full load, 220 – 240 V, 50 Hz / see graphs
	Power losses	5.7	W	Maximum, full load
	No-load power	n/a	W	Load switching on output side is safe but not permitted
	Stand-by power	< 350	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: 55; B10: 33		
OUTPUT	Nominal voltage range	15 – 54	V	
	Maximum voltage	60	V	No load protection, restart trials every 1-3 s
	Nominal current range	350-1050	mA	LEDset open: 175 mA; LEDset short: 700 mA (digitally programmable)
	Current accuracy	+/- 5	%	Digital programming. +/- 5% through the LEDset interface.
	Current ripple	< 2	%	Ripple / average @ 100 Hz; Full load
	Nominal power range	15 – 35	W	
	Maximum power	35	W	LED output
	Galvanic isolation	SELV equivalent		Output to earth - Touch current < 0.7 mA
DIMMING	Dimming control	yes		DALI, TouchDIM
	Dimming range	1 – 100	%	Of selected nominal current
	Dimming technique	mixed		AM (>260mA) + PWM (<260mA)
	PWM frequency	> 280	Hz	
	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, t_a 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		
	Expected lifetime	50’000 100’000	h	t_c = 75°C, 0.2% / 1’000 h failure rate t_c = 65°C, 0.1% / 1’000 h failure rate

Protections

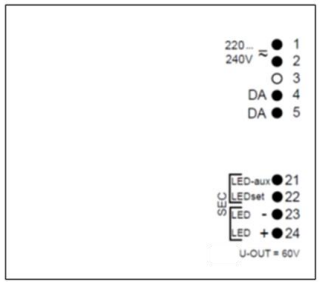
Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

See remarks on page 4.

Wiring Diagram

Input

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



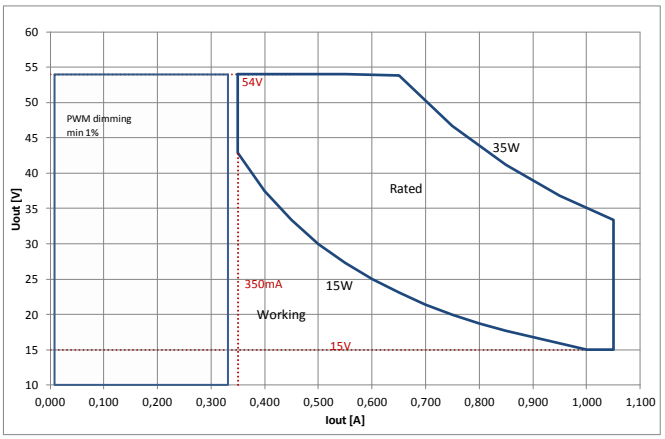
Output

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

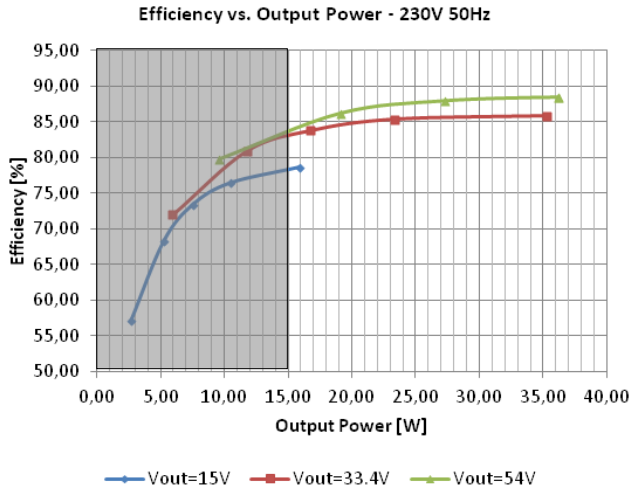
Load wires length: 2m max.

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

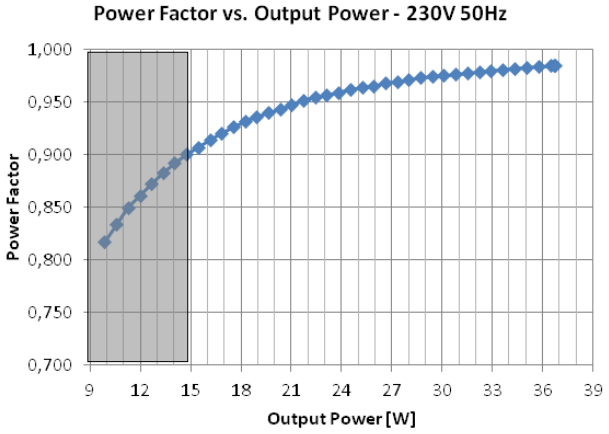
Typical Operating window



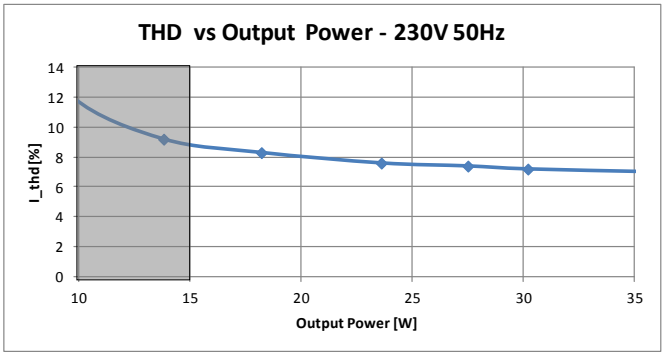
Typical Efficiency vs load



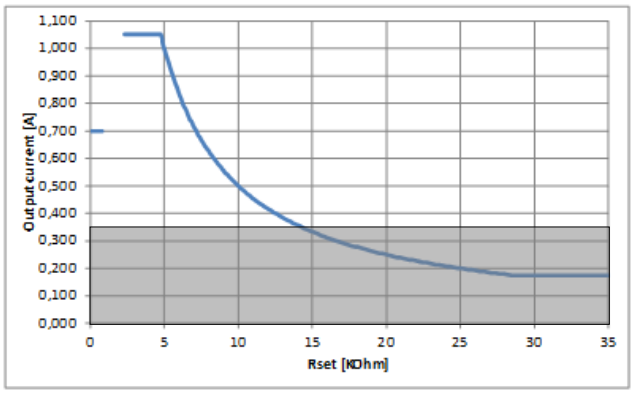
Typical Power factor vs load



Typical THD vs load



Typical Iout vs Rset



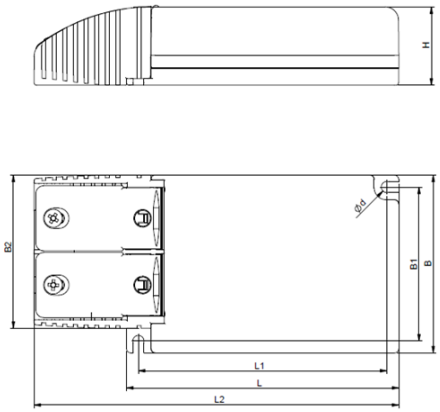
Rset formula and standard Iout values

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

Iout [mA] **nominal**	Iout [mA] actual	**Rset [kOhm]** **E48 series**
350	357	14
700	699	7.15
1050	1050*	4.64

*Rset value set I_{out} = 1078 mA but I_{out} is internal limited to 1050 mA lease refer to “Typical Iout vs. Rset” graph.

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 two hours 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 15 V (typ. 12 V); the unit automatically tries to switch on the load again every 1 s for 0.5 s delivering the selected nominal current.
- **Output overload protection**: the unit automatically reduces the output current to keep the output power below 35W .
- **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 1 s for 0.5 s delivering the selected nominal current.
- **No load operation:** the unit automatically tries to switch on the load 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. The protection is self restoring.
- **Touch current: lower than 0**.7 mA, according to EN 60598-1 annex G and EN 61347-2-13 annex A. Max. 2 ECG per luminiare, each ECG supplying separately its load (two or more units cannot be connected together on secondary side).
- **Switchover time**: typical 0.6s, both AC and DC mains.
- **Output power hold time**: ≤ 2 ms, in case of mains dips.
- **Emergency lighting**: this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22, with emergency output factor EOF_l = 0,15 (default value, can be programmed up to EOF_l = 1) and related duration time of 10 h at least. Function in emergency is ensured up to t_a = 80°C and t_c = 92°C.
- **HOT Plug: connection of** LED on secondary is allowed without damage of LED. LED turns on automatically

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 35/220-240/1A0 LT2	AA62433	4052899919440	4052899919518	n/a	20
OT Cable Clamp B-style			4052899077898		20

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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