Light is OSRAM

OTi DALI 30/220-240/24 1CH

24 V Single-channel Constant Voltage LED driver Dimmable range 0/1% - 100%

Housing material: plastic, white

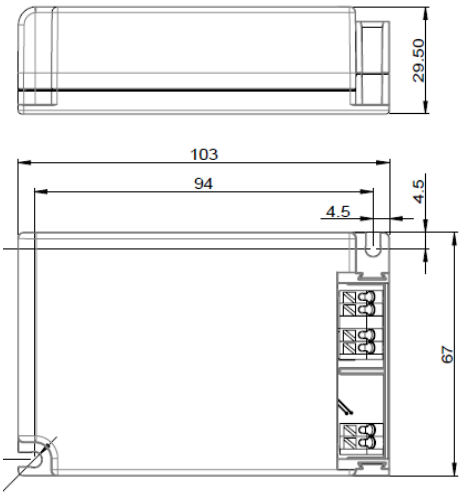
* image for information purpose only

Benefits

Long lasting and high reliability.
DALI-2 single channel.
High efficiency in compact form factor.
3 kHz PWM dimming until 1%.
Optional cable clamp for independent installation.

Applications

Hospitality, shops, decorative luminaires.
Suitable for indoor CLASS I and CLASS II luminaires.



Approvals

When not printed on product label, they are under evaluation.

Safe Dimming SDT Technology | Touch DIM Sensor | EL | 5 Year OSRAM Guarantee

Product Features

- Single channel DALI-2 certified
- Lamp Failure detection
- Smart Power Supply
- t_a range -20…+50°C
- Overload/Over temperature and Short circuit protection

*10% cumulated failure, 24 h = 14 h ON, 10 h Standby

- Dimmable via DALI or Touch DIM
- Mains voltage: 220–240 V_{ac} / 220–240 V_{dc}
- 50’000 h lifetime at max t_c*
- 5 years guarantee*
- IP20 independent housing
- Output wire length up to 10 m
- Emergency lighting compatibility

Electrical specification

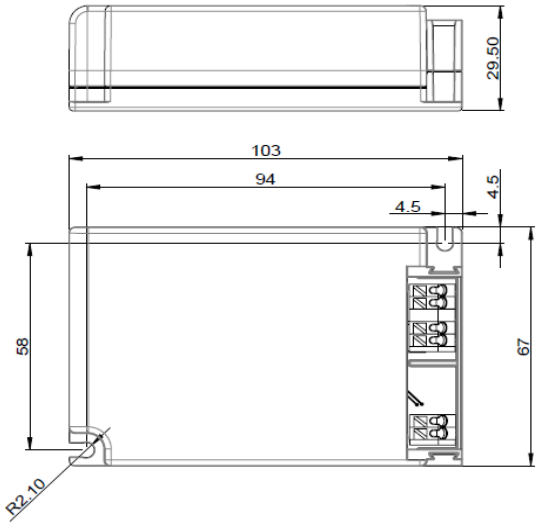
	Item	Value	Unit	Remarks / Condition
INPUT	Nominal line voltage	220 – 240	V	
	Mains line frequency	0 / 50 / 60	Hz	
	AC voltage range	198 – 264	V	Max 320 V for 2h.
	DC voltage range	176 – 276	V	
	AC Nominal current	160	mA	Typical @ full load, 230 Vac, 50 Hz
	DC Nominal current	26	mA	Typical @ EOFI= 0,2 EOFV= 1 | 230 V_{DC}, 0 Hz
	Total Harmonic Distortion (THD)	< 10	%	Full load, 230 Vac, 50 Hz, 3% typ. See graphs
	Power factor λ	0,32…0,95		230 Vac, 50 Hz. See graphs
	Efficiency in full load	88	%	Typical, steady state @ full load, 230 Vac, 50 Hz see graphs
	Device power loss	4.5	W	Full load, 230 Vac, 50 Hz, Typical
	Networked stand-by power	<0,5	W	230 Vac, 50 Hz. Typical 400 mW
	Protection Class	II		With cable clamp
	Suitable for fixtures with prot. Class	I / II		
	Inrush current	<40 A_{pk} / 150 µs		Full Load, 240 Vac, Cold Start Duration = 50% / 50% I_{pk}
	Max. units per circuit breaker:			
	Max. ECG no. on circuit breaker 10 A (B)	20		B-Type is underusing thermal protection
	Max. ECG no. on circuit breaker 16 A (B)	31		
	Max. ECG no. on circuit breaker 25 A (B)	49		
	Max. ECG no. on circuit breaker 10 A (C)	32		C-Type is the preferable MCB choice
	Max. ECG no. on circuit breaker 16 A (C)	52		
	Max. ECG no. on circuit breaker 25 A (C)	81		
	Max. ECG no. on circuit breaker 10 A (D)	41		D-Type is underusing short-circuit protection
	Max. ECG no. on circuit breaker 16 A (D)	66		
OUTPUT	Nominal voltage	24,2	V	
	Voltage accuracy	± 3	%	
	Voltage ripple	< 1	V_{pp}	@ 100 Hz, full load. Typical < 500 mV_{pp}
	Nominal output power	2.42 – 30	W	
	Maximum output power	30	W	At steady state. Smart Power to manage up to Pout_max + 25%
	DC Output power (EL)	20	%	dimming range (1%...20%) under DC input
	Galvanic isolation	SELV		When using for PELV, do connect the “+” to PE
DIMMING	Dimming interface	DALI 2.0		Proper DALI diagnostics with a min. load of 9% (4.5 / 7.5 W) and dimming > 3%
	Dimming range	1 – 100	%	DALI dimming steps (3 – 254)
	Dimming method	PWM 3 kHz		
	TLA (Flicker and strobe effects)	P_{ST} < 1 SVM < 0,4	-	For every dimming condition Extended SVM metrics (10 kHz).
	Capacitive load	10	µF/A	
	Galvanic Isolation	Basic / Double		Basic DALI to PRIM / Double DALI to SEC
ENVIRONMENTAL	Ambient temperature range	-20…+50	°C	
	Max. temperature at T_c test point	80	°C	Measured on t_c point indicated of the prod label, t_a not exceeded
	Max. case temperature in fault condition	110	°C	
	Storage temperature range	-40…+85	°C	
	Permitted rel. humidity during operation	5 – 85	%	Not condensing
	Surge capability	1 2	kV	L to N according to EN 61547 L+N to GND plane
	Environmental rating	Indoor		
	IP protection class	IP 20		
	Mains switching cycles	> 100000	cycles	
	Expected ECG lifetime	30000	h	@ t_a = 50°C, t_c MAX,10% failure rate, always ON
		50000	h	@ t_a = 50°C, t_c MAX,10% failure rate, 14 h ON and 10 h stand-by per day
		100000	h	@ t_c - 10°C and 10% failure rate, 14 h ON and 10 h stand-by per day
	No-load proof	Yes		Auto recovery
	Intended for no-load operation	No		
	Overheating protection	Yes		Auto recovery
	Overload protection	Yes		Auto recovery + Smart Power
	Short-circuit protection	Yes		Auto recovery

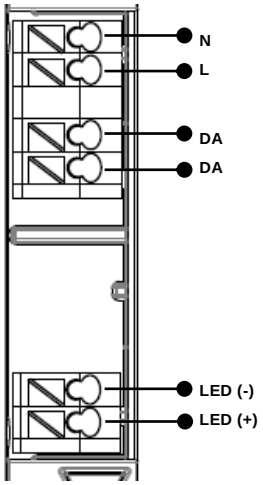
	Item	Value	Unit	Remarks / Condition
DIMENSIONS	Height	29.5	mm	
	Length	103	mm	
	Width	67	mm	
	Weight	155	g	
	Mounting holes interaxis	94 × 58	mm	
	Casing material	Plastic		White
	Type of connection	0,5 – 1,5	mm²	Push-in terminals
	Wire preparation length	7 / 8	mm	Input / output terminals

Protection

Over temperature, Overload, Short-circuit, Input overvoltage, Output overvoltage. Reversible.

Product drawing





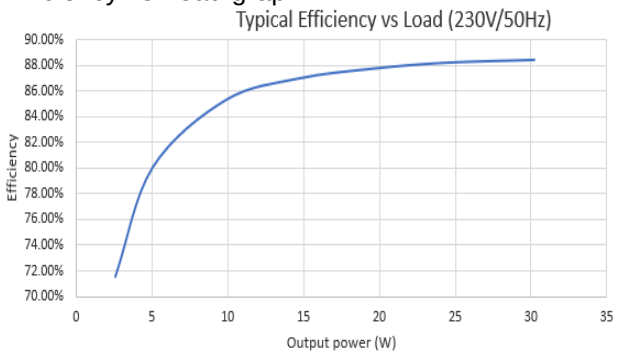
INPUT	Terminals	Wago 255 or equivalent		
	Wire peeling length	7 - 8	mm	
	Cable cross section	0.5 – 1.5	mm²	Recommended cables for AC input: NYM-J 5x1,5 NYM-J 4x1,5 NYM-J 3x1,5 H05 VV-F 3x1,5 H05 VV-F 3x1 H05 VV-F 3x0,75
OUTPUT	Terminals	Wago 255 equivalent		1 LED+ / 1 LED-
	Wire peeling length	7 - 8	mm	
	Cable cross section	0.75 – 1.5	mm²	Recommended cables: NYM-J 5x1,5 NYM-J 4x1,5 H05 VV-F 3x1,5 H05 VV-F 3x0,75 H05 VV-F 2x1 H03 VV-F 3x0,75 2xAWG 22 jacketed cable E14800 2xAWG 22 single wires E254881

Remarks:
- For built-in installations 0.5~1.5 mm², for independent installation 0.75~1.5 mm².
- Powering on the driver without LED load or secondary switching is not allowed.

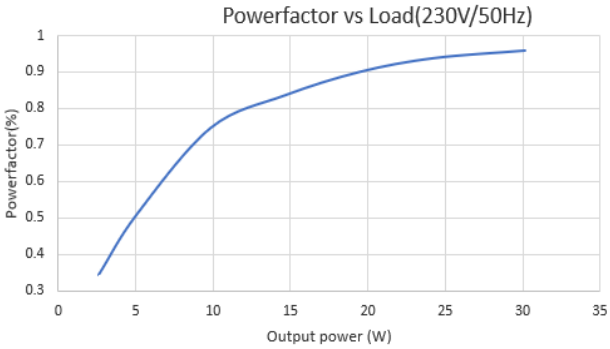
LED wire length

The wire length from the ECG to the LED module can reach 10 m with verified EMI.

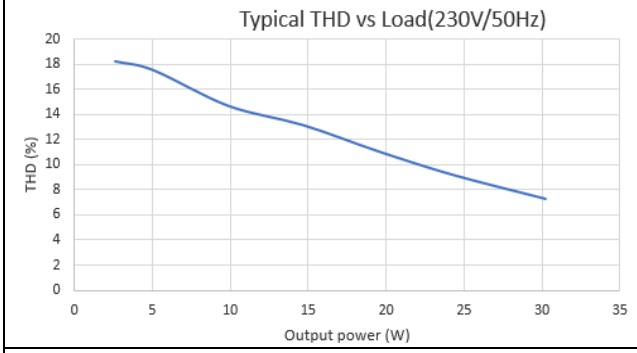
Efficiency vs Load graph



PF vs Load

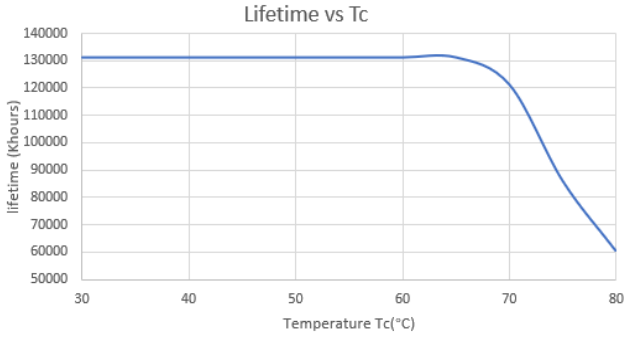


THD vs Load

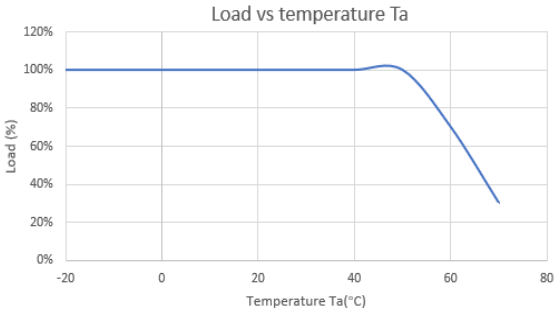


— OTi DALI 30/220-240/24 1CH

Lifetime vs Temperature Tc

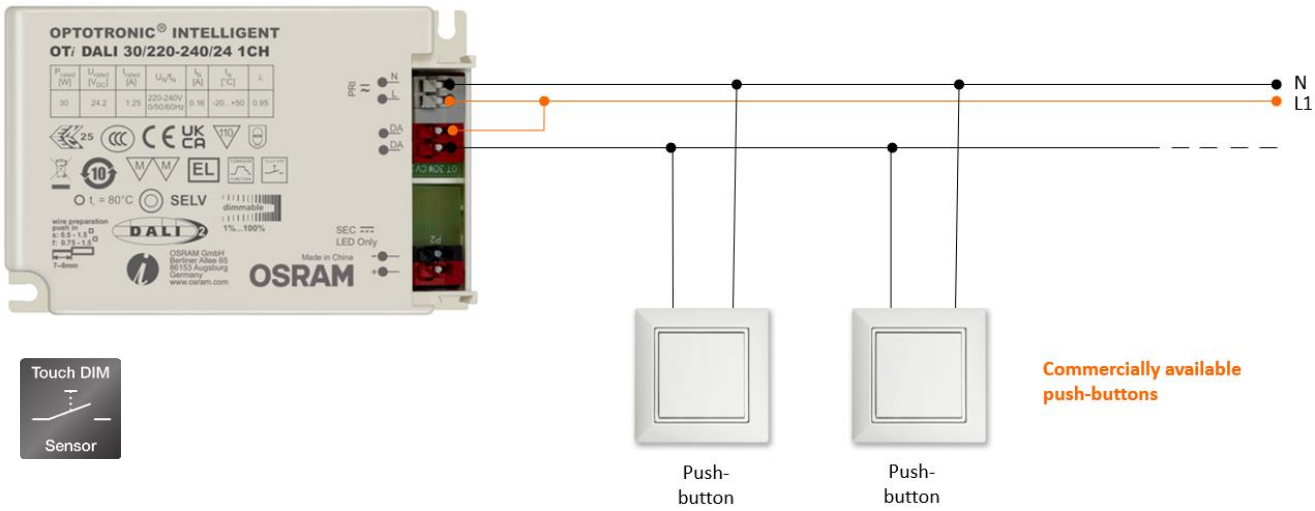


Load vs Temperature Ta



Touch DIM

This driver supports Touch DIM operation, which enables an easy control of light by means of a push-button and additional Presence Sensors and/or Light Sensor directly connected to the DALI terminals. No further programming is necessary, unless additional functions are to be implemented, like Corridor Function, fading time, dimming limit levels and so on. For these additional features, the Tuner for Tronic (T4T) is suggested as a convenient tool. For more information, please refer to OSRAM on-line documentation and catalogue.



ADDITIONAL INFORMATION

- The Touch DIM input voltage ranges from 10 Vac to 264 Vac and has single insulation from mains.
- DALI and Touch DIM must never be used at the same time: control is achieved either with DALI controller or with the Touch DIM function (self-recognized and stored at the first Long Press following 5 s without DALI frames after last turn-on or previously programmed via DALI).
- Up to 20 ECGs can be controlled via direct push-button use. The number of push-buttons is limited by the sum of the overall cable length between switch(es) and the connected ECGs: maximum length should not exceed 25 m. In case of longer distances, a small 12 V transformer (AC buttons only) or a DALI repeater must be used to overcome line capacitance.

Touch DIM operation

The following item-list briefly describes the use of push-button for brightness control:

- Switching the lamp on/off: Short Press (< 0,5 s).
- Dimming: Long Press (> 0,5 s); the dimming direction is changed with each press.
- Store reference value: double-click (press twice within 0,4 s) while lamp is *On* → Switch to *Mode 2*.
- Delete reference value: double-click while lamp status is *Off* → Switch to *Mode 1*.
- Long Press while lamp status off: the lamp is switched on at the minimum dimmer setting and faded up until the push-button is released.

Operating Modes

- Mode 1: the switch-on value is always the last brightness/color before the lighting was switched off
- Mode 2: the switch-on value is the value stored by double clicking (default mode)

Re-synchronization

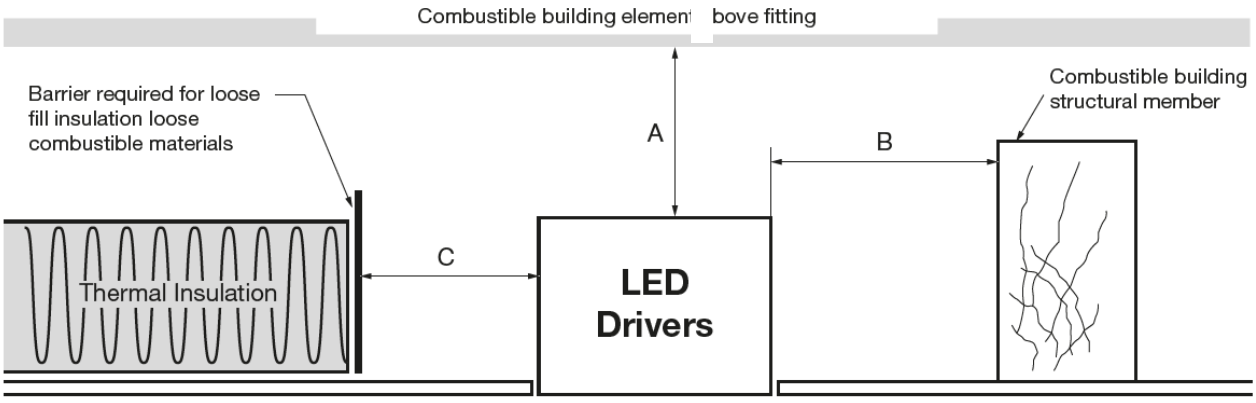
In case of many ECGs connected to the same Touch DIM buttons, there is a chance that an ECG will operate out of synchronism with the others (different on/off state or dimming level).

To have all of them back in synchronism, just apply a Long – Short – Long button press sequence, and in case apply a double-click afterwards to store a new common reference level.

NON-IC

The independent LED driver cannot be abutted against or covered by normally flammable materials of used in installations where building insulation or debris is, or may be, present in normal use. No use for residential installations.

Installation Guide



A=B=C≥10mm

For Australia and New Zealand: the minimum clearance distance from the top and sides of the control gear to normally flammable building elements is A=B=C≥10mm, this clause does not apply when the LED driver is built-in the luminaries

Remarks

- **Product performances below minimal load condition**: the output power is still generated if the load is below the minimum output power (2.42 W), without any safety risk, but performances regarding THD, EMI, etc. are not guaranteed. See typical operation window graph for details.
- **Output short circuit protection**: the short circuit current is limited without damaging the unit. The short circuit protection is self-restoring.
- **Output overload protection**: in case of overload (< 125%), the device automatically dims down the output to keep the average power within 30 W and let the LED load warm-up. When the load exceeds the 125% of maximum nominal output power, the LED load will blink to manifest a fault condition, till the short circuit limit (> 200%).
- **Input over voltage protection**: the ECG is capable of having input of max 350 V for 2 hours. To prevent damages to the unit, driver performs auto switch off when input voltage is > 280 V_{ac}, therefore driver operation in this abnormal condition is not guaranteed. The over-voltage protection is self-restoring.
- **Lamp failure detection**: the minimum load that doesn't trigger open circuit detection is 2.42W.
- **No load operation**: do not put a switch between ECG and load.
- **Over temperature protection**: the driver is protected against temporary overheating, so it automatically dims down when t_c is exceeded, and eventually turns off. The protection is self-restoring.
- **Emergency lighting:** this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22, with emergency default output factor EOFI = 0.2, EOFV = 1. The value is programmable

up to EOFI = 0.2, EOFV = 1 with P_{max} 6 W and related duration time of 10 h at least. Function in emergency is ensured up to t_a = 80°C and t_c = 85°C.

- **Application:** the driver is intended to manage 24 V LED light sources like – but not limited to – OSRAM LINEARlight FLEX®, Tec Flex LED flexible strips, GinoLED Flex LED flexible strips, Value Flex LED flexible strips, OSRAM BackLED® and BoxLED® modules.
- **Ecodesign regulation information:**
  Intended for use with LED modules only. Separated control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centers and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Optional accessory*

OT CABLE CLAMP B-STYLE
4052899077881

*: for independent application use. Double or reinforced insulation between live parts and external parts which contact with the luminaire

Standards

EN 61347-1
EN 61347-2-13
EN 61547
EN 61000-3-2
EN 60598-2-22
EN 62384

Ordering information

Product name	EAN 10	EAN 40	Pieces / Box
OTi DALI 30/220-240/24 1CH	4062172329767	4062172329774	30

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