

OTi DALI 80/220-240/24 1-4 CH OTi DALI 50/220-240/24 1-4 CH

24 V DALI Constant Voltage LED driver

Dimmable range 0,1% - 100%

Benefits:

Slim form factor for mounting on the cove or in linear luminaires

From 1 to 4 channels to arbitrary distribute the power

Long lasting and high reliability

EL compliant

Applications: cove lighting, wall washer corridor, handrail, hospitality luminaires

Approvals (Under preparation if not shown on label)



L	345 mm
L1	303 mm
B	32 mm
H	22 mm

Housing material: plastic, white

Product Features

- 1 up to 4 DALI addressable channels set by DIP switch
- Lamp Failure detection
- Slim form factor
- Touch DIM functionality
- Suitable for Class I and Class II luminaires
- Smart Power Supply
- Screw terminal blocks
- Mains voltage: 220 – 240 V_{AC}
176 – 276 V_{DC}
- SELV, U_{out}: 24 V
- Overload protection
- Over temperature protection
- tc max = 85/70 °C OTi80/OTi50
- Wide t_a range -20 ... +45 °C
- 50'000 h lifetime at t_c = 45 °C
- 5 years guarantee

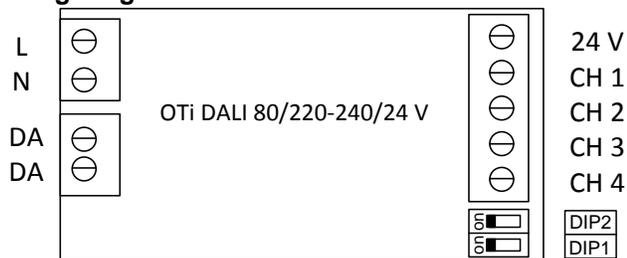
Electrical Specifications

	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	V	
	Nominal frequency	0 / 50 / 60	Hz	
	AC voltage range	198 – 264	V	
	DC voltage range	176 – 276	V	
	Maximum voltage	350	Vac	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	OTi 80: 0,39 OTi 50: 0,26	A	At 230 Vac
	Total Harmonic Distortion (THD)	< 5	%	Full load, 230 Vac, 50 Hz / 60 Hz see graphs
	Power factor	0,98		Typical, Full load, 230 Vac, 50 Hz / 60 Hz, see graphs
	Efficiency	OTi 80: 93 OTi 50: 92	%	Typical, Full load, 230Vac, 50Hz, see graphs
	Standby Power (by DALI)	< 500	mW	230Vac, 50Hz typical 360 mW
	Protection class	II		Suitable for safety class I and II luminaires
	Inrush current	OTi 80: 48 Apk / 220 us OTi 50: 43 Apk / 160 us		
	Max. units per circuit breaker	OTi 80: B16= 10 / B10= 6 OTi 50: B16= 15 / B10= 9		
OUTPUT	Nominal voltage	24,2	V	
	Voltage accuracy	+/- 3	%	
	Voltage ripple	< 5	%	Ripple / average @ 100 Hz; Full load
	Power range	OTi 80: 0 – 80 OTi 50: 0 – 50	W	Power Factor, Harmonics and EMI verified between: 30-80 W 18-50 W
	Maximum power	OTi 80: 80 OTi 50: 50	W	LED output
	Galvanic isolation	SELV		
	DC Output power (EL)	15	%	Preset value, adjustable by Tuner4Tronic
DIMMING	Dimming control	DALI 2.0		DALI ed2 compatible, TouchDIM
	Dimming range	0,1 – 100	%	
	Dimming technique	PWM		
	PWM frequency	1	kHz	
	Galvanic Insulation	Basic / Double		Basic DALI to Primary / Double DALI to Secondary
ENVIRONMENTAL	Ambient temperature	-20 ÷ +45	°C	
	Maximum case temperature t_c	OTi80: 85 OTi50: 70	°C	Measured on t_c point indicated of the prod label, t_a not exceeded
	Max. case temp. in fault condition	115	°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	> 200'000		
	Expected lifetime	50'000 70'000	h	$t_c = 85^\circ\text{C} - 0,2\% / 1'000 \text{ h failure rate}$ $t_c = 70^\circ\text{C} - 0,1\% / 1'000 \text{ h failure rate}$

Protections

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

Wiring Diagram

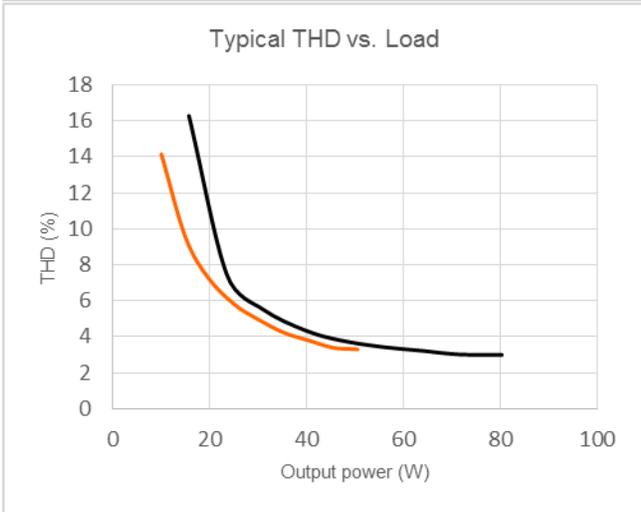
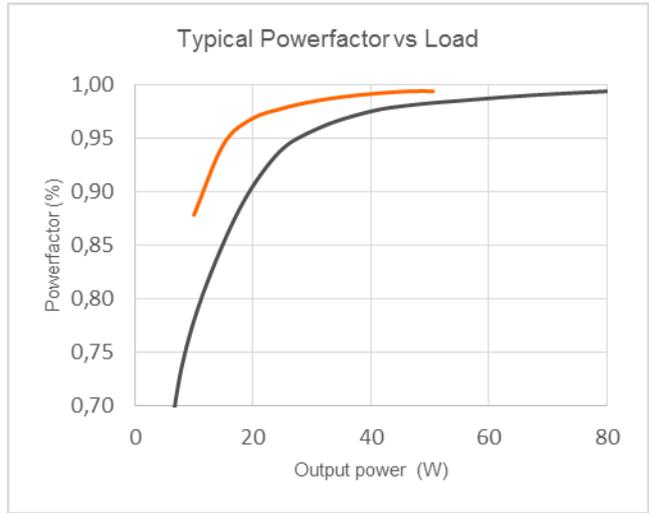
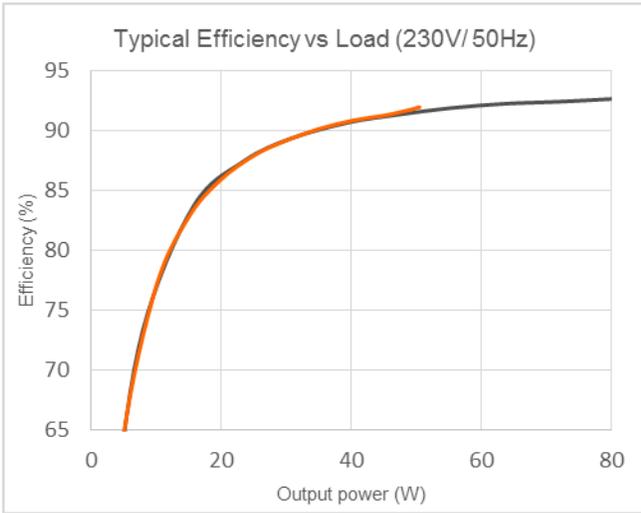


DIP switch for channel configuration

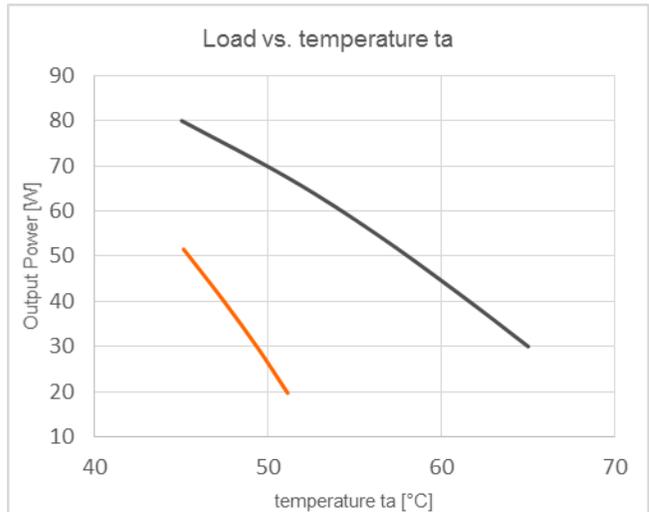
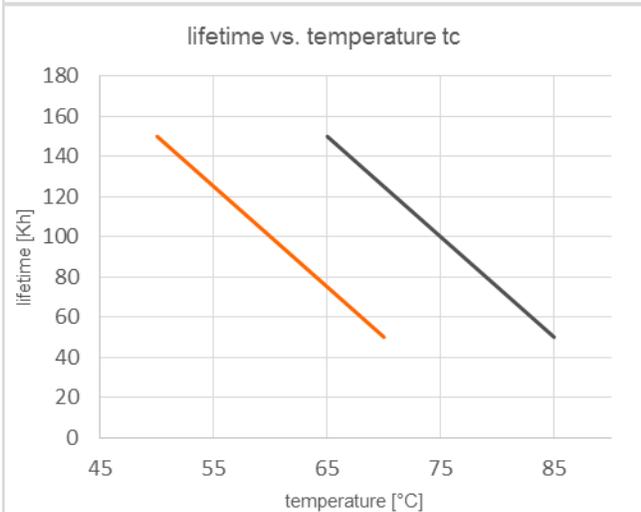
- Input wires cross section: 0,5 - 2,5 mm²
- Wire peeling length: input 6 mm output 5 mm
- Load wires length: 10 m verified

Output wires cross section 0,2 – 1,5 mm²

OPTOTRONIC® LED Power Supply OTi DALI 80/220-240/24 1-4 CH Product Data Sheet
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Configuration	DIP1	DIP2
1- channel device (1 DALI address): 80 W (50 W) at channel 1	ON	ON
2- channel device (2 DALI addresses): 80 W (50 W) split between channel 1 and 2	OFF	ON
3- channel device (3 DALI addresses): 80 W (50 W) split among channel 1, 2 and 3	ON	OFF
4- channel device (4 DALI addresses): 80 W (50 W) split among channel 1, 2, 3 and 4	OFF	OFF

Remarks

- **Input over voltage protection:** mains up to 350 Vac, for 2 hours maximum, will not destroy neither the unit nor the load; shut down of load might occur in this condition.
- **Output overload protection:** the unit automatically dims down to keep the output power below 80 W / 50 W.
- **No load operation:** Do not put a switch between load and unit.
- **Over temperature protection:** the unit is protected against temporary overheating by automatic dimming down when t_c exceeds. The protection is self-restoring.
- **Touch current:** lower than 0,7 mA, according to EN 60598-1 ann. G and EN 61347-1 ann. A.
- **Lamp Failure detection:** minimum load per channel that not trigger open circuit detection is 7.5W for OTi80 and 4.5W for OTi50.
- **Emergency lighting:** this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22, with emergency output factor EOFI=0,15 for OTi80 and EOFI=0,24 for OTi50 (default value, can be programmed up to EOFI=1 with Pmax 12 W) and related duration time of 10 h at least. Function in emergency is ensured up to $t_a=80^{\circ}C$ and $t_c=96^{\circ}C$.

Standards

EN 61347-1
 EN 61347-1
 EN 61347-2-13
 EN 61547
 EN 61000-3-2
 EN 62384
 EN 60598-2-22
 EN 62386

Ordering information

Product name	Type	EAN10	EAN40	Pieces / box
OTi DALI 80/220-240/24 1-4 CH	AB4327800DG	4052899452893	4052899452909	20
OTi DALI 50/220-240/24 1-4 CH	AB4659400DG	4052899452916	4052899452923	20

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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.
 Take heed of additional safety and handling notes. Prior to production, the design, including dimensions, is subject to modification.
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