

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% - 100%

Benefits

Slim form factor for mounting on the cove or in linear luminaires
From 1 to 4 channels to arbitrary distribute the power
Dimming down to zero - range 0 ... 100%
Smooth transition to dark, minimum light 0,1%
EL compliant

Applications

Cove lighting, wall washer corridor, handrail, hospitality luminaires

Approval marks



In preparation, if not already printed on product label



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

Product Features

- 1 up to 4 DALI addressable channels set by DIP switch
- DALI steps: 0;1;...254
- Minimum light 0,1%
- Lamp Failure detection
- Slim form factor
- Touch DIM functionality
- Suitable for Class I/II luminaires
- Mains voltage: 220 – 240 V_{AC}
176 – 276 V_{DC}
- SELV, U_{out}: 24 V
- Overload protection
- Over temperature protection
- t_c max = 85/70 °C OTi80/OTi50
- Wide t_a range -20 ... +45 °C
- 50'000 h lifetime at t_c
- 5 years guarantee

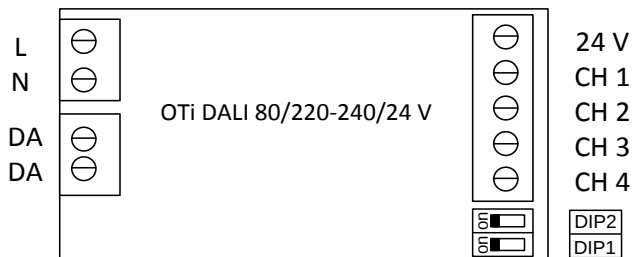
Electrical specifications

	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	V	
	Mains frequency	0 / 50 / 60	Hz	
	Input voltage AC	198 – 264	V	
	Input voltage DC	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 λ	0,98		Typical, Full load, 230 Vac, 50 Hz / 60 Hz, see graphs
	ECG Efficiency	OTi 80: 93 OTi 50: 92	%	Typical, Full load, 230Vac, 50Hz, see graphs
	Power loss in stand-by mode	< 500	mW	230Vac, 50Hz typical 360 mW
	Protection class	II		Suitable for safety class I and II luminaires
	Suitable for fixtures with prot. Class	I / II		
	Inrush current	OTi 80: 48 Apk / 220 us OTi 50: 43 Apk / 160 us		
	Max ECG no. on circuit breaker 10 A (B)	OTi 80: B10= 6 OTi 50: B10= 9		
	Max ECG no. on circuit breaker 16 A (B)	OTi 80: B16= 10 OTi 50: B16= 15		
	Max ECG no. on circuit breaker 25 A (B)	OTi 80: B25 =18 OTi 50: B25= 27		
OUTPUT	Nominal output voltage	24,2	V	
	Voltage accuracy	+/- 3	%	
	Voltage ripple	< 5	%	Ripple / average @ 100 Hz; Full load
	Nominal output power	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
	U-OUT (working voltage)	24,2	V	
DIMMING	Dimming interface	DALI 2.0		DALI ed2 compatible, TouchDIM
	Dimming range	0 – 100	%	DALI dimming steps (0-254)
	Dimming method	PWM		
	PWM frequency	1	kHz	
	Galvanic Isolation	Basic / Double		Basic DALI to Primary / Double DALI to Secondary
ENVIRONMENTAL	Ambient temperature range	-20 ÷ +45	°C	
	Max. temperature at t_c test point	OTi 80: 85 OTi 50: 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	
	Permitted rel. humidity during operation	5 – 85	%	Not condensing
	Surge capability (L/N)	1	kV	L/N acc to. EN 61547
	Environmental rating	Indoor		

	IP protection class	IP 20		
	Mains switching cycles	> 200'000		
	Expected lifetime	50'000 70'000	h	t _c = 85°C - 0,2% / 1'000 h failure rate t _c = 70°C - 0,1% / 1'000 h failure rate
	No-load proof	Yes		
	Overheating protection	Yes		Automatically restart
	Overload protection	Yes		Automatically restart
	Short-circuit protection	Yes		Automatically restart
	Type of connection, output side			0,2 – 1,5 mm ²
DIMENSIONS AND MATERIAL	Height	32	mm	
	Length	345	mm	
	Product weight	340	g	
	Width	22	mm	
	Casing material	Plastic		
	Wire preparation length, input side	5	mm	
	Wire preparation length, output side	5	mm	
	Mounting hole spacing, length	303	mm	

Protections

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



Dip switch for channel configuration

- Input wires cross section: 0,5 - 2,5 mm²
- Output wires cross section 0,2 – 1,5 mm²
- Wire peeling length: input 6 mm output 5 mm
- Load wires length: 10 m verified

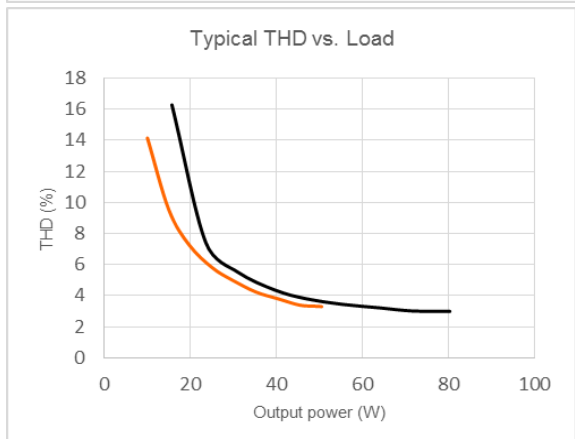
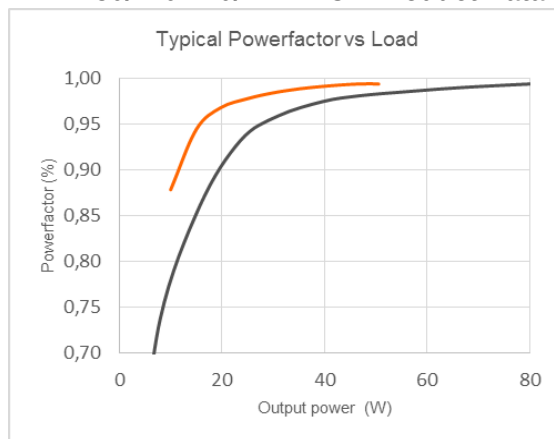
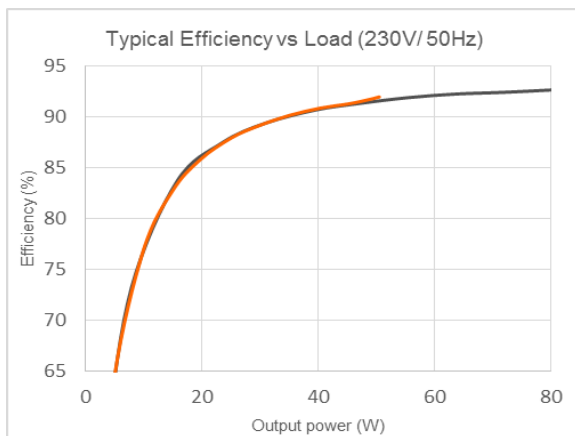
Wiring

LED wire length

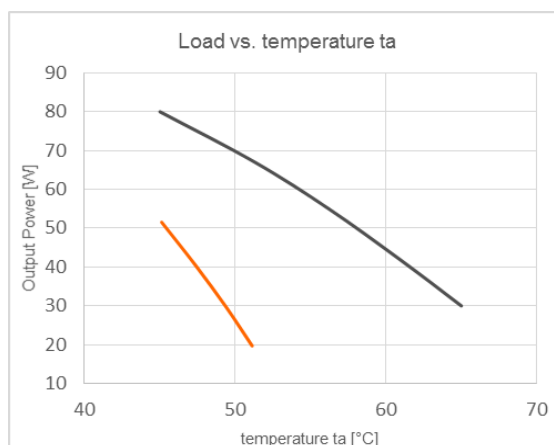
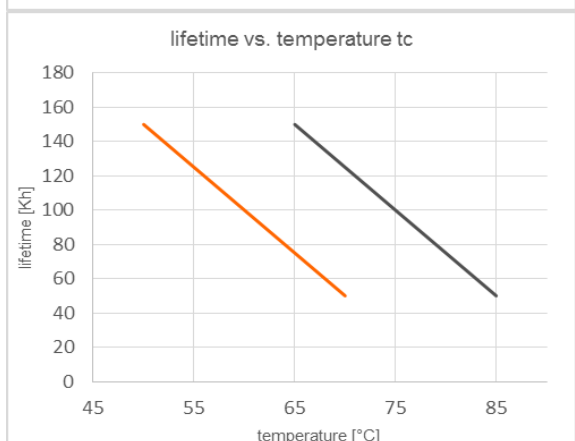
OSRAM internally verified the wire length from LED driver to LED module at full load is up to 50mt
Chose a proper wire thickness to reduce the voltage drop effect

wires	mm ²	1	1,5	2,5	4
cross section	AWG	17	15	13	11
maximum cable length		10m	18m	30m	45m

The values are indicative. Each connection may increase the total voltage drop



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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 P_{max} 12 W) and related duration time of 10 h at least. Function in emergency is ensured up to $t_a=80^{\circ}\text{C}$ and $t_c=96^{\circ}\text{C}$.

Standards

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

Ordering information

Product name	Type	EAN 10	EAN 40	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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