

OTi DALI 80/220-240/24 TW
OTi DALI 50/220-240/24 TW

24 V DALI Constant Voltage LED driver

Dimmable range 0% - 100%

Benefits

Slim form factor for mounting on the cove or into luminaire
 DALI Device Type 8 for Tunable White (arbitrary load distr)
 Dimming down to zero - range 0 ... 100%
 Smooth transition to dark, minimum light 0,1%
 EL compliant

Applications

Cove lighting, wall washing, corridors, handrails, hospitality luminaires

Approvals



In preparation, if not already printed on product label



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

Product Features

- **DALI Device Type 8 for Tunable white**
- DALI steps: 0;1;...254
- **Minimum light 0,1%**
- **Lamp Failure detection** (open and short circuit detection)
- Suitable for Class I/II luminaires
- Smart Power Supply
- Wide t_a range -20 ... +45 °C
- 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
- 50'000 h lifetime at t_c
- 5 years guarantee

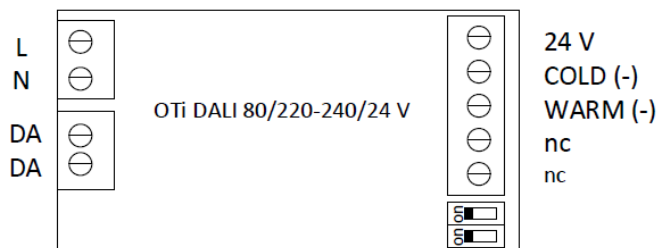
Electrical specification

	Item	Value	U nit	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	Va c	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	m W	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 =16 OTi 50: B25= 25		
OUTPUT	Nominal output voltage	24,2	V	
	Voltage accuracy	+/- 3	%	
	Voltage ripple	< 5	%	Ripple / average At 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	Maximum total LED output (sum of both channels)
	Galvanic isolation	SELV		
	DC Output power (EL)	15	%	Preset value, adjustable by Tuner4Tronic
	U-OUT (working voltage)	24,2	V	
DIMMING	Dimming interface	DALI (DT8)		
	Dimming range	0 – 100	%	DALI dimming steps (0-254)
	Dimming method	PWM		
	PWM frequency	1	kH z	
	Galvanic Isolation	Basic / Double		Basic DALI to Primary / Double DALI to Secondary
ENVIRONMEN	Ambient temperature range	-20 ÷ +45	°C	
	Max. temperature at tc test point	OTi 80: 85 OTi 50: 70	°C	Measured on tc point indicated of the prod label, ta 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 ECG 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	Terminal		0,2 – 1,5 mm2
DIMENSIONS MATERIAL	Height	32	m m	
	Length	345	m m	
	Product weight	340	g	
	Width	22	m m	
	Casing material	Plastic		
	Wire prep. length, input side	5	m m	
	Wire prep. length, output side	5	m m	
	Mounting hole spacing, length	303	m m	

Protection

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



- Input Wires cross section 0,75 – 2,5 mm²
- Output wire cross section 0,2 – 1,5 mm²
- Wire peeling length: 5 mm

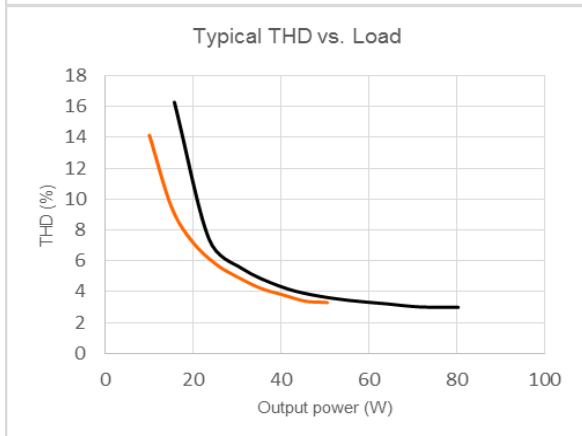
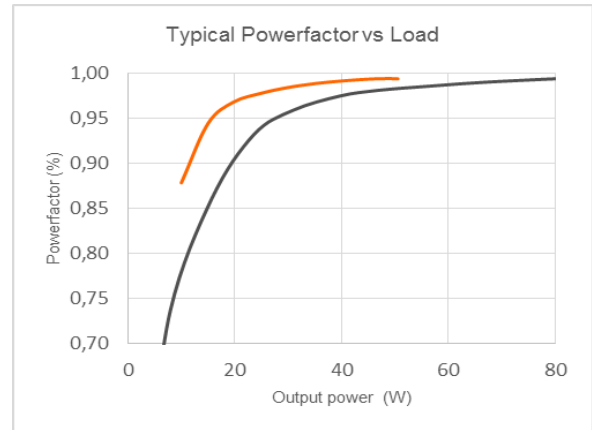
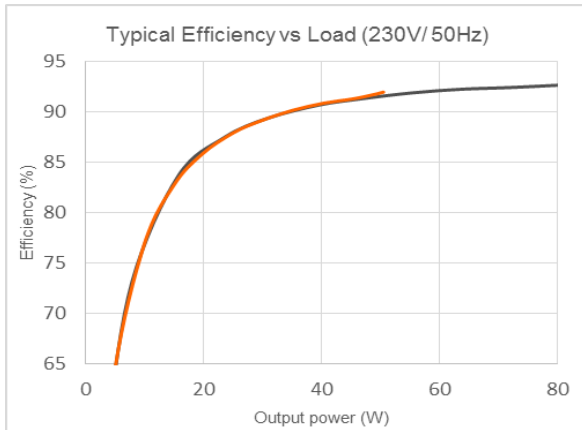
Wiring

LED wire length

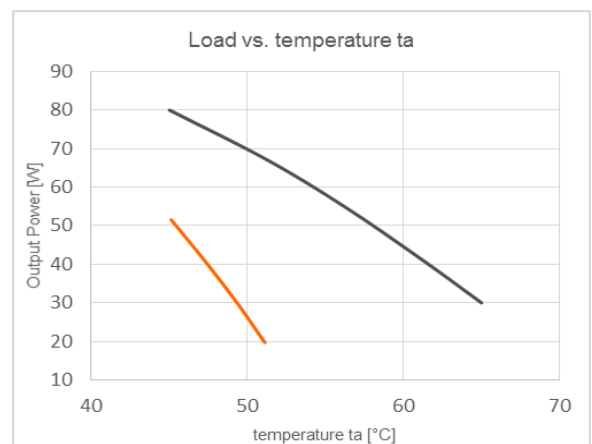
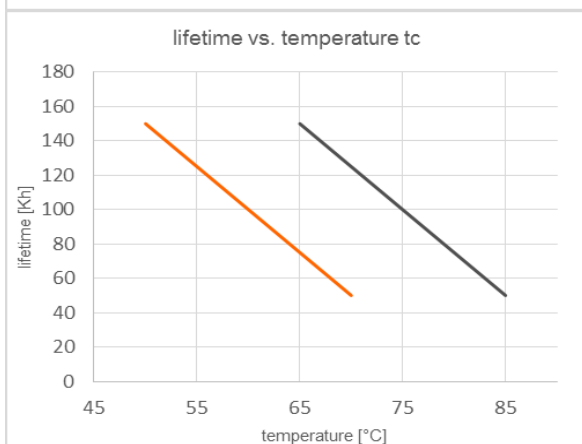
OSRAM verified internally that the wire length from LED driver to LED module at full load is up to 50mt
 Choose a proper wire thickness to reduce the voltage drop effect

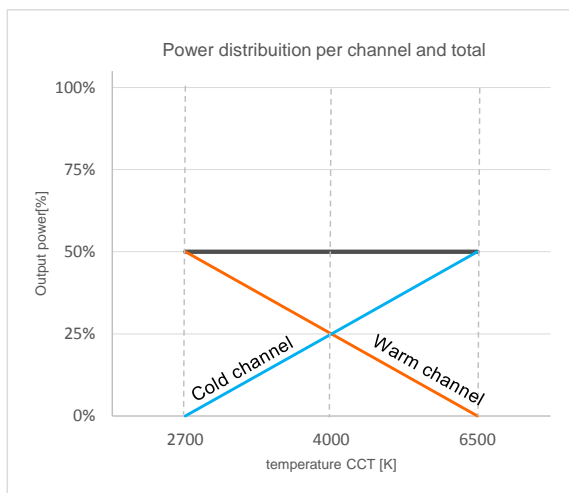
wires	mm2	1	1,5	2,5	4
cross section	AWG	17	15	13	11
maximum cable length		10m	18m	30m	45m

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



— OTi DALI 80/220-240/24 TW
 — OTi DALI 50/220-240/24 TW





Total LED load shall be divided in
 Warm LED load — (orange line)
 Cold LED load — (blue line)

LED load may be also asymmetrical

The sum of the LED load of Warm and Cold channels cannot exceed the maximum power stated in the table.

OSRAM system match:

When the OTI DALI 24V TW is used in combination with OSRAM LINEARlight flex or Signage module, the following matching table can be use as proven system match. (cfr TDS of LLF for Tp definition)

	Tp rated			
	Oti 50/24 TW		Oti 80/24 TW	
	min module length [mm]	max module length[mm]	min module length [mm]	max module length[mm]
LF4000TW-G3-82765-02	525	1500	900	2400
LF3000TW-G3-82765-03	675	1800	1050	3000
LF2000TW-G3-82765-04	1050	3000	1725	4875
LF1200TW-G3-82765-09	1800	5325	2925	8625
	min module quantity	max module quantity	min module quantity	max module quantity
BackLED®TW Plus G2	10	11	16	17

	Tp -20°C			
	Oti 50/24 TW		Oti 80/24 TW	
	min module length [mm]	max module length[mm]	min module length [mm]	max module length[mm]
LF4000TW-G3-82765-02	450	1200	675	1875
LF3000TW-G3-82765-03	525	1500	825	2400
LF2000TW-G3-82765-04	825	2475	1350	4050
LF1200TW-G3-82765-09	1575	4725	2550	7500
	min module quantity	max module quantity	min module quantity	max module quantity
BackLED®TW Plus G2	10	11	16	17

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 $t_a=80^{\circ}\text{C}$ 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	EAN 10	EAN 40	Pieces / Box
OTI DALI 80/220-240/24 TW	4052899490758	4052899490765	20
OTI DALI 50/220-240/24 TW	4052899490772	4052899490789	20

OSRAM GmbH

Head Office:

Marcel-Breuer-Strasse 6
80807 Munich, Germany
Phone +49 89 6213-0
Fax +49 89 6213-2020
www.osram.com

