

OTi DALI 160/220-240/24 TW

24 V DALI Constant Voltage LED driver

Dimmable range 0% - 100%

Benefits

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



Applications

Cove lighting, wall washer corridor, hospitality luminaires

Approval marks



L	300 mm
L1	258 mm
B	50 mm
H	35 mm

Housing material: plastic, white

Product Features

- **DALI Device Type 8 for Tunable white**
- Mains voltage: 220 – 240 V_{AC}
176 – 276 V_{DC}
- DALI steps: 0;1;...254
- SELV, U_{out}: 24 V
- **Minimum light 0,1%**
- Overload protection
- **Lamp Failure detection**
(open and short circuit detection)
- Over temperature protection
- Suitable for Class I and Class II luminaires
- t_c max = 90°C
- Smart Power Supply
- Wide t_a range -20 ... +45 °C
- Screw terminal blocks
- 50'000 h lifetime at t_c = 90°C
- 5 years guarantee

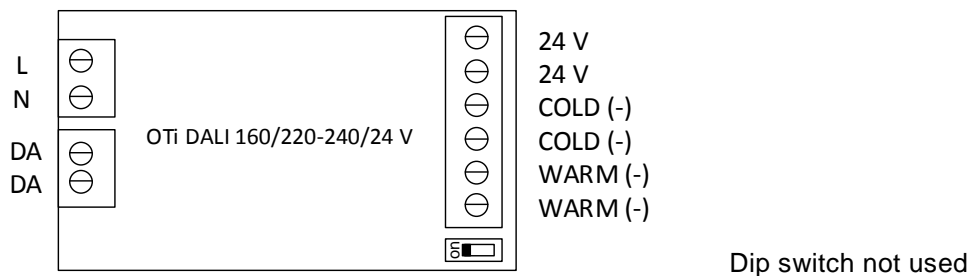
Electrical specifications

	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 vooltage	264	V	
	Nominal current	770	mA	At 230 V _{ac} , 50 Hz
	Total Harmonic Distortion (THD)	< 5	%	Full load, 230 V _{ac} , 50 Hz / 60 Hz see graphs
	Power factor	0,99		Typical, Full load, 230 V _{ac} , 50 Hz / 60 Hz, see graphs
	ECG Efficiency	93	%	Typical, Full load, 230 V _{ac} , 50 Hz, see graphs
	Power loss in stand-by mode	360	mW	230 V _{ac} , 50 Hz
	Protection class	II		Suitable for safety class I and II luminaires
	Inrush current	69	A _{pk}	T _{width} 280 us measured at 50% I peak
	Suitable for fixtures with prot. Class	I / II		
		Max ECG no. on circuit breaker 10 A (B)	5	
Max ECG no. on circuit breaker 16 A (B)		8		
Max ECG no. on circuit breaker 25 A (B)		13		
OUTPUT	Nominal output voltage	24,2	V	
	Voltage accuracy	+/- 3	%	
	Voltage ripple	< 5	%	Ripple / average @ 100 Hz; Full load
	Nominal output power	0 – 160	W	Power Factor, Harmonics and EMI verified 60 - 160 W between:
	Maximum power AC	160	W	Maximum total LED output (sum of both channels)
	Maximum power DC	140	W	Maximum total LED output (sum of both channels)
	Galvanic isolation	SELV		
	DC Output power (EL)	15	%	Pre-set value, adjustable by Tuner4Tronic
	U-OUT (working voltage)	24,2	V	
DIMMING	Dimming interface	DALI (DT8)		DALI ed2 compatible
	Dimming range	0 – 100	%	DALI dimming steps (0-254)
	Dimming method	PWM		
	PWM frequency	1	kHz	
	Galvanic Insulation	Basic / Double		Basic DALI to Primary / Double DALI to Secondary
ENVIRONMENTAL	Ambient temperature	-20 ÷ +45	°C	
	Max. temperature at t _c test point	90	°C	Measured on t _c point indicated of the prod label, t _a not exceeded
	Max. case temp. in fault condition	120	°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 = 90°C - 0,2% / 1'000 h failure rate t _c = 85°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 screw		0,5 – 2,5 mm ²
DIMENSIONS MATERIAL	Height	50	mm	
	Length	300	mm	
	Width	35	mm	
	Product weight	418	g	
	Casing material	Plastic		
	Wire preparation length, input side	6	mm	
	Wire preparation length, output side	6	mm	
	Mounting hole spacing, length	258	mm	

Protections

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



- Input wires cross section: 0.5 – 2.5 mm²
- Output wires cross section 0.5 – 2.5 mm²
- Wire peeling length: input 6 mm, output 6 mm

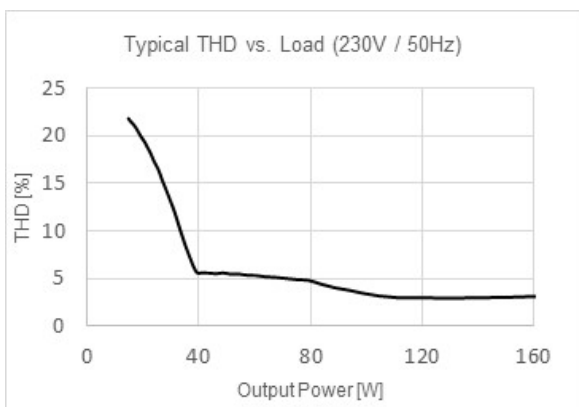
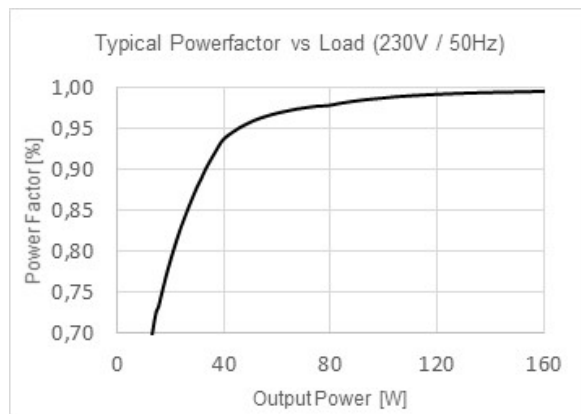
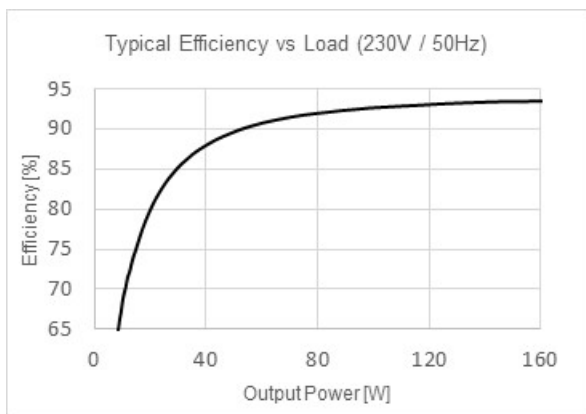
Wiring

LED wire length

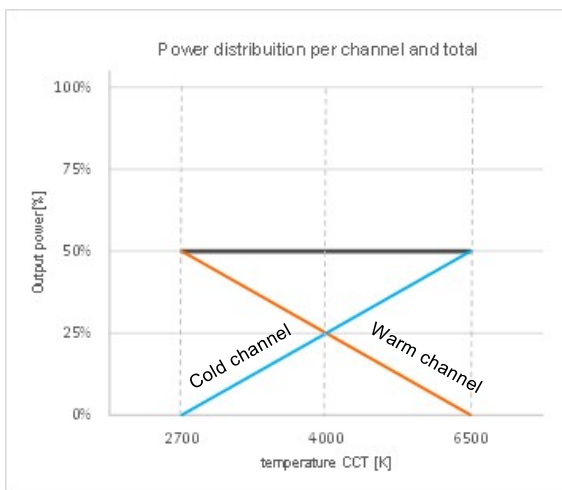
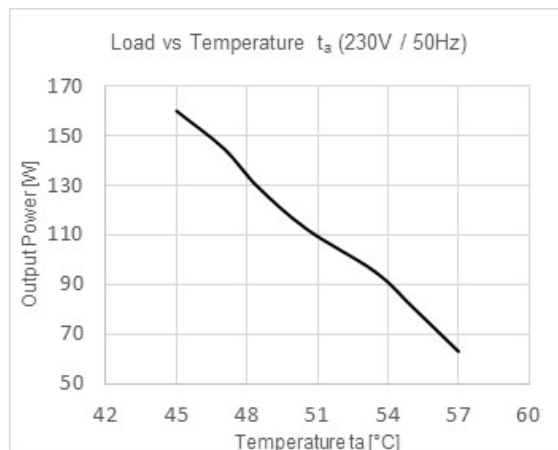
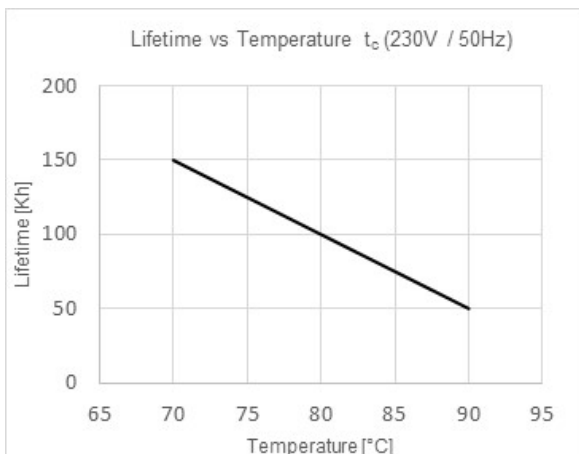
OSRAM internally verified the wire length from LED driver to LED module at full load is up to 50mt
 Chose a proper wire thickness to reduce the voltage drop effect

wires	mm ²	1	1,5	2,5	4	6	10
cross section	AWG	17	15	13	11	9	7
maximum cable length		5m	5m	10m	20m	30m	50m

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



— OTI DALI 160/220-240/24 TW



Total LED load shall be divided in
 Warm LED load —
 Cold LED load —

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 160/220-240/24 TW	
	min module length [mm]	max module length[mm]
LF4000TW-G3-82765-02	1725	4800
LF3000TW-G3-82765-03	2100	5850
LF2000TW-G3-82765-04	3375	9600
LF1200TW-G3-82765-09	5850	16800
	min module quantity	max module quantity
BackLED®TW Plus G2	14	35

	Tp -20°C	
	Oti 160/220-240/24 TW	
	min module length [mm]	max module length[mm]
LF4000TW-G3-82765-02	1350	3750
LF3000TW-G3-82765-03	1650	4650
LF2000TW-G3-82765-04	2700	7800
LF1200TW-G3-82765-09	5100	14850
	min module quantity	max module quantity
BackLED®TW Plus G2	11	25

Remarks

- **Output overload protection:** the unit automatically dims down to keep the output power below 160 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 annex G and EN 61347-1 annex A.
- **Lamp Failure detection:** minimum load per channel that not trigger open circuit detection is 15 W.
- **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 (default value, can be programmed up to EOFI = 1 with P_{max} 21 W) and related duration time of 10 h at least. Function in emergency is ensured up to $t_a = 80^\circ\text{C}$ and $t_c = 110^\circ\text{C}$.

Standards**Ordering information**

EN 62386

EN 61347-1

EN 61347-1

EN 61347-2-13

EN 61547

EN 61000-3-2

EN 62384

EN 60598-2-22

Product name	EAN 10	EAN 40	Pieces / box
OTi DALI 160/220-240/24 TW	4052899986312	4052899986336	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

OSRAM