

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



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

In preparation, if not already printed on product label

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

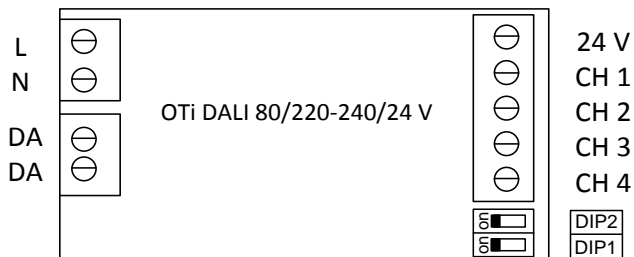
Electrical specifications

| | 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 | h | t _c = 85°C - 0,2% / 1'000 h failure rate |
| | | 70'000 | | 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

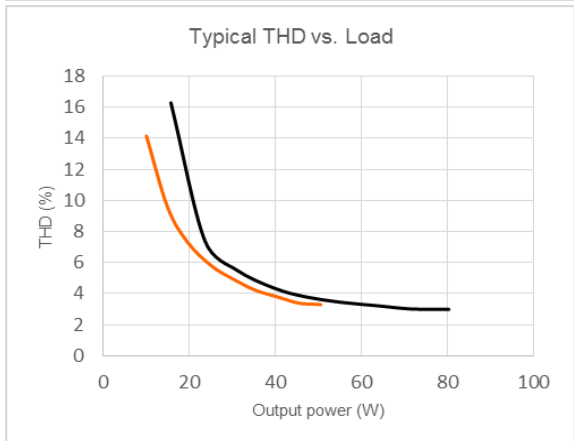
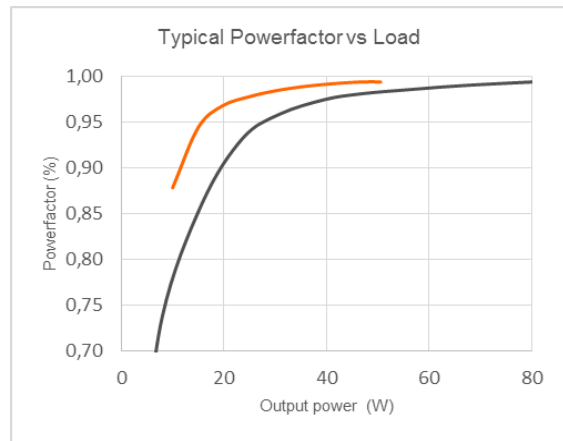
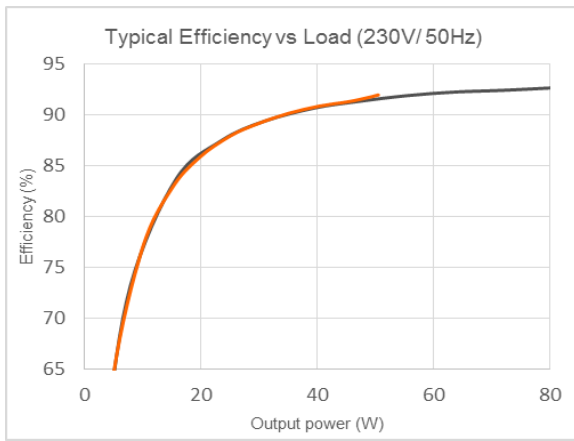
Wiring

LED wire length

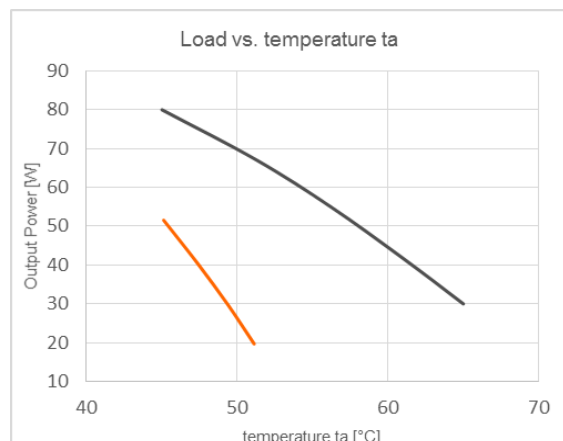
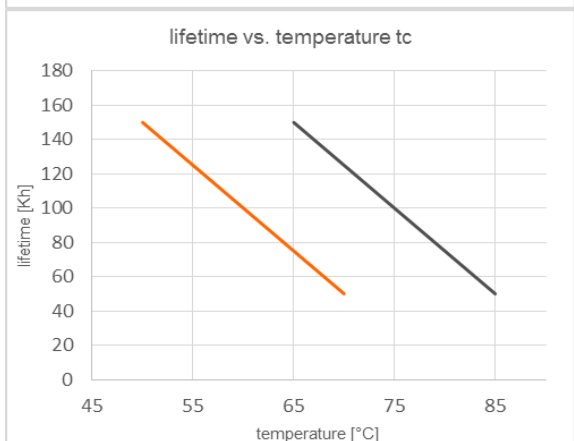
OSRAM internally verified the wire length from LED driver to LED module at full load is up to 50mt
 Chose a proper wire thickness to reduce the voltage drop effect

| | | | | | |
|---------------|-----------------|-----|-----|-----|------|
| wires | mm ² | 1 | 1,5 | 2,5 | 4 |
| cross section | AWG | 17 | 15 | 13 | 11 |
| maximum | 80W | 10m | 18m | 30m | 45m |
| cable length | 50W | 19m | 30m | 45m | +50m |

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



— OTi DALI 80/220-240/24 1-4 CH
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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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