

## OTi DALI 20/220...240/500 NFC S

OPTOTRONIC Intelligent – DALI NFC S | Compact constant current LED driver – Dimmable



### Product family features

- Supply voltage: 220...240 V
- Line frequency: 0 Hz, 50...60 Hz
- Line voltage: 198...264 V
- According to EN 61347-1, 61347-2-13, 62384
- RI suppression: to EN 55015/CISPR 15
- Immunity according to EN 61547
- Type of protection: IP20

### Product family benefits

- Versatile DALI window driver due to flexible output characteristic
- Locking and unlocking of luminaire/driver data
- Easy and fast output current setting via NFC
- Very high efficiency
- High-quality dimming of 1...100 % by amplitude dimming
- DALI-2 certified incl. Parts 251, 252, 253

### Areas of application

- Suitable for downlights, spotlights and LED panels
- Suitable for use in luminaires with flexible current setting
- Installation in emergency lighting systems according to IEC 61347-2-13, appendix J
- Suitable for indoor SELV installations
- Suitable for luminaires of protection classes I and II



## Technical data

### Electrical data

|                                          |                            |
|------------------------------------------|----------------------------|
| Nominal input voltage                    | 220...240 V                |
| Mains frequency                          | 0...60 Hz                  |
| Input voltage AC                         | 198...264 V <sup>1)</sup>  |
| Input voltage DC                         | 176...276 V                |
| Total harmonic distortion                | < 10 % <sup>2)</sup>       |
| Power factor $\lambda$                   | 0.63C...0.95               |
| Efficiency in full-load                  | 88 % <sup>3)</sup>         |
| Inrush current                           | < 20 A <sup>4)</sup>       |
| Max. ECG no. on circuit breaker 10 A (B) | 20                         |
| Max. ECG no. on circuit breaker 16 A (B) | 30                         |
| Surge capability (L/N-Ground)            | 2 kV                       |
| Surge capability (L-N)                   | 1 kV                       |
| Nominal output voltage                   | 20...50 V <sup>5)</sup>    |
| U-OUT (working voltage)                  | 60 V                       |
| Nominal output current                   | 200...500 mA <sup>6)</sup> |
| Default output current                   | 350 mA                     |
| Output current tolerance                 | ±5 %                       |
| Output ripple current (100 Hz)           | < 5 % <sup>7)</sup>        |
| Output PSTLM                             | ≤1                         |
| Output SVM                               | ≤0.4                       |
| Nominal output power                     | 20 W <sup>8)</sup>         |
| Maximum output power                     | 20 W                       |
| Power loss in stand-by mode              | <0.15 W                    |
| Galvanic isolation primary/secondary     | SELV                       |
| Current set                              | DALI / NFC                 |
| Galvanic isolation DALI/mains            | Basic                      |
| Galvanic isolation DALI/output           | SELV                       |
| Networked standby power                  | ≤0.18 W <sup>3)</sup>      |

<sup>1)</sup> Permitted voltage range

<sup>2)</sup> At full load, 220...240 V, 50 Hz / see graphs

<sup>3)</sup> at 230 V, 50 Hz

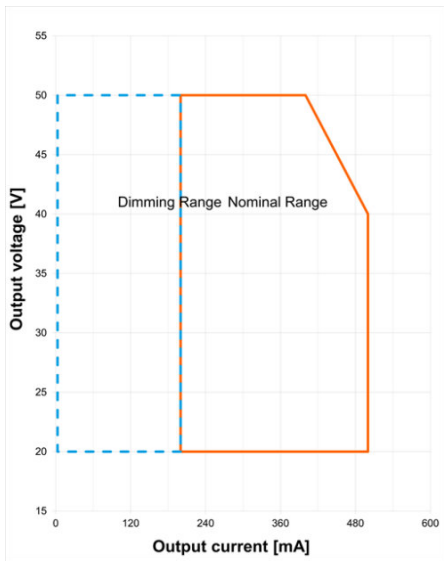
<sup>4)</sup>  $t_{\text{width}} = 200 \mu\text{s}$  (measured at 50 %  $I_{\text{peak}}$ )

<sup>5)</sup> Maximum 60 V

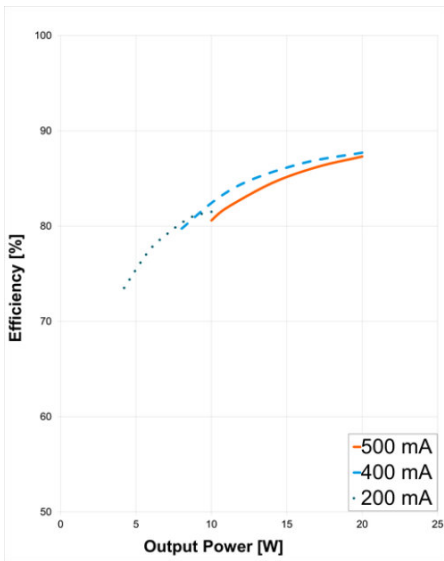
<sup>6)</sup> ±5%

<sup>7)</sup> Ripple average at 100 Hz

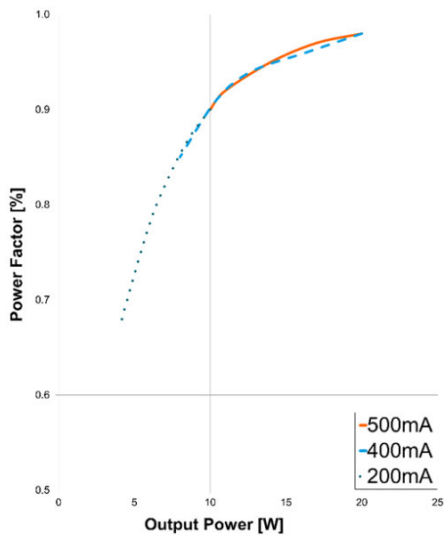
<sup>8)</sup> Partial load 4...20 W



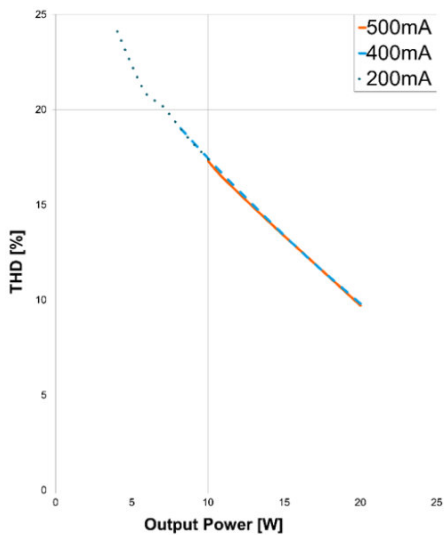
OTI QBM DALI 20 Operating Window



OTI QBM DALI 20 Typical Efficiency vs. Load

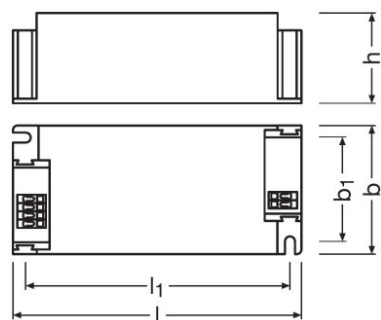


OTI QBM DALI 20 Typical Power Factor vs. Load



OTI QBM DALI 20 Typical THD Vs Load

Dimensions & weight



|                                      |                                         |
|--------------------------------------|-----------------------------------------|
| Mounting hole spacing, length        | 88.0 mm                                 |
| Mounting hole spacing, width         | 34.0 mm                                 |
| Product weight                       | 110.00 g                                |
| Cable cross-section, input side      | 0.2...1.5 mm <sup>2</sup> <sup>1)</sup> |
| Cable cross-section, output side     | 0.2...1.5 mm <sup>2</sup> <sup>1)</sup> |
| Wire preparation length, input side  | 8.0...9.0 mm                            |
| Wire preparation length, output side | 8.0...9.0 mm                            |
| Length                               | 97.0 mm                                 |
| Width                                | 43.0 mm                                 |
| Height                               | 29.5 mm                                 |

<sup>1)</sup> Solid or flexible leads

Colors & materials

|                 |         |
|-----------------|---------|
| Casing material | Plastic |
|-----------------|---------|

Temperatures & operating conditions

|                                          |                        |
|------------------------------------------|------------------------|
| Ambient temperature range                | -20...+50 °C           |
| Maximum temperature at tc test point     | 75 °C <sup>1)</sup>    |
| Max.housing temperature in case of fault | 110 °C                 |
| Temperature range at storage             | -25...85 °C            |
| Permitted rel. humidity during operation | 5...85 % <sup>2)</sup> |

<sup>1)</sup> Maximum at the Tc-point

<sup>2)</sup> Maximum 56 days/year at 85 %

Lifespan

|              |                                |
|--------------|--------------------------------|
| ECG lifetime | 50000 / 100000 h <sup>1)</sup> |
|--------------|--------------------------------|

<sup>1)</sup>  $T_c = 75^\circ\text{C}$ , 0.2% / 1,000 h failure rate /  $T_c = 65^\circ\text{C}$ , 0.1% / 1,000 h failure rate

### Capabilities

|                                        |                      |
|----------------------------------------|----------------------|
| Dimmable                               | Yes                  |
| Dimming interface                      | DALI-2               |
| Dimming range                          | 1...100 %            |
| Dimming method                         | Amplitude Modulation |
| Overheating protection                 | Automatic reversible |
| Overload protection                    | Automatic reversible |
| Short-circuit protection               | Automatic reversible |
| No-load proof                          | Yes                  |
| Intended for no-load operation         | No                   |
| Max. cable length to lamp/LED module   | 2.0 m <sup>1)</sup>  |
| Suitable for fixtures with prot. class | I / II               |
| Type of connection, input side         | Push terminal        |
| Type of connection, output side        | Push terminal        |
| Suitable for through-wiring            | No                   |
| Suitable for emergency lighting        | Yes                  |
| Constant lumen function                | Programmable         |
| Programming interface                  | DALI, NFC            |
| Control interface                      | DALI                 |
| Number of channels                     | 1                    |
| DALI-2 Energy Data                     | Yes <sup>2)</sup>    |
| DALI-2 Diagnostic Data                 | Yes <sup>3)</sup>    |

<sup>1)</sup> Output wires must be routed as close as possible to each other

<sup>2)</sup> Acc. DALI part 252

<sup>3)</sup> Acc. DALI part 253

### Programming

|                        |            |
|------------------------|------------|
| Box programming        | Yes        |
| Tuner4TRONIC           | Yes        |
| Tuner4TRONIC Field App | Yes        |
| Programming device     | DALI / NFC |

### Programmable features

|                     |     |
|---------------------|-----|
| Operating Current   | Yes |
| Constant Lumen      | Yes |
| Lamp Operating Time | Yes |
| Driver Guard        | Yes |
| DALI Settings       | Yes |
| Emergency Mode      | Yes |

Product datasheet

|                        |                   |
|------------------------|-------------------|
| DALI-2 Luminaire Data  | Yes <sup>1)</sup> |
| Configuration Lock     | Yes               |
| Soft Switch Off        | Yes               |
| Dim to Dark            | Yes               |
| TouchDIM + Sensor      | No                |
| Corridor Functionality | No                |
| OEM Key                | No                |

<sup>1)</sup> Acc. DALI part 251

Certificates & standards

|                           |                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval marks – approval | CE / EL / DALI-2 / EAC / CCC / ENEC                                                                                                                                                                             |
| Standards                 | Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1 |
| Protection class          | II                                                                                                                                                                                                              |
| Type of protection        | IP20                                                                                                                                                                                                            |

Logistical data

|                |             |
|----------------|-------------|
| Commodity code | 85044083900 |
|----------------|-------------|

Environmental information

| Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH) |                                                                                                    |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Date of Declaration                                                   | 28-04-2023                                                                                         |
| Primary Article Identifier                                            | 4062172110068                                                                                      |
| Candidate List Substance 1                                            | Lead                                                                                               |
| CAS No. of substance 1                                                | 7439-92-1                                                                                          |
| Safe Use Instruction                                                  | The identification of the Candidate List substance is sufficient to allow safe use of the article. |
| Declaration No. in SCIP database                                      | 65eb4a13-3136-4e8c-bd01-b083d4e8a210                                                               |

Download Data

| File                                                                                |                                                    |
|-------------------------------------------------------------------------------------|----------------------------------------------------|
|  | User instruction<br>OPTOTRONIC LED Power Supply    |
|  | Certificates<br>OTI DALI NFC S CB DE1 63171 270220 |

## Product datasheet

|                                                                                     |                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------|
|    | Certificates<br>OTI DALI 20 NFC S EATON AM31177 050320               |
|    | Certificates<br>OTI DALI 20 NFC S INOTEC AM31177 050320              |
|    | Certificates<br>OTI DALI NFC S RCM CS10925N 180821                   |
|    | Certificates<br>OT ENEC 40038447 260623                              |
|    | Certificates<br>OT EMC 40044675 031022                               |
|    | Declarations of conformity<br>OTI DALI NFC S I CE 4169161 110222     |
|    | Declarations of conformity<br>OTI DALI NFC S I UK DoC 4281113 110222 |
|    | CAD data<br>OTI DALI NFC S IGS 140220                                |
|    | CAD data<br>OTI DALI NFC S STEP 140220                               |
|   | CAD Data 2-dim<br>OTI DALI NFC S CAD2PDF 140220                      |
|  | CAD data 3-dim<br>OTI DALI NFC S CAD3PDF 140220                      |

### Ecodesign regulation information:

Intended for use with LED modules.

The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

### Logistical Data

| Product code  | Product description                | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Volume               | Gross weight |
|---------------|------------------------------------|------------------------------|--------------------------------------|----------------------|--------------|
| 4062172110068 | OTi DALI<br>20/220...240/500 NFC S | Shipping carton box<br>20    | 208 mm x 158 mm x 107 mm             | 3.52 dm <sup>3</sup> | 2315.00 g    |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

### Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on [www.mynosram.com](http://www.mynosram.com) and downloading the Tuner4TRONIC software from the Internet. The Tuner4TRONIC software enables users to access and view the operational data of a luminaire or driver via the corresponding programming interfaces. A password key (Config Lock) must be set up in the driver via the Tuner4TRONIC software in order to control which users can access and view operational data. Follow the instructions for password setup. To grant an external person or company rights to access or view operational data, you can assign password keys. In this case, however, you are responsible for ensuring that the third party concerned takes notice of the information described here. However, OSRAM can read out operating data from devices for maintenance and service purposes even when a password key has been assigned. In individual cases, OSRAM will also use its access rights in order to optimize or improve driver hardware and driver functions. In accordance with data privacy principles, any user of operating data (luminaire manufacturers, third parties with access rights) must ensure that personal data (e.g. name, address, location IDs) are only merged with the prior written consent of the person (end user) concerned. The respective user of the operating data is responsible for providing evidence of consent.

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### Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.