

Light is OSRAM

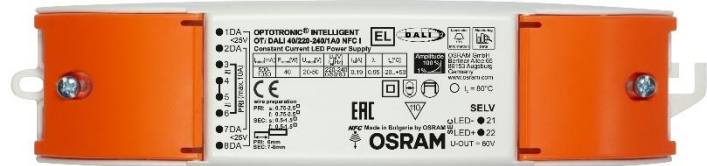
OSRAM

Product data sheet: OPTOTRONIC® OTi DALI 40/220-240/1A0 NFC I

Compact constant current LED driver with DALI Interface

Wide operating area, 1...100%
dimmable

Compact SELV DALI driver
Prepared for the new DALI data standard



Benefits

Super compact SELV DALI LED driver 40W
Prepared for DALI standard (251, 252, 253)
Locking / unlocking of luminaire monitoring data
Fast programming / current set via NFC*
Suitable for emergency lighting units
Amplitude dimming 1...100%
For independent installation
Through-looping of mains and DALI

Applications

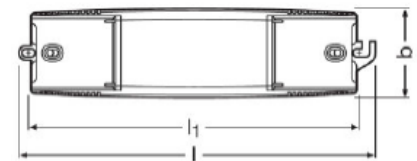
Spots and downlights
Office – Shop - Hospitality

Approbations & Certifications

CE, ENEC, VDE-EMC, RCM, EL, CCC, EAC, BIS
In preparation, if not already printed on the label

*For more information please refer to Tuner4TRONIC

Housing material: plastic, white.



L	204 mm
L1	186,5 mm
B	50 mm
H	32 mm

Preliminary

Product Features

- Output current range 500-1050mA
- NFC Interface
- Amplitude dimming 1-100%
- Low stand-by consumption <0.15 W
- Suitable for emergency lighting
- Through-looping of mains and DALI
- New DiiA standards 251, 252, 253
- Low LF-ripple < 5%
- 100'000 h lifetime at $t_c = 70^\circ\text{C}$
- $t_c \text{ max} = 80^\circ\text{C}$
- 2.5mm² screw terminals (PRI side)
- 5 years guarantee

Electrical Specifications

	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	V	
	Nominal frequency	0 / 50 / 60	Hz	
	AC voltage range	198 – 264	V	
	DC voltage range	176 – 276	V	DC or RAC
	Maximum voltage	320	Vac	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	0.2	A	
	Total Harmonic Distortion (THD)	< 10	%	Full load
	Power factor	≥ 0.95		Full load, 220 – 240 V, 50 Hz / see graphs
	Efficiency	91	%	Full load, 220 – 240 V, 50 Hz / see graphs
	Stand-by power	< 0.15	W	
	Protection class	II		
	Inrush current	20	A pk	th = 200 µs
OUTPUT	Max. units per circuit breaker	B16: 30 B10: 20		
	Nominal voltage range	20 – 50	V	
	Maximum voltage	< 60	Vdc	w/ Open Circuit
	Nominal current range	500 – 1050	mA	Default current 700mA
	Current accuracy	+/- 5	%	
	Current ripple 100Hz	< 5	%	
	Nominal power range	20 – 40	W	
	Maximum power	40	W	
Dimming	Galvanic isolation	SELV		
	Dimming control	yes		DALI
	Dimming method	Analog dimming		
	Dimming range	1...100	%	
	Dimming Standard	DALI 2		
ENVIRONMENT				
	Galvanic isolation	Basic		Mains to DALI
	Ambient temperature range t_a	-25 ...+50	°C	
	Maximum case temperature t_c	80	°C	Measured on t_c point indicated of the product label
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-25 ...+85	°C	
	Relative humidity	5 ... 85	%	Not condensing
	Surge transient protection	1 2	kV	L/N LN/PE acc to. EN 61547 Clause 5.7
	Environmental rating	Indoor		
	IP rating	IP 20		
	Mains switching cycles	> 150'000		
	Expected lifetime	50'000 100'000	h	$t_c = 80^{\circ}\text{C}$, 0.2% / 1'000 h failure rate, 24h ON $t_c = 70^{\circ}\text{C}$, 0.1% / 1'000 h failure rate, 24h ON

NFC compatible with MD SIG standard

Additional Features

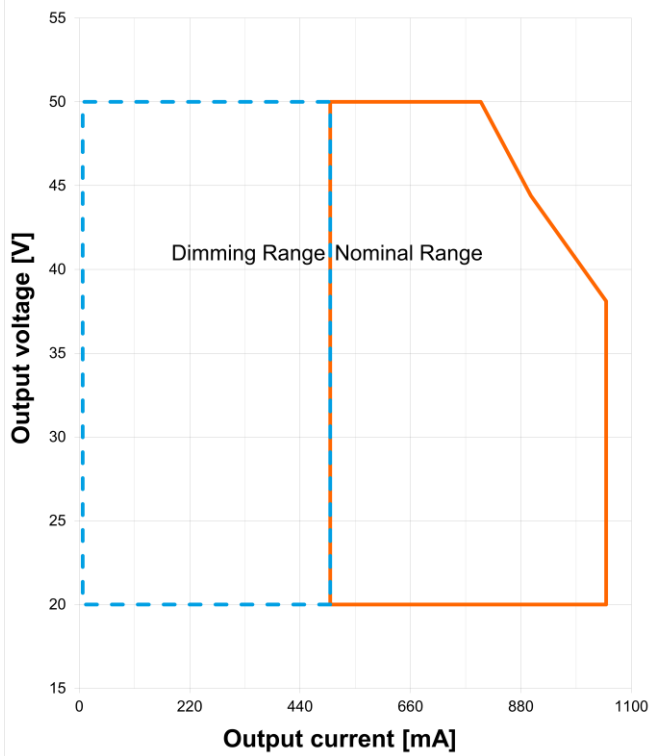
Driver Guard – Tuning Factor – Dim to Dark

Luminaire Info (acc. Part 251), monitoring Data (acc. Part 252&253), Configuration Lock

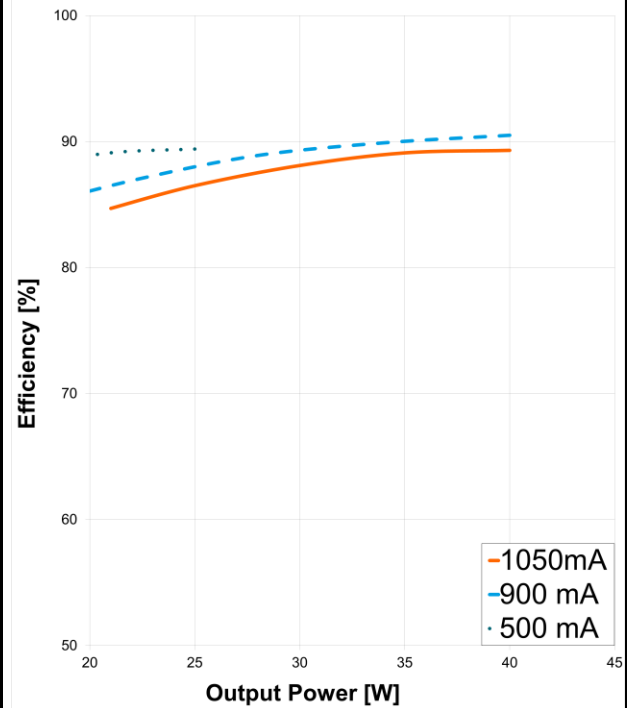
Protections

Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage
See remarks on page 4.

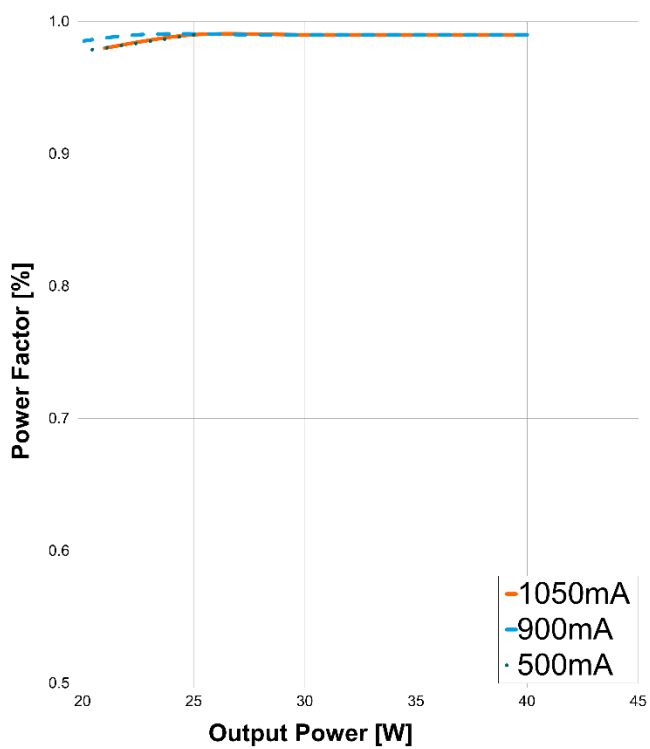
Typical Operating window



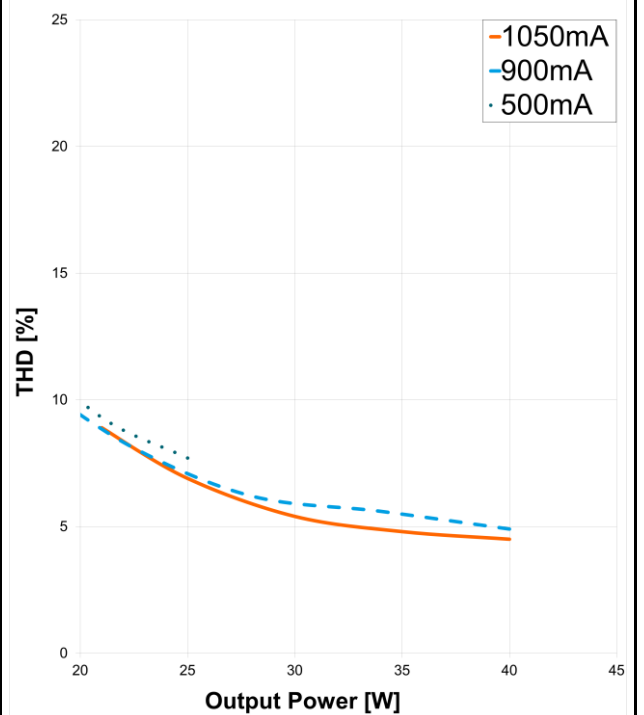
Typical Efficiency vs Load (230V/ 50Hz,)



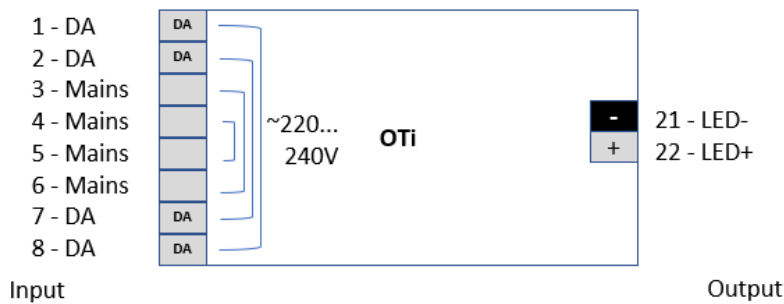
Typical Powerfactor vs Load



Typical THD vs Load



Wiring Diagram



Input wires

Wire cross-section: 0.75-2.5 mm²

Wire peeling length: 6 mm

Load wires length: 2m max.

Wire cross-section: 0.5-1.5 mm²

Wire peeling length: 7-8 mm

Product type	EAN10
OTi DALI 40/220-240/1A0 NFC I	4062172115001

Remarks

- **Input over voltage protection:** mains up to 320 Vac, for 2 hours maximum, will not destroy both the unit and the load; shut down of load might occur in this condition.
- **Output short circuit / under voltage protection:** shut down of load happens if U_{rated} is below 20V. The unit automatically tries to switch on the load again every 4-5 sec for 0.1 sec the selected nominal current.
- **Output overload protection:** the unit automatically reduces the output current to keep the output power below the max limit.
- **Output over voltage protection:** the unit tries to stabilize the voltage by reducing the current as necessary down to 50%; if U_{rated} still exceeds 50V shutdown will occur; the unit tries to automatically switch on the load again every 4-5 sec for 0.1 sec delivering the selected nominal output current.
- **No load operation:** the unit tries to automatically switch on the load again every 4-5 sec for 0.1 sec delivering the selected nominal output current; this operation mode is safe for the unit but is not recommended. Do not put a switch between load and unit.
- **Over temperature protection:** the unit is protected against temporary overheating by automatic reduction of the output current (up to a complete power off) when $t_c > t_{c max}$. The protection is self-restoring.
- **Touch current:** lower than 0.7 mA, according to EN 60598-1 ann. G and EN 61347-1 annex A
- **Emergency lighting:** this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22., with emergency output factor $EOF_1=0.15$ (default value, can be programmed up to $EOF_1=1$) and related duration time of 1h at least. Function in emergency is ensured up to $t_a=80^\circ\text{C}$.

Standards

IEC 61347-1; IEC 61347-2-13; IEC 62384; EN 55015; IEC 62386; IEC 61000-3-2; IEC 61000-3-3
IEC 61547; CISPR 15

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