

Light is OSRAM

OSRAM

Product data sheet: OTi DALI 90/220-240/700 D LT2 L

Constant current LED driver incl. OSRAM DALI features – non isolated
Wide operating area up to 700mA, 1...100% dimmable

Flexible, reliable solution for energy saving lighting:
DALI dimmable & programmable, embedded
corridor functionality and advanced TouchDIM with
daylight harvesting, constant lumen output.
Automatic current set through the LEDSet interface.

Benefits

Wide operating range: 250 – 700mA
Adjustable current via DALI programmable or LEDset2
Long lasting and high reliability
Small, slim white metal housing 30 x 21 mm
Suitable for emergency lighting units
Smart analogue dimming 1...100%
Following DALI Ed. 2

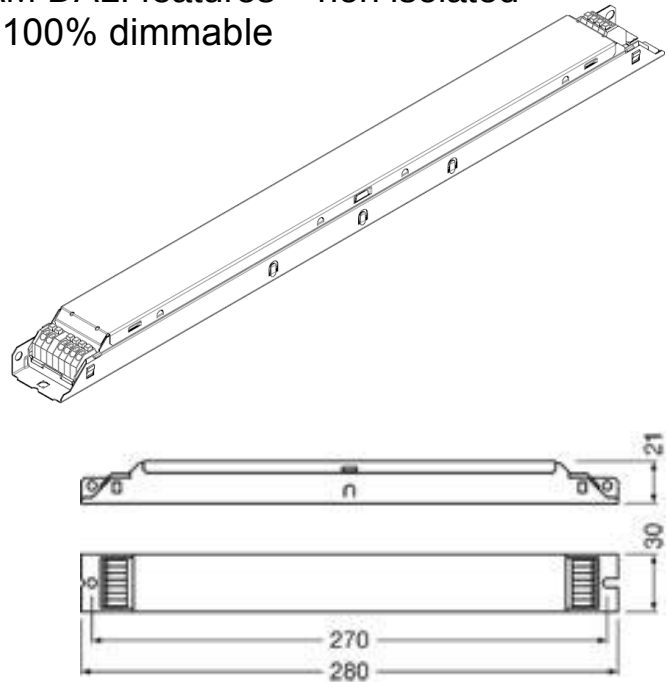
Applications

Linear and area lighting
Office – industrial – shop

Applications

CE, ENEC, VDE-EMC, RMC, , EL

In preparation, if not already printed on the label



Housing material: metal, white painted

Product Features

- Output current range 250 – 700mA
- Fully digital programmable
- Analogue dimming down to 1%
- Very high efficiency up to 93%
- Low stand-by consumption <0.25 W
- Output power up to 90 W
- Suitable for emergency lighting
- Very wide operating window
- Overload & temperature protection
- Very low ripple $\leq 1\%$
- 100'000 h lifetime at $t_c = 65^\circ\text{C}$
- $t_c \text{ max} = 75^\circ\text{C}$
- Wide t_a range $-25 - +50^\circ\text{C}$
- 5 years guarantee

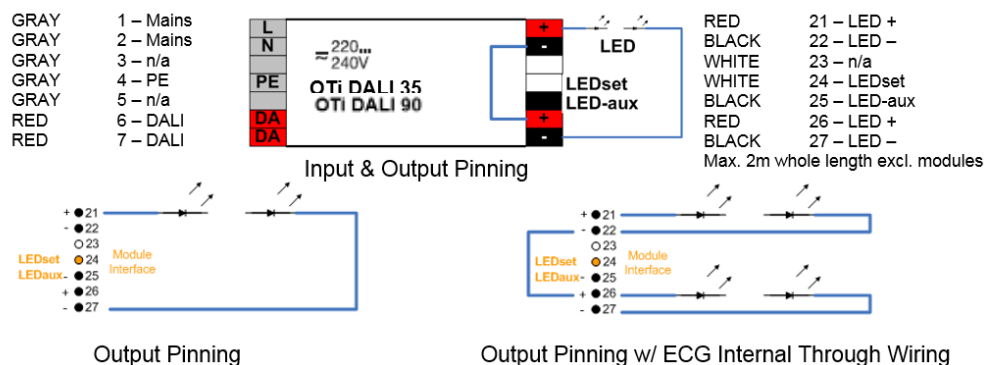
Electrical Specifications

	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	V	
	Nominal frequency	0 / 50 / 60	Hz	
	AC voltage range	198 – 264	V	AC or RAC
	DC voltage range	176 – 276	V	DC
	Maximum voltage	350	Vac	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	0.43	A	
	Total Harmonic Distortion (THD)	< 10	%	Full load
	Power factor	> 0.95		Full load, 220 – 240 V, 50 Hz / see graphs
	Efficiency	Up to 93	%	Full load, 220 – 240 V, 50 Hz / see graphs
	Starting time	≤ 0.6	s	
	Power losses	9	W	Maximum, full load
	Stand-by power	< 0.25	W	
	Protection class	I		PE can be connected either to terminal or housing
	Inrush current	25	A pk	th = 280 µs
	Max. units per circuit breaker	B16: 24 B10: 13		
	PE current	< 0.5	mA	Through PE
OUTPUT	Nominal voltage range	54 – 240	V	
	Maximum voltage	< 250	Vdc	w/ Open Circuit
	Nominal current range	250 – 700	mA	LEDset open: 125mA; LEDset short: 250mA
	Current accuracy	+/- 3	%	With LEDset2 +/-5%
	Current ripple	< 1	%	100 Hz., low freq. ripple is negligible
	Nominal power range	13.5 – 90	W	
	Maximum power	90	W	
	DC Output current (EL)	15	%	Preset value, adjustable via software, at DC or RAC
DIM	Galvanic isolation	no		Non-isolated
	Dimming control	yes		DALI and TouchDIM
	Dimming range	1...100	%	Complete analogue Dimming
ENVIRONMENT	Dimming Standard	Acc. DALI Ed.2		
	Ambient temperature range t_a	-25 ... +50	°C	
	Maximum case temperature t_c	75	°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	> 100'000		
	Expected lifetime	50'000 100'000	h	$t_c = 75^{\circ}\text{C}$, 0.2% / 1'000 h failure rate, 24h ON $t_c = 65^{\circ}\text{C}$, 0.1% / 1'000 h failure rate, 24h ON

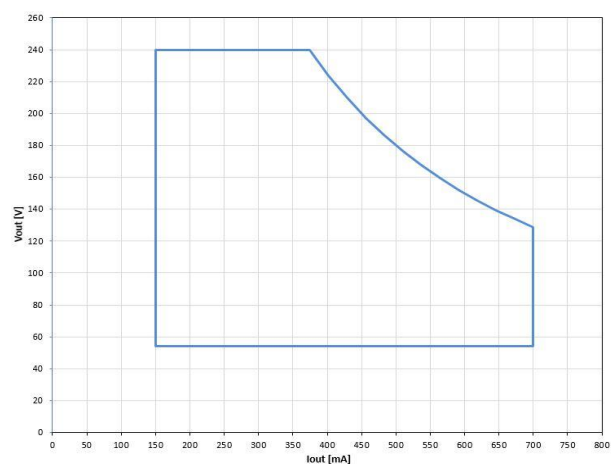
Protections

Overtemperature, Overload, No load, Short-circuit, Input overvoltage, Output overvoltage, Output undervoltage

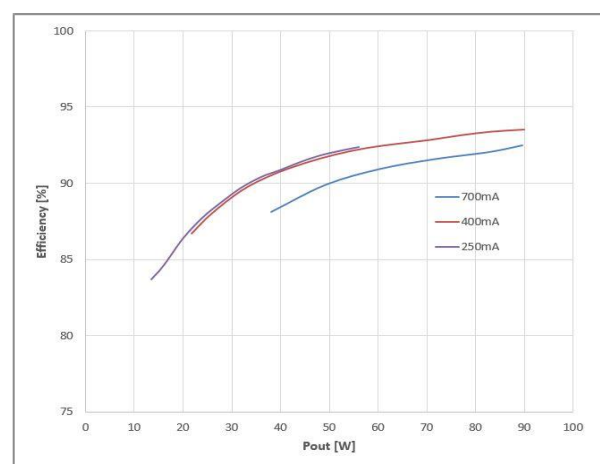
See remarks on page 4



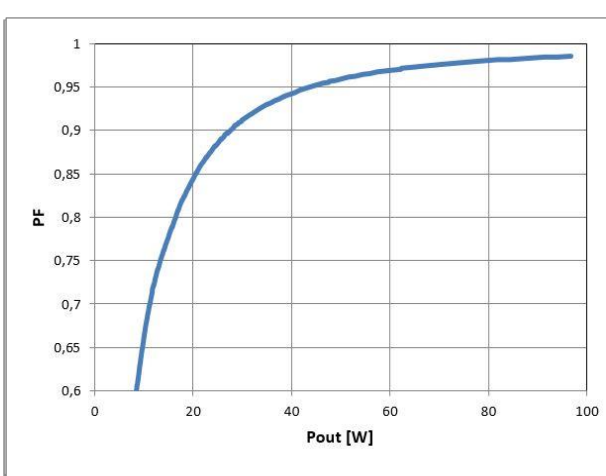
Typical Operating window



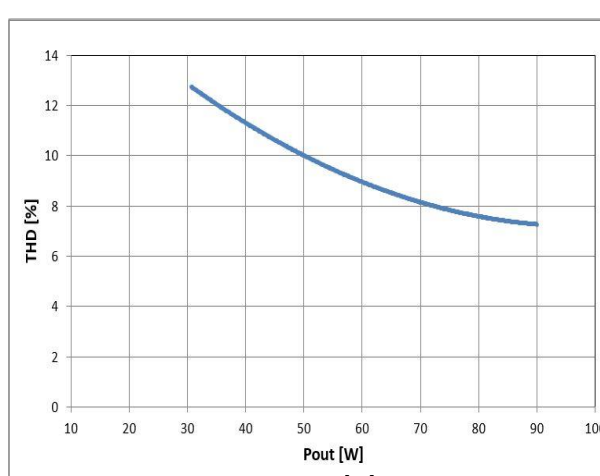
Typical Efficiency vs load



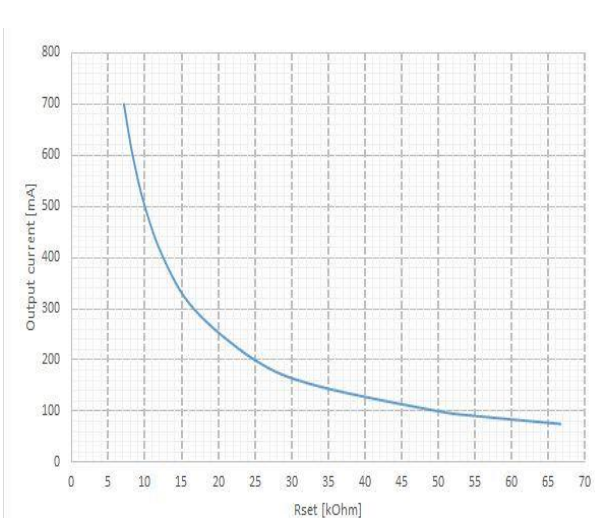
Typical Power factor vs load



Typical THD vs load



Typical Iout vs Rset



Rset formula and standard Iout values

$$I_{OUT[A]} = \frac{5V}{R_{set[\Omega]}} \times 1000$$

Iout [mA] nominal	Iout [mA] set, +/-5%	Rset [kOhm]
250	250	20 (E24)
	250	20.0 (E48)
350	333	15 (E24)
	350	14.3 (E48)
700	667	7.5 (E24)
	669	7.15 (E48)

Refer to the LEDset2 application note and/or instruction sheet for further details

Remarks

- **Input over voltage protection: mains up to 350 Vac**, for two hours maximum, will not destroy both the unit and the load; shut down of load might occur in this condition.
- **Output short circuit / undervoltage protection:** shut down of load happens if V_{out} is out of operating range
- **Output overload protection:** the unit automatically reduces the output current to keep the output power below 38W.
- **Output over voltage protection:** shut down of load happens if V_{out} exceeds 240V
 - **Step 1:** output current reduction to decrease V_{out}
 - **Step 2:** shut down of load at longer or extreme overvoltage
- **No load operation:** the unit automatically switches off.
- **Over temperature protection:** the unit is protected against temporary overheating by automatic reduction of the output current when $t_c > 75^{\circ}\text{C}$
- **Switchover time:** lower than 0.5 s, both AC and DC mains.
- **Output power hold time:** > 4 ms, in case of mains dips.
- **Emergency lighting:** this LED power supply is suitable for emergency lighting fixtures acc. to EN 60598-2-22; according to IEC 61347-2-13 Annex J.
- **Emergency Escape Lighting:** this LED power supply is suitable for emergency escape lighting systems acc. to EN 50172

Standards Ordering information

EN 61347-1	Product name	Type	EAN10	EAN40	NAED	Pieces / box
EN 61347-2-13	OTI DALI 90/220-240/700 D LT2 L	AM0014001OL	4052899494244	4052899494251	n.a.	20
EN 55015						
EN 61547						
EN 61000-3-2						
EN 62384						
EN 62386						

OSRAM GmbH

Head Office:

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

Created on: 21.11.2016

OSRAM