PHILIPS

Xitanium

LED driver

Xitanium non-isolated DALI dimmable & programmable iXt

Xitanium 150W 0.2-0.7A 300V iXt TD 230V

9290 016 85706

Xitanium non-isolated DALI drivers stand on three pillars: quality of light, reliability and flexibility.

By using Xitanium LED drivers in your luminaires, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects. The reliability of your complete lighting system is enhanced as our Industry Xtreme drivers offer longer lifetime, high surge specifications and a wide ambient temperature range.

Finally, application-oriented operating windows offer the flexibility required to provide the stable lumen output and light quality levels that are required in demanding industrial applications.

Benefits
- High quality of light
- High reliability
- Future-proof flexibility
- Fast and easy wireless programming with SimpleSet
- Flicker and noise free dimming due to amplitude modulation dimming (AM)

Features
- High efficiency
- Wide operating windows - output current can be adjusted via the Philips MultiOne software, SimpleSet (NFC) or LEDset (resistor)
- Reduced ripple current
- Industry Xtreme (iXt) drivers offer longer life time, higher surge specifications and a wide T-ambient range

Application
- Offices
- Retail: supermarkets, shopping malls
- Indoor industry applications: warehouses, distribution centers, cold storage, manufacturing

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V_{ac}	Nominal range
Rated input voltage	230	V_{ac}	
Rated input frequency range	50...60	Hz	Nominal range
Rated input current	0.72	A	@ rated output power @ minimum performance input voltage
Rated input power	159	W	@ rated output power @ rated input voltage
Power factor	0.9		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	94.6	%	@ rated output power @ rated input voltage @ max. Uout
Rated input voltage DC range	186...250	V_{dc}	Nominal range
Rated input current DC range	0.64...0.86	A_{dc}	Nominal range
Input voltage AC range	198...264	V_{ac}	Operational range
Input frequency AC range	45...66	Hz	Operational range
Input voltage DC range	168...275	V_{dc}	Operational range
Standby Power	0.28	W	
Isolation input to output	No		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	100...300	V_{dc}	
Output voltage max.	330	V	Maximum output voltage (rms)
Output current	0.2...0.7	A	
Output current min programmable	200	mA	
Output current min dimming	4	mA	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P_{st}^{LM}	≤ 0.12		
Output SVM	≤ 0.07		
Output power	43...150	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Corridor Mode, DALI, Touch & Dim (TD)		DALI Parts: 101, 102, 207, 251, 252, 253. See design-in guide at www.philips.com/oem for more controllability details.
Dimming range	1...100	%	lower-25℃ and higher+50℃ dimming to be set to 10%
Isolation controls input to output	Basic		acc. IEC61347-1

Wiring and Connections

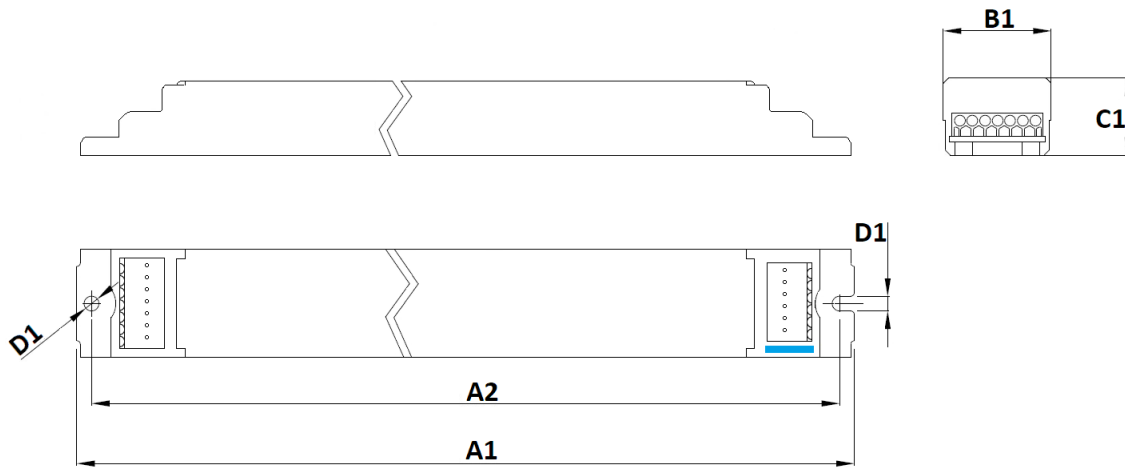| Specification item	Value	Unit	Type
Input wire cross-section	0.5…1.5 / 20…16	mm² / AWG	WAGO744, solid wire
Input wire strip length	8…9	mm	
Output wire cross-section	0.5…1.5 / 20…16	mm² / AWG	WAGO744, solid wire
Output wire strip length	8…9	mm	
Control wire cross-section	0.5…1.5 / 20…16	mm² / AWG	WAGO744, solid wire
Control wire strip length	8…9	mm	
Maximum cable length	2	m	Total length of wiring including LED module, one way
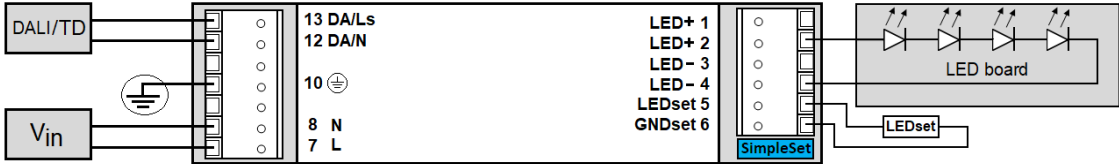
Insulation

Insulation per IEC61347-1	Input	Output+LEDset	DALI	Housing
Input		No	Basic	Basic
Output+LEDset	No		Basic	Basic
DALI	Basic	Basic		Basic
Housing	Basic	Basic	Basic	

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	360	mm	
Mounting hole distance (A2)	350	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	295	gram	

Logistical data

Specification item	Value
Product name	Xitanium 150W 0.2-0.7A 300V iXt TD 230V
EOC	871869968858500
Logistic code 12NC	9290 016 85706
EAN1 (GTIN)	8718699688585
EAN3 (box)	8718699688592
Pieces per box	24

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+60	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded. Below -30°C DALI performance cannot be guaranteed.
Tcase-max	90	°C	lifetime 35khrs;
Tcase-life	75	°C	lifetime 100khrs; measured at T_c-point
Maximum housing temperature	110	°C	In case of a failure, inherent by design
Relative humidity	10...90	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%
Mains switching cycles	> 100,000	switches	See Design-in guide for detailed explanation
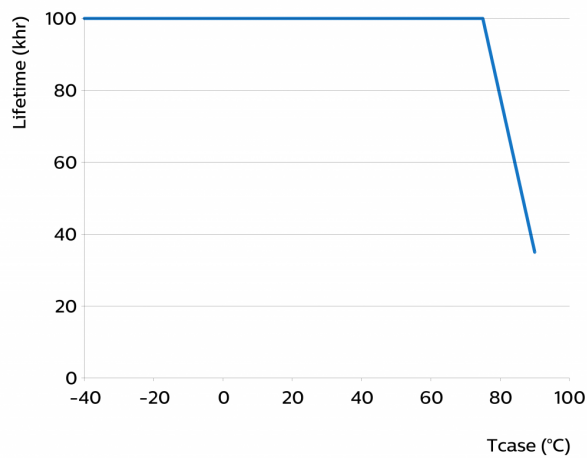
Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	LEDset, Programmable, SimpleSet	200 mA	
NTC on LEDset	Yes	OFF	
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
DALI 102	Yes	—	Programmable via SimpleSet
DALI 253 M	Yes	—	
Touch & Dim (TD)	Yes	ON	
Corridor Mode	Yes	ON	Default: T1=55s, T2=12s, T3=30min
Min Dim Level	Yes	1 %	
DC emergency (DCemDim)	Yes	ON	Current output decreased to 15%
OEM Write Protection (OWP)	Yes	OFF	
Luminaire Info (DALI part 251)	Yes	—	

Features

Specification item	Value		Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I		per IEC60598
Output Overvoltage Detection	Yes		
Energy metering (DALI part 252)	Yes		
Diagnostics	Yes		

Inrush current

Specification item	Value	Unit	Condition
Inrush current	5.1	A	Input voltage 230V
Inrush peak width	760	µs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 16	pcs	Indicative value at 230V
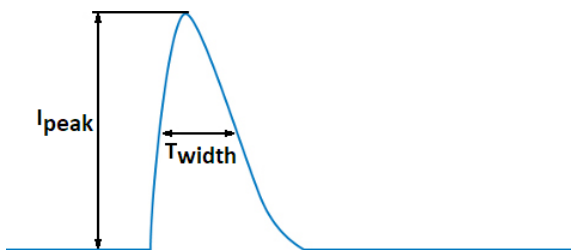
Please refer to the driver design in guide if you use other MCB-types.

Driver touch current / protective conductor current

| Specification item	Value	Unit	Condition
Typical Protective Conductor Current (ins. Class I)	0.5	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

| Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	2	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	4	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info

| Specification item	Value
Approval marks	BIS / CCC / CE / DALI 2 / EAC / EL / ENEC / KC / UA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

Operating window

Performance operating window · · · Full operating window
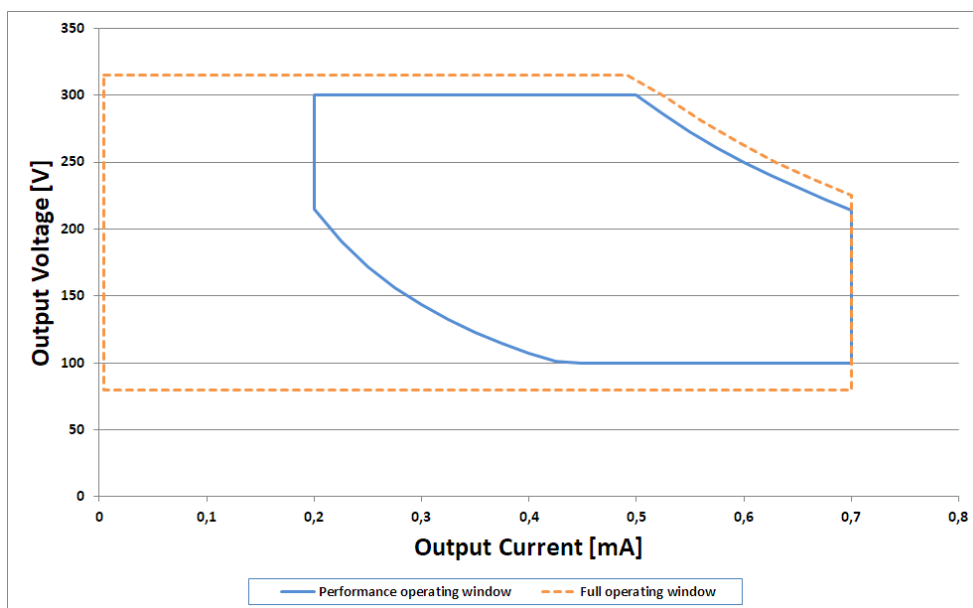
Power factor versus output power
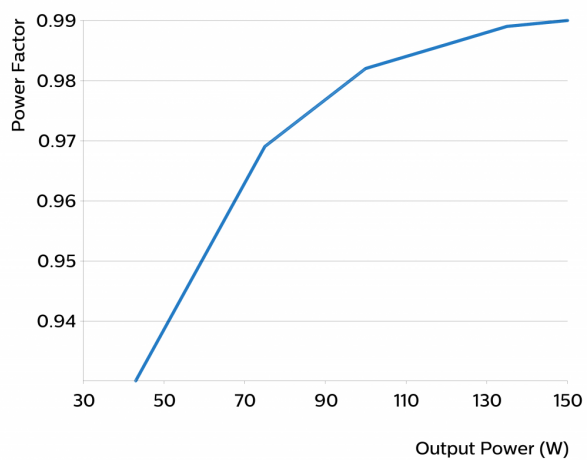
Efficiency versus output power

THD versus output power

Xitanium 150W 0.2-0.7A 300V iXt TD 230V   December 2021
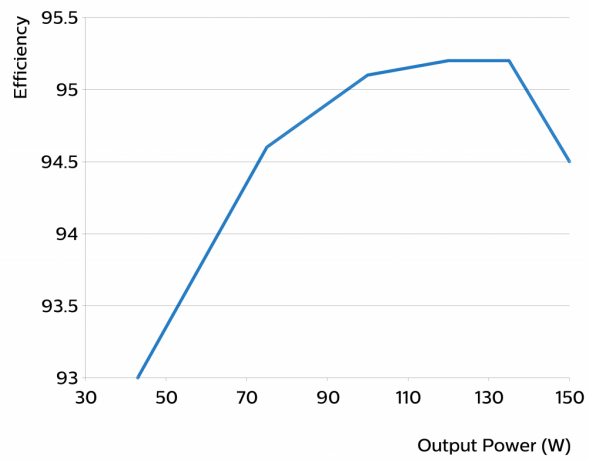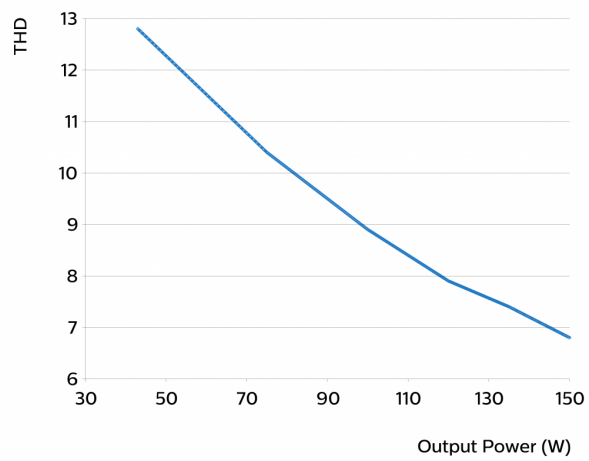
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