

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium non-iso DALI dimmable & programmable

Xitanium 75W 0.12-0.4A 215V TD 230V

9290 008 52103

Xitanium non-isolated DALI drivers are ideal for High Voltage (HV) linear systems and 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 our drivers is based on in-depth electronics knowledge and extensive testing.

Finally, application-oriented operating windows offer the flexibility required to provide the stable lumen output and light quality levels that lighting specifiers and architects demand.

Benefits

- High quality of light
- High reliability
- Future-proof flexibility
- Flicker and noise free dimming due to amplitude modulation dimming (AM)

Features

- Configurable operating windows (AOC)
- Adjustable Light Output (ALO)
- Constant Light Output (CLO)
- Corridor Mode (CM)
- Dimming supported during DC operation (DCemDim)
- Touch & Dim (TD)

Application

- Offices
- Healthcare
- Education
- Indoor parking areas
- Retail: supermarkets, shopping malls
- Industry

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V _{ac}	Performance range
Rated input voltage	230	V _{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.37	A	@ full output power @ rated input voltage
Rated input power	80	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	≥ 93	%	@ full output power @ rated input voltage
Rated input voltage DC range	186...250	V _{dc}	Performance range
Input voltage AC range	202...254	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	0.5	W	
Isolation input to output	No		

Electrical output data

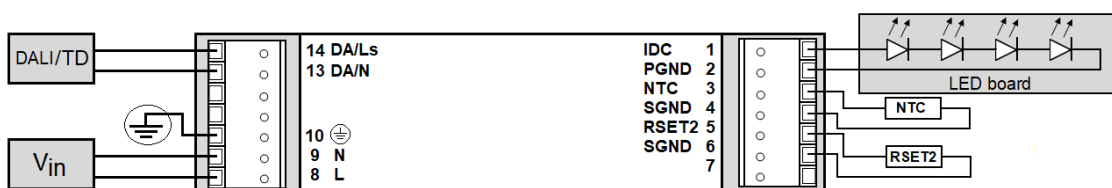
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	100...215	V _{dc}	
Output voltage max.	275	V	Maximum output voltage (rms)
Output current	0.12...0.4	A	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output power	21...75	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Corridor Mode, DALI, Touch & Dim (TD)		
Dimming range	1...100	%	>300mA 1% dimming; < 300mA min. current 3mA
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	mm ² / AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	WAGO744, solid wire
Output wire strip length	8...9	mm	
Maximum cable length	4	m	Total length of wiring including LED module, one way

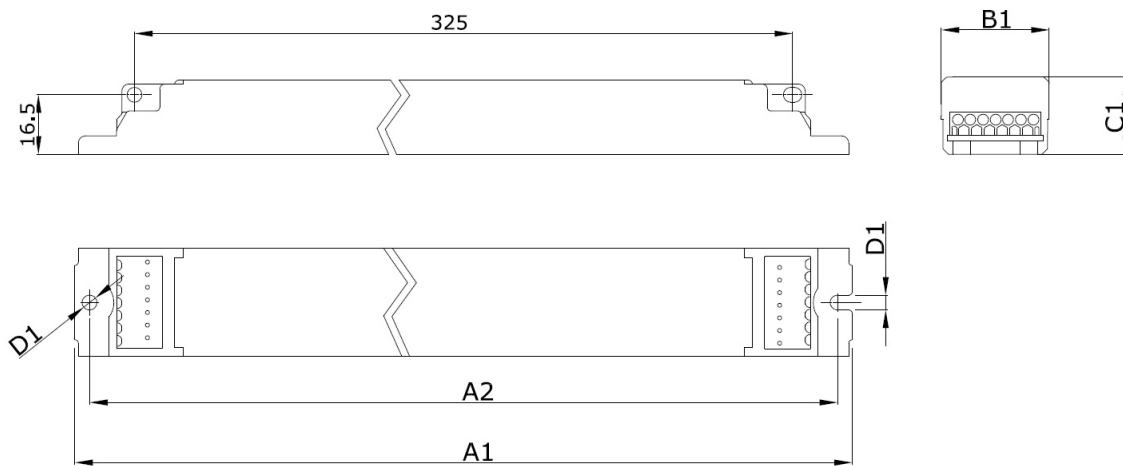


Insulation

Insulation per IEC61347-1	Input	Output+LEDset	DALI	Housing
Input		Non	Basic	Basic
Output+LEDset	Non		Basic	Basic
DALI	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)	22	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	248	gram	



Logistical data

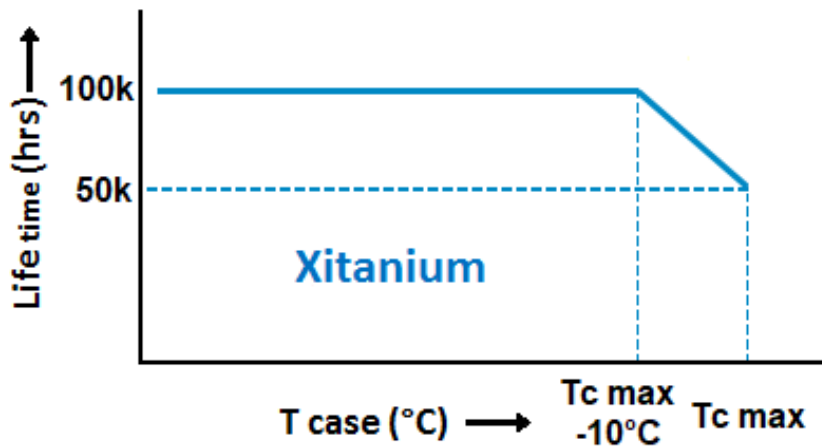
Specification item	Value
Product name	Xitanium 75W 0.12-0.4A 215V TD 230V
EOC	871829168402200
Logistic code 12NC	9290 008 52103
EAN1 (GTIN)	8718291684022
EAN3	8718291684039
Pieces per box	12

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as T _{case-max} is not exceeded
T _{case-max}	75	°C	Maximum temperature measured at T _{case-point}
T _{case-life}	75	°C	Measured at T _{case-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	50,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	Programmable, Rset2	120 mA	
LED Module Temperature Protection (MTP)	Yes		
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Touch & Dim (TD)	Yes	ON	
Corridor Mode	Yes	ON	Default: T1=55s, T2=12s, T3=30min
DC emergency (DCemDim)	Yes	ON	Current output decreased to 15%

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
Energy metering	Yes	
Diagnostics	Yes	

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	22	A	Input voltage 230V
Inrush current T_{width}	275	μ s	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 24	pcs	Indicative value



MCB	Rating	Relative number of LED drivers
B	4A	25%
B	6A	40%
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
B	32A	200%
B	40A	250%
C	4A	42%
C	6A	63%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%
C	32A	340%
C	40A	415%

Driver touch current / protective conductor current

Specification item	Value	Unit	Condition
Typical Protective Conductor Current (ins. Class I)	0.4	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

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

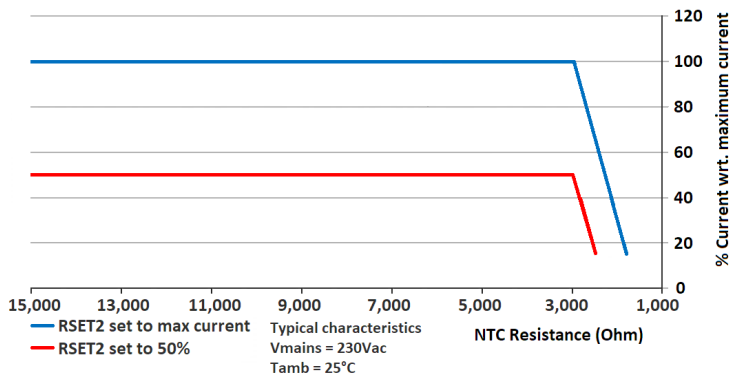
Application Info

Specification item	Value
Approval marks	BIS / C-tick / CCC / CE / EL / ENEC / F-mark / TISI
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Module Temperature Protection

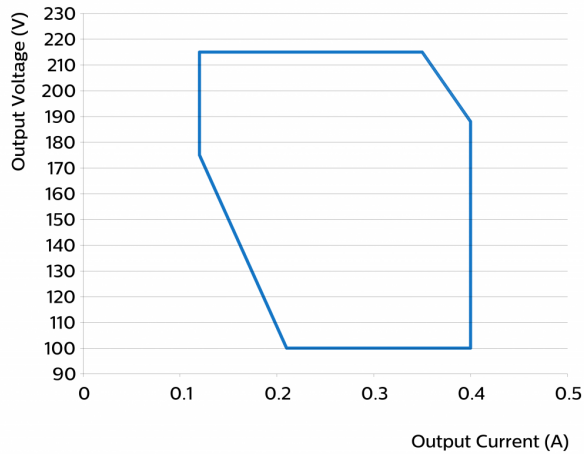
Specification item	Value	Unit	Condition
Advised NTC type	Vishay 15K	238161554153	
	Murata	NCP15XW153E03RC	With 390Ω in series
NTC resistance threshold	2966	Ω	Start limiting output current
Corresponding temperature	70	°C	With advised type 238161554153

NTC resistance versus output current

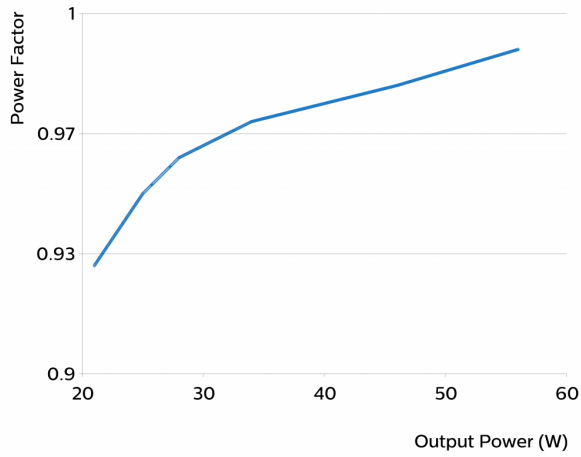


Graphs

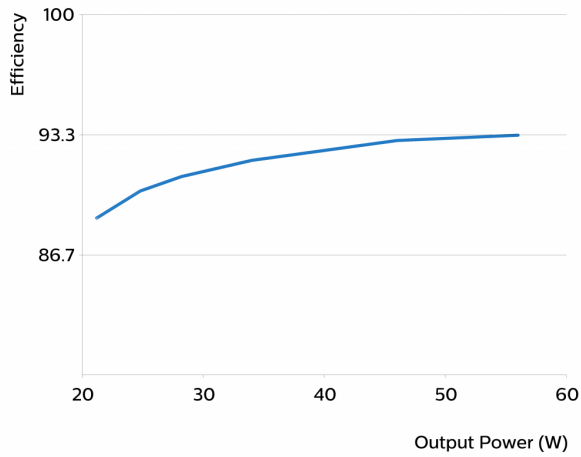
Operating window



Power factor versus output power



Efficiency versus output power



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