

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium DALI drivers – Linear LV isolated

Xitanium 41W 0.5-0.8A 51V TD DS 230V

9290 028 76880

Enabling future-proof LED technology

Xitanium LED drivers with single current output offer industry leading performance and reliability at optimized cost.

They are ideal for high volume applications while delivering to specific requirements. These drivers offer the same level of performance as Xitanium adjustable current linear drivers to ensure high quality of light, but with a specific current setting for optimized performance. Due to the low output current ripple, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects.

Benefits

- High quality of light -assurance of camera and scanner-friendly performance
- High reliability
- Optimized performance at specific output current settings
- Flicker and noise free dimming with all Touch and DALI LED drivers due to amplitude dimming (AM)

Features

- Low output current tolerance
- Low output ripple current
- Long lifetime at high operating temperature
- Easy current selection via dipswitch
- Dali dimmable & programmable, and fixed-output versions available

Application

- Offices
- Industry
- Supermarkets / Retail

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	0.21	A	@ full output power @ rated input voltage
Rated input power	46	W	@ full 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	88	%	@ rated output power @ rated input voltage @max. Uout
Input voltage AC range	202...254	V _{ac}	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Standby Power	0.45	W	
Isolation input to output	SELV		

Electrical output data

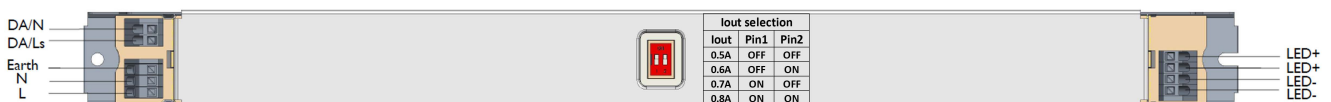
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	23...51	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.5 / 0.6 / 0.7 / 0.8	A	Select output current via the dipswitch
Output current min dimming	15	mA	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P _{st} ^{LM}	≤ 1		In entire operating window
Output SVM	≤ 1.6		In entire operating window
Output power	11.5...40.8	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	DALI, Touch & Dim (TD)		
Dimming range	3...100	%	Default range
Isolation controls input to output	SELV		acc. IEC61347-1

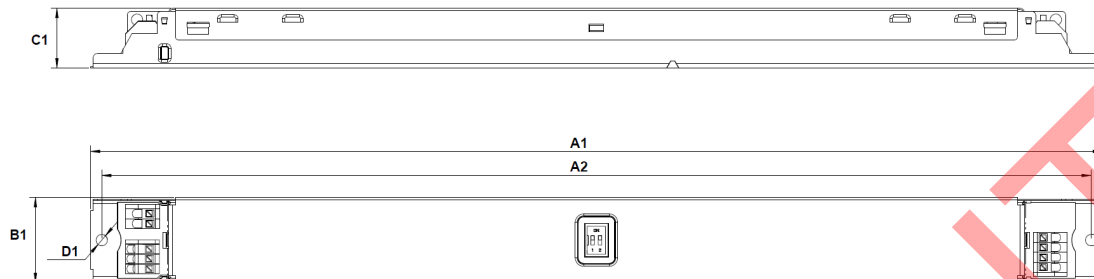
Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	Type250, solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	Type250, solid / stranded wire
Output wire strip length	8...9	mm	
Control wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	Type250, solid / stranded wire
Control wire strip length	8...9	mm	
Maximum cable length	2	m	Total length of wiring including LED module, one way. For longer wiring please double check EMI behavior of luminaire



Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	358.2	mm	
Mounting hole distance (A2)	350.2	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4	mm	
Weight	235	gram	



Logistical data

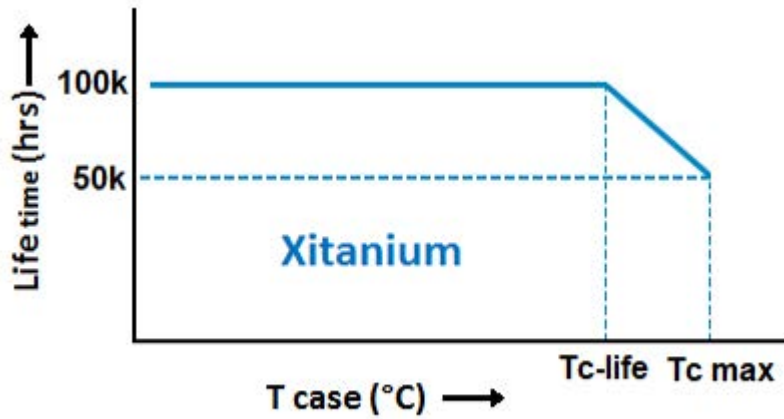
Specification item	Value
Product name	Xitanium 41W 0.5-0.8A 51V TD DS 230V
Logistic code 12NC	9290 028 76880
Pieces per box	24

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°C	Maximum temperature measured at Tcase-point
Tcase-life	65	°C	Measured at Tcase-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%



Storage temperature and humidity

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

Programmable features

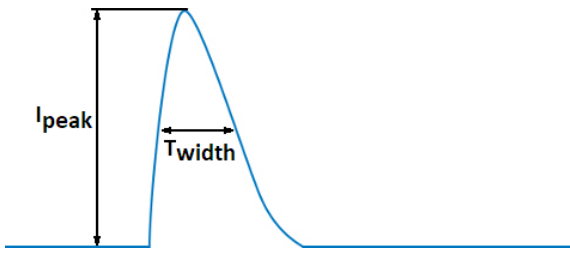
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	DipSwitch	500 mA	Set the output current via the dipswitch, see wiring diagram for an overview
Constant Light Output (CLO)	No		
Touch & Dim (TD)	Yes	ON	
DC emergency (DCemDim)	No		

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	15.8	A	Input voltage 230V
Inrush current T_{width}	288	μ s	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 27	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 Touch Current (ins. Class II)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

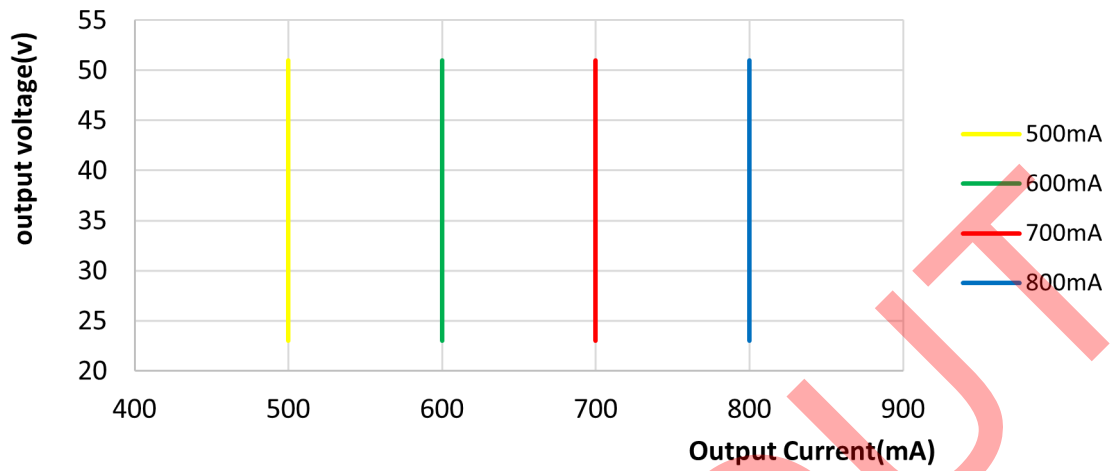
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info

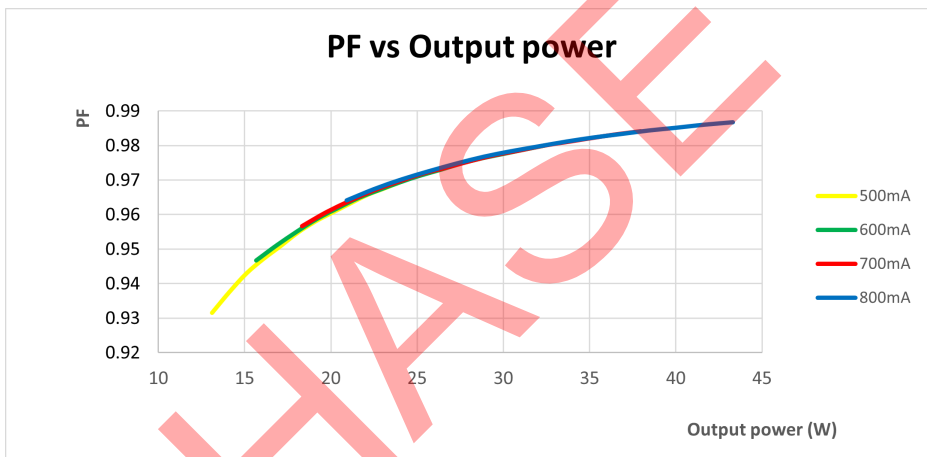
Specification item	Value
Approval marks	CB / CCC / CE / DALI-2 / ENEC / RCM / TISI / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

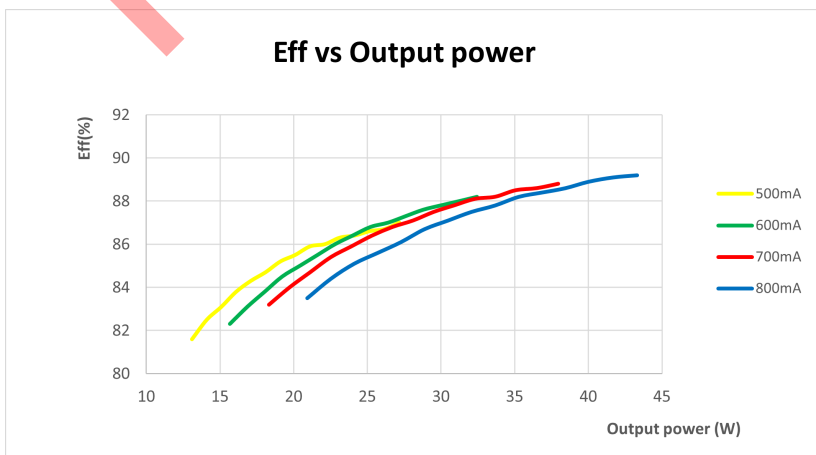
Operating window

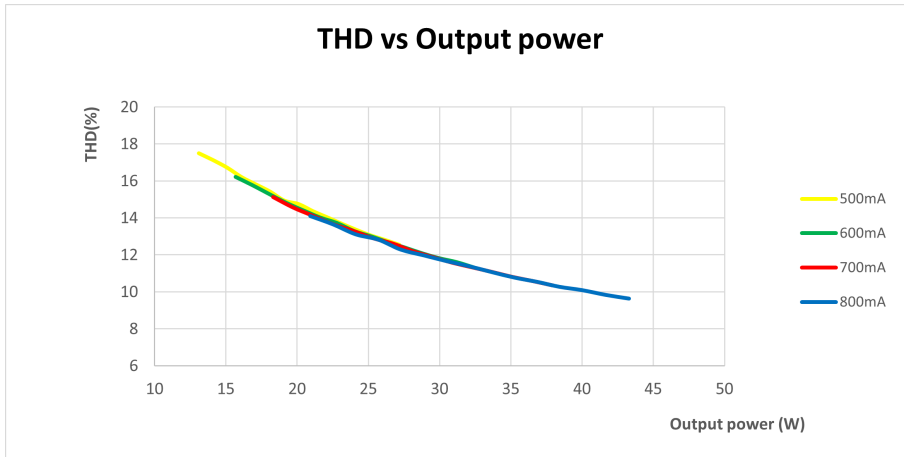


Power factor versus output power



Efficiency versus output power





The information in this datasheet is accurate at the time of writing. All data and specification is subject to change.

This datasheet is provided "as is" without express or implied warranty of any kind, it is based on the data of this new product.

Neither Signify nor its agents assume any liability for inaccuracies in this guide or losses incurred by use or misuse of the information in this guide.

Signify will not be liable for any indirect, special, incidental or consequential damages (including damages for loss of business, loss of profits or the like), whether based on breach of contract, tort (including negligence), product liability or otherwise, even if Signify or its representatives have been advised of the possibility of such damages.

Signify desires to provide, and the customer identified below ("Customer") desires to receive, limited prototypes of this product listed in this document ("Products") at no charge and free-of-cost. In consideration of receiving the Products at no charge and free-of-cost, Customer agrees to assume, and does assume, all risk and liability for the use of the Products and its employees' and agents' use of the Products, and that Signify shall have no liability to Customer with respect to Customer's use, or the performance of, of the Products.

We like you to contact Signify and report problems, suggestions towards a prototype of this product, and provide suggestions regarding this New Product. Signify has no obligation whatsoever to respond in any way to such a problem report or suggestion but will evaluate to any feedback as possible improvement.

The customer shall not sell or otherwise provide a Prototype to any third party.



©2021 Signify Holding, IBRS 10461, 5600 VB, NL. All rights reserved.
UK importer address: Signify Commercial UK Limited, 3, Guildford Business Park, GU2 8XG.

The information provided herein is subject to change without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.

Date of release: August 31, 2021

www.philips.com/oem