

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium isolated DALI Dip switch drivers G2

Xitanium 41W 0.5-0.8A 51V TD DS 230V G2

9290 034 62480

Philips Xitanium LED Linear DALI drivers offer industry leading performance to ensure high quality lighting at the full 1% to 100% dimming range. Xitanium drivers have common features such as low ripple output current, and 50,000 hours lifetime and are specifically designed to ensure great EMI performance, high robustness and safe usage. The new Dali range comes with DipSwitch which helps to reduce SKU's by 75%.

Features

- Dali 2.0 with 1-100% dimming
- Class I application
- High efficiency
- Low Ripple less than 4%
- 4 output currents by Dip switch
- 50,000 hours lifetime @ Tc-max

Benefits

- Dali 2.0 enables wired digital controls
- Provides options for different luminaire designs
- Energy saving
- Comfortable for the eyes
- Selectable output current enables flexibility and SKU reduction
- Peace of mind with proven reliability

Application

- Trunking lighting
- Recessed, surface and suspended linear lighting

Logistical data

Specification item	Value
Product name	Xitanium 41W 0.5-0.8A 51V TD DS 230V G2
Logistic code 12NC	9290 034 62480
Pieces per box	24

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	50...60	Hz	Performance range
Rated input current	0.21	A	@ full output power @ rated input voltage
Rated input power	46.0	W	@ full output power @ rated input voltage
Power factor	0.9 C		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Total harmonic distortion, best value	9.5	%	@ full output power @ rated input voltage
Efficiency	88.0	%	@ rated output power @ rated input voltage @ max. U _{out}
Input voltage AC	202...254	V _{ac}	Operational range
Input frequency AC	47.5...63	Hz	Operational range
Standby Power (no load)	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	500 / 600 / 700 / 800	mA	Select output current via the dipswitch
Min output current	5	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple LF	≤ 2	%	@100Hz
Output current ripple HF	≤ 15	%	
Output P _{st} ^{LM}	≤ 1		
Output SVM	≤ 0.4		
Output power	11.5...40.8	W	
Rated output power	40.8	W	

Electrical data controls input

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

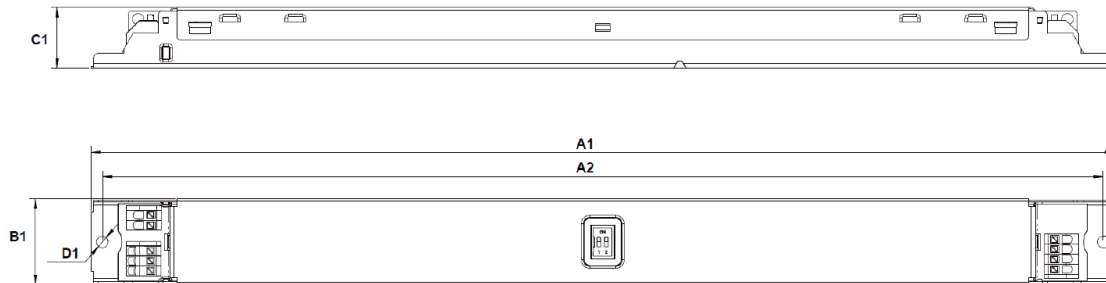
Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	solid / stranded wire
Output wire strip length	8...9	mm	
Control wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	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	

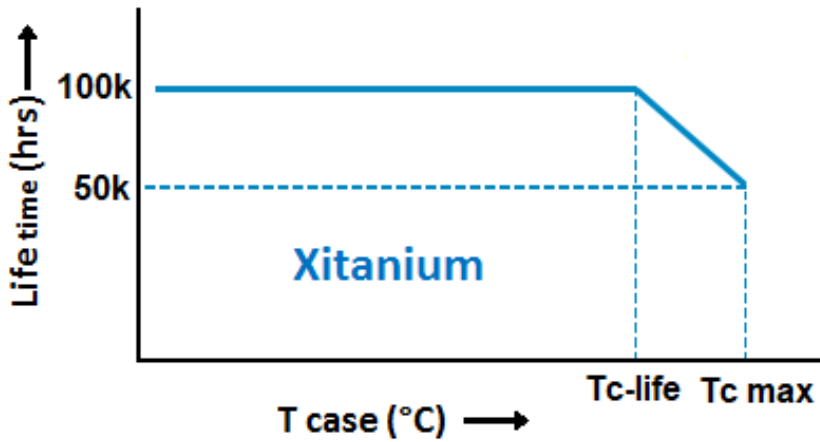


Operational temperatures and humidity

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}	65	°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	100,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
75	50000	hr	
70	71000	hr	
65	100000	hr	Temperature measured @Tc point
60	>100000	hr	
55	>100000	hr	

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

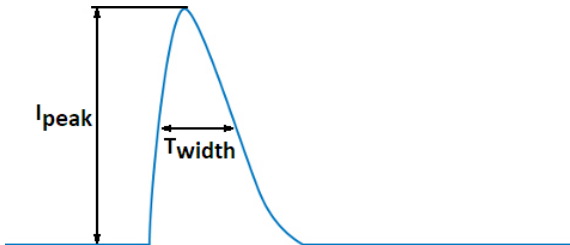
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	15.8	A	Input voltage 230V
Inrush peak width	288	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 27	pcs	Indicative value at 230V

Please refer to the driver design in guide if you use other MCB-types.

If several mini circuit breakers are used directly side-by-side (without distance pieces) a correction factor of 80% has to be applied to the rated current



Driver touch current / protective conductor current / earth leakage current

Specification item	Value	Unit	Condition
Typical Protective Conductor Current (ins. Class I)	0.7	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

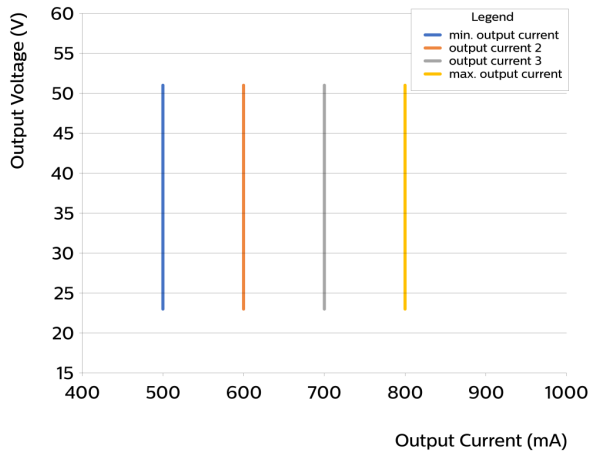
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info

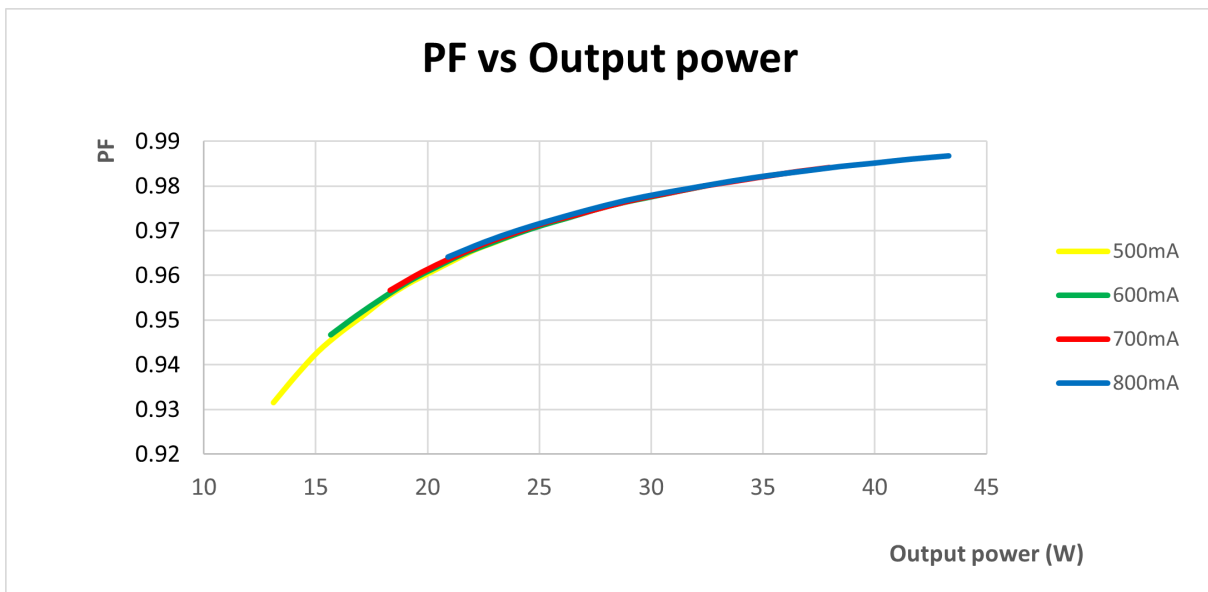
Specification item	Value
Approval marks and Certifications	CB / CCC / CE / DALI 2 / ENEC / RCM / TISI / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

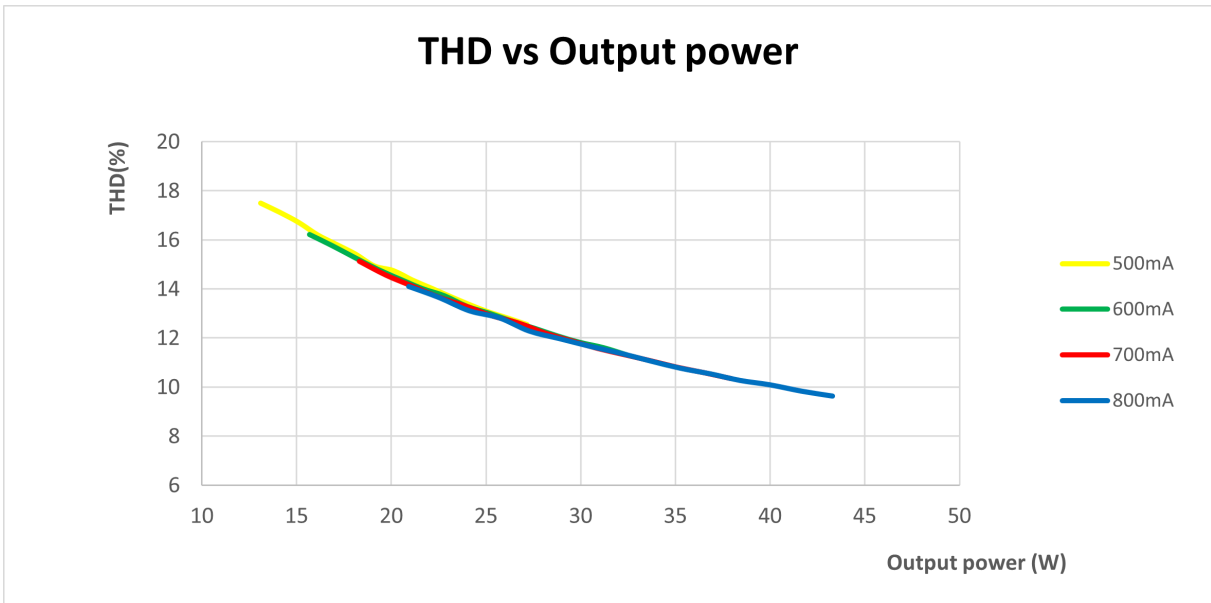
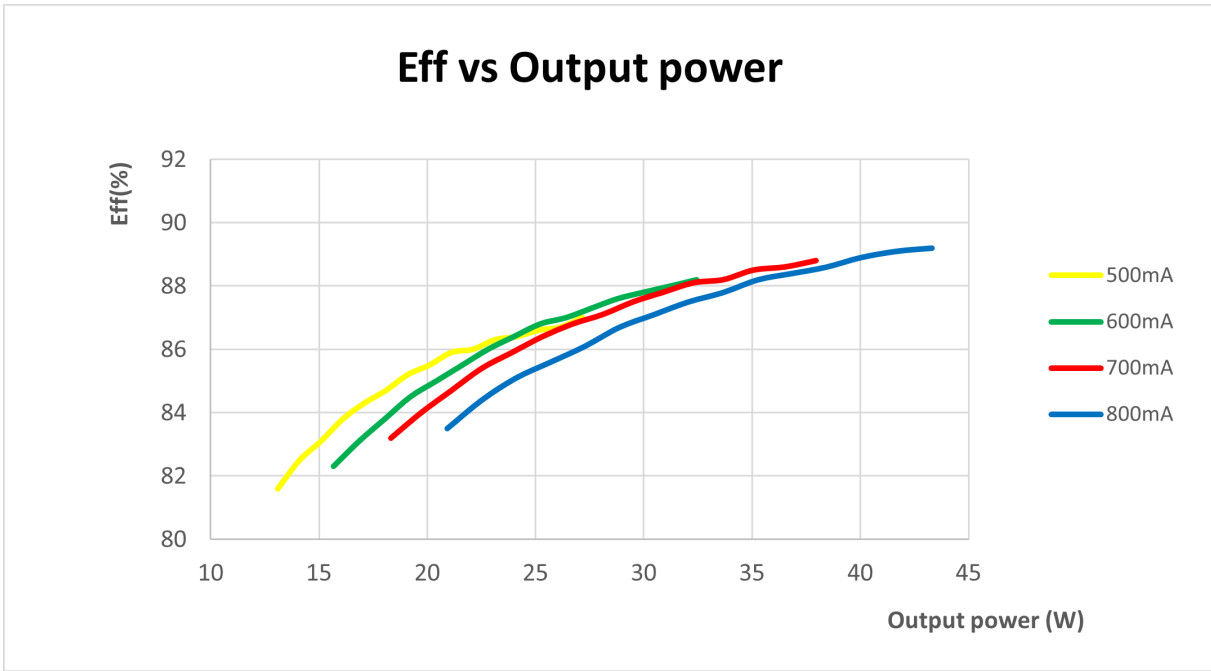
Graphs

Operating window



Power factor versus output power





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