

Datasheet

Xitanium non-Isolated DALI Dip Switch

Xitanium 20W 0.1-0.35A 60V DALI DS 230V
9290 040 06706



Xitanium LED non-isolated DALI Dipswitch drivers are ideal for high-voltage (HV) systems. They are based on three pillars: quality of light, reliability, and flexibility. Our drivers' robustness 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 quality levels that lighting specifiers and architects demand..

Benefits

- High quality of light
- Peace of mind with proven reliability
- Selectable output current enables flexibility and SKU reduction

Application

- Offices
- Waterproof
- Retail: supermarkets, shopping malls

Features

- High efficiency
- Low Ripple less than 5%
- 2 selectable output currents by Dip switch
- 50,000 hours lifetime @ Tc-max

Logistical data

Specification item	Value
Product name	Xitanium 20W 0.1-0.35A 60V DALI DS 230V
EOC	872790097661800
Logistic code 12NC	9290 040 06706
EAN1 (GTIN)	8727900976618
EAN3 (box)	8727900976625
Pieces per box	20

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	0.1	A	@ rated output power @ rated input voltage
Rated input power	23.0	W	@ rated output power @ rated input voltage
Power factor	0.98		@maximum output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	≥ 86.0	%	@ maximum output power @ rated input voltage @ max. Uoutput
Rated input voltage DC	186...250	V _{dc}	Performance range; EOFi = 95%
Rated input current DC	0.07...0.09	A _{dc}	Performance range
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	47.5...63	Hz	Operational range
Input voltage DC	168...275	V _{dc}	Operational range
Standby Power (W)	0.5	W	
Isolation input to output	No		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...60	V _{dc}	
Output voltage max.	250	V	Maximum output voltage (rms)
Output current	100...350	mA	Via Programmable DipSwitches with MultiOne Software
Min output current	10	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 5	%	Ripple = peak / average, < 3kHz, ≤ 6% @ DC inpu
Output current ripple HF	≤ 15	%	
Output P _{st} ^{LM}	≤ 1.0		In entire voltage range for each choice of output current
Output SVM	≤ 0.4		In entire voltage range for each choice of output current
Output power	6.0...20.0	W	Performance range: 6...20W
Number of output channels	1		

Control interfaces

Specification item	Value	Unit	Condition
Control method	DALI		Output current can be set via dip switches
Dimming range	5...100	%	Default range

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	2	m	CISPR15: between driver and LED module

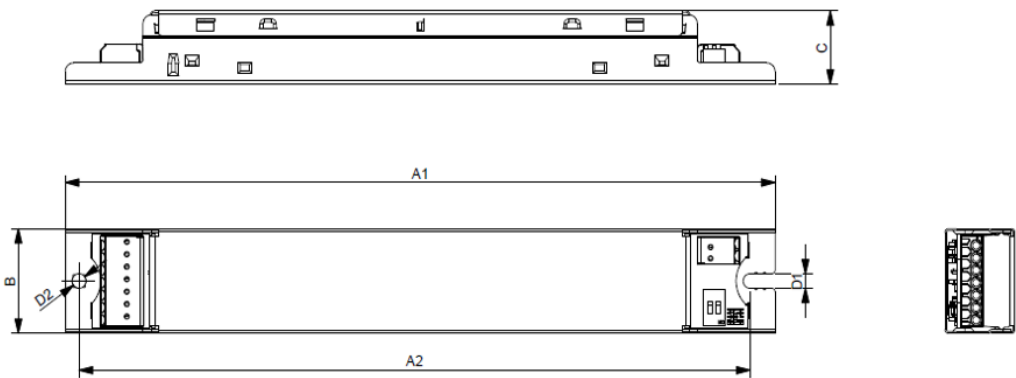


Isolation

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

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	210	mm	± 0.3
Mounting hole distance (A2)	198.5	mm	± 0.3
Width (B1)	30	mm	± 0.5
Height (C1)	21	mm	± 0.5
Mounting hole diameter (D1)	4.1	mm	± 0.2
Mounting hole diameter (D2)	4.1	mm	± 0.2
Weight	150	gram	
Housing color	White		

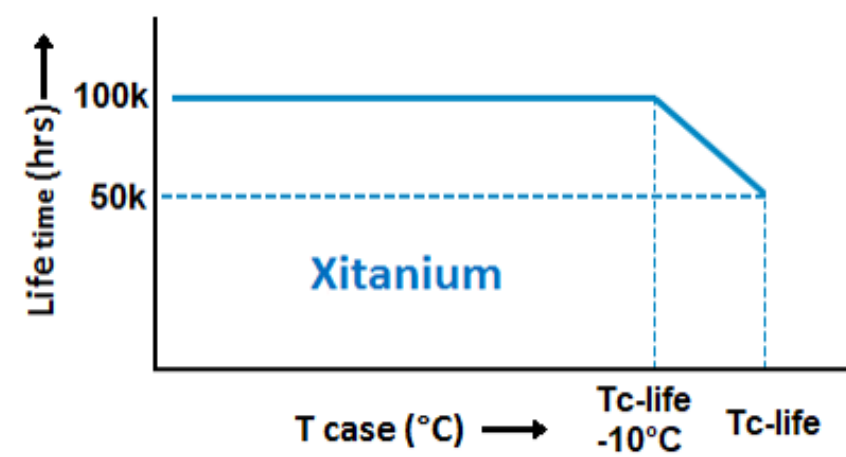


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	80	°C	Maximum temperature measured at Tcase-point
Tcase-life	70	°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	50,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is Tcase-life -10 degrees. Maximum failures = 10%
Driver lifetime Tcmax	0	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



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, NFC	200 mA	Set the output current via the dipswitch, see wiring diagram for an overview
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Min Dim Level (%)	Yes	5 %	
DC emergency (DCemDim)	Yes	ON	%100
OEM Write Protection (OWP)	Yes	OFF	
Luminaire Info (DALI part 251)	Yes		
Luminaire maintenance (DALI part 253)	Yes		

Non-programmable features

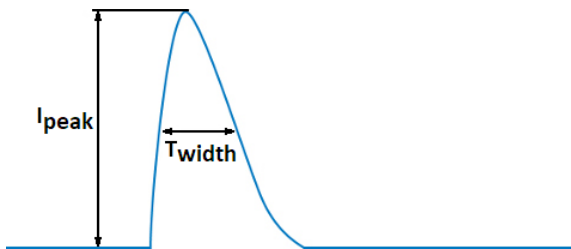
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598
Output Overvoltage Detection	Yes	
Energy metering (DALI part 252)	Yes	
Diagnostics (DALI part 253)	Yes	

Inrush current

Specification item	Value	Unit	Condition
Inrush current	19.2	A	Input voltage 230V
Inrush peak width	205	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 32	pcs	Input voltage 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 piece) 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)	0.5	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

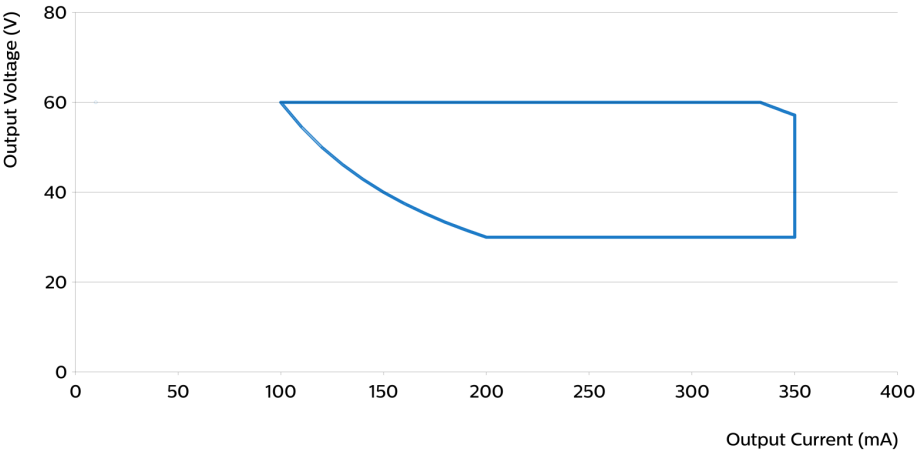
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	L- N Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	L/N - PE Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	0.8	kV	DALI/TD - DALI-TD Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge immunity (comm. mode)	2	kV	DALI/TD - PE, DALI - L/N Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

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

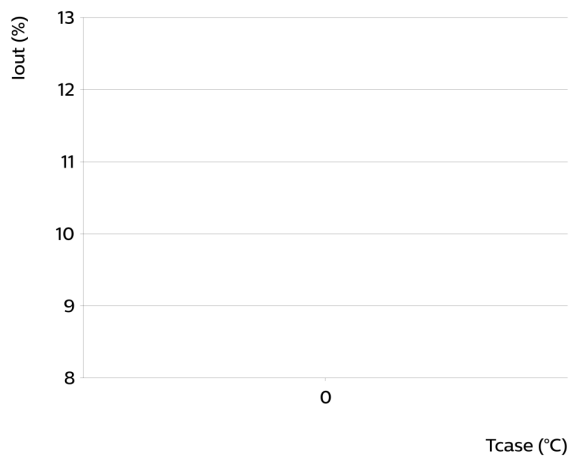
Graphs

Operating window

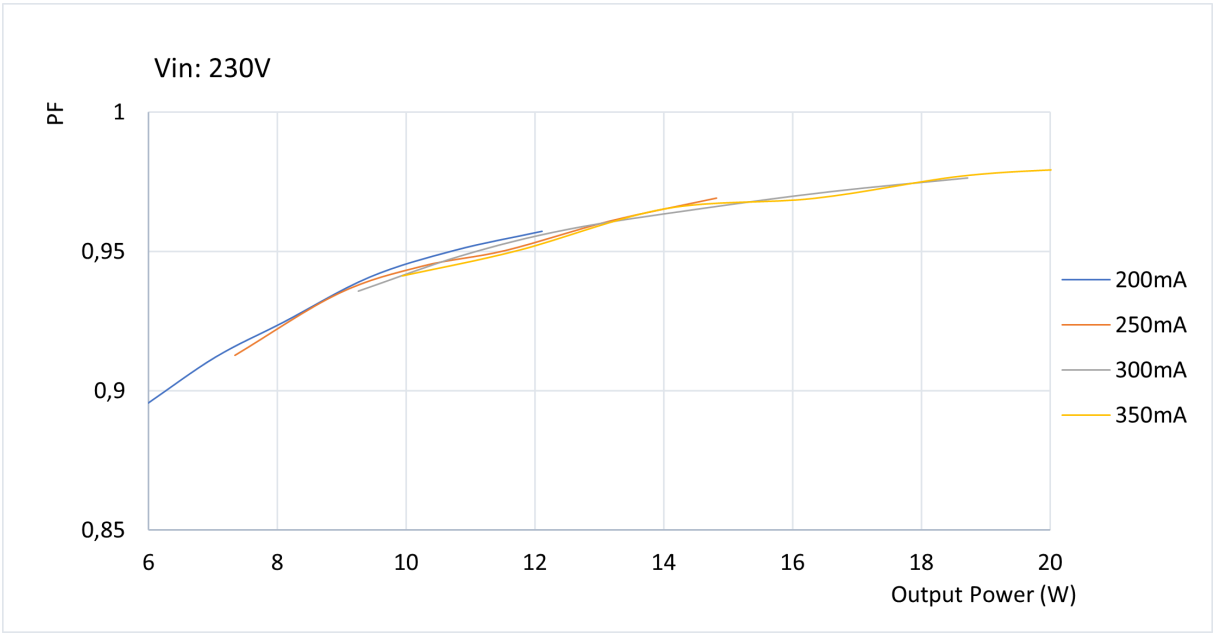


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 20W 0.1-0.35A 60V DALI DS 230V	100	60	60	6
Xitanium 20W 0.1-0.35A 60V DALI DS 230V	150	40	60	9
Xitanium 20W 0.1-0.35A 60V DALI DS 230V	200	30	60	12
Xitanium 20W 0.1-0.35A 60V DALI DS 230V	250	30	60	15
Xitanium 20W 0.1-0.35A 60V DALI DS 230V	300	30	60	18
Xitanium 20W 0.1-0.35A 60V DALI DS 230V	350	30	57	20

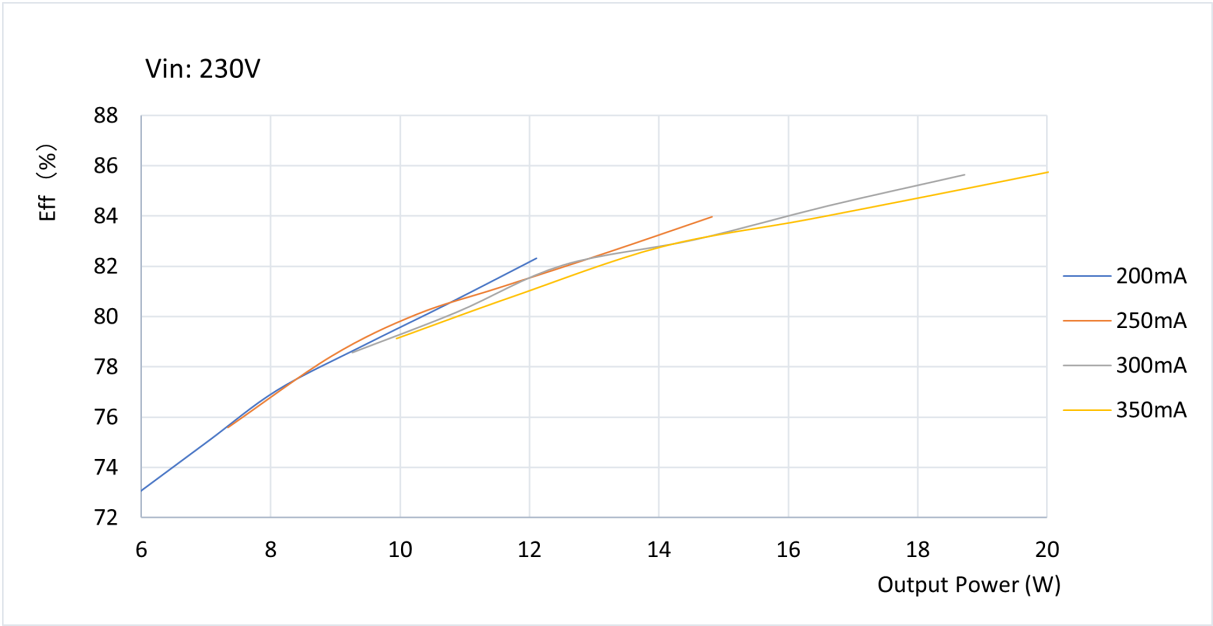
Thermal Guard



Power factor versus output power



Efficiency versus output power



THD versus output power

