Datasheet

Xitanium non-isolated SR dimmable & programmable

Xitanium 100W 0.25-0.7A 220V SR 230V

9290 016 95606

Because light is all around us, the lighting infrastructure is an ideal platform for collecting and carrying information.
 The Philips Xitanium SR drivers are sensor ready, making them perfect for use in building management systems. You can power and interface with sensors directly from the driver without the need for additional modules, devices or power packs. The versatile and scalable DALI-2 open standard digital interface is used via a simple 2-wire connection to the sensor, so that you can confidently design flexible lighting, and incorporate your preferred sensors and networks, without worrying about potential incompatibilities.

Benefits

- Sensor Ready concept, ideal for use with indoor sensors & building management systems
- Integrated power supply to power sensors and wireless radios directly from the driver
- Communication between the sensor or wireless radio and the driver is according to the DALI-2 standard
- Highly accurate integrated power metering for use in building management systems
- Certified per DIIA intra-luminaire standard D4i
- Suitable for central emergency DC operation

Features

- Integrated Bus Power Supply for sensors and radios (DALI part 250)
- SimpleSet configuration interface (NFC)
- Configurable operating windows (AOC)
- Dimming supported during DC operation (DCemDim)
- Constant Light Output (CLO)
- Adjustable Light Output (ALO)
- OEM Write Protection (OWP)
- Memory Bank 1 Extension / Luminaire Data (DALI part 251)
- Energy reporting (DALI part 252)
- Diagnostics & Maintenance (DALI part 253)

Application

- Offices
- Healthcare
- Education
- Retail: supermarkets, shopping malls

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	0.49	A	@ rated output power @ rated input voltage
Rated input power	107	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	%	@ rated output power @ rated input voltage @ max. Iout
Rated input voltage DC range	186...250	V_{dc}	Performance 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	0.44	W	
Isolation input to output	No		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	50...220	V_{dc}	
Output voltage max.	250	V	Maximum output voltage (rms)
Output current	0.25...0.7	A	
Output current min programmable	250	mA	
Output current min dimming	4.5	mA	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 4	%	1
Output power	28...100	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	SR		DALI Parts: 101, 102, 207, 250, 251, 252, 253. See design-in guide for more controllability details at www.philips.com/oem
Dimming range	1...100	%	With AOC >250mA 1% dimming possible; AOC <250mA min. physical current = 4.5mA
Isolation controls input to output	Double		acc. IEC61347-1
SR output voltage max.	22.5	V	
SR guaranteed current	52	mA	
SR maximum current	60	mA	

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	SR-interface	Housing
Input		Non	Double	Basic
Output	Non		Double	Basic
SR-interface	Double	Double		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	284	gram	
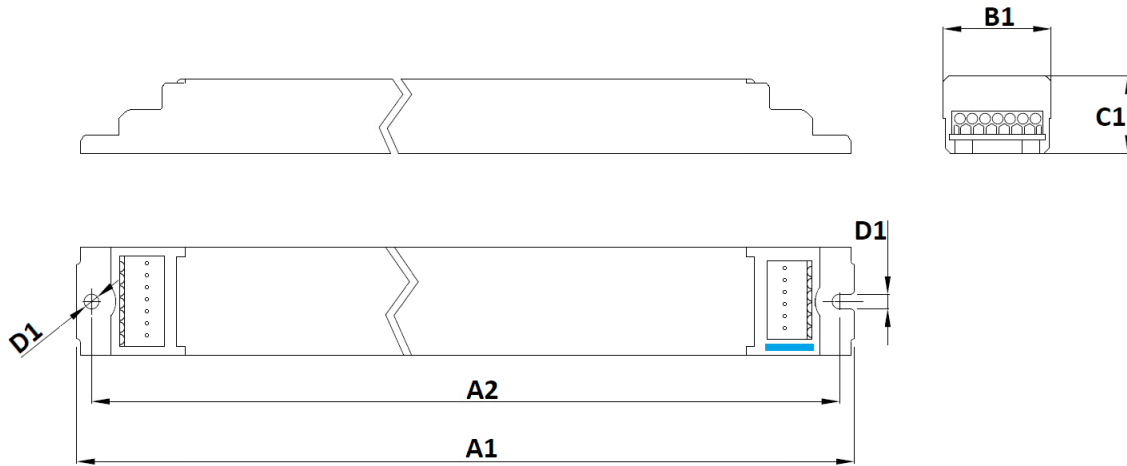
Logistical data

Specification item	Value
Product name	Xitanium 100W 0.25-0.7A 220V SR 230V
EOC	871951426411300
Logistic code 12NC	9290 016 95606
EAN1 (GTIN)	8719514264113
EAN3 (box)	8719514264120
Pieces per box	24

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	75	°C	Lifetime 50khrs;
Tcase-life	65	°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
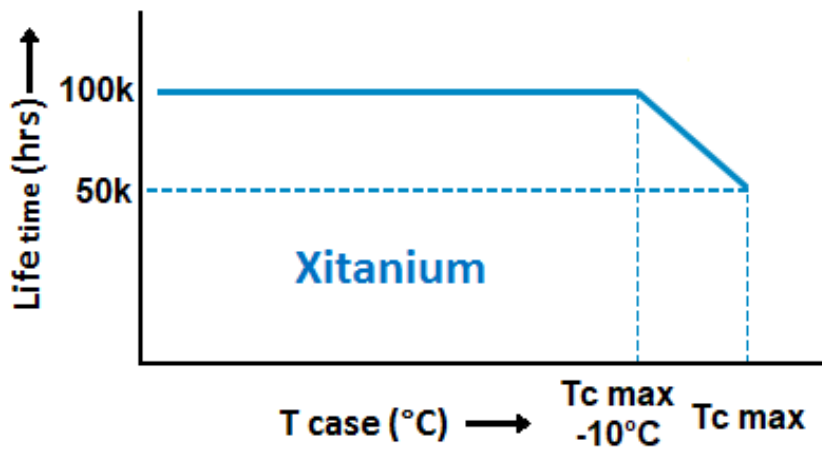
Storage temperature and humidity

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	250 mA	
NTC on LEDset	Yes	OFF	
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
DALI 102	Yes	ON	Programmable via SimpleSet
DALI 253 M	Yes	—	
Min Dim Level	Yes	1 %	
DC emergency (DCemDim)	Yes	ON	Default 15%, EOFx range = 1 .. 100% (EOFx = DCemDIM level)
DALI control supported at DC operation	Yes	OFF	
OEM Write Protection (OWP)	Yes	OFF	
SR PSU (DALI part 250)	Yes	ON	
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		Accuracy 4%
Diagnostics (DALI part 253)	Yes		

Inrush current

Specification item	Value	Unit	Condition
Inrush current	4.5	A	Input voltage 230V
Inrush peak width	1000	µs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 18	pcs	Indicative value
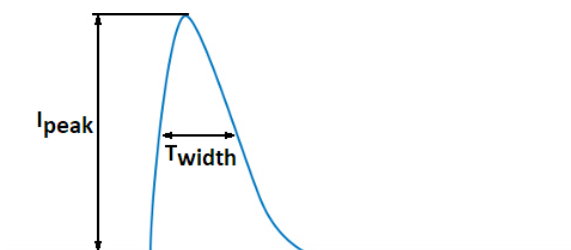
Please refer to the driver design in guide if you use other MCB-types.

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)	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

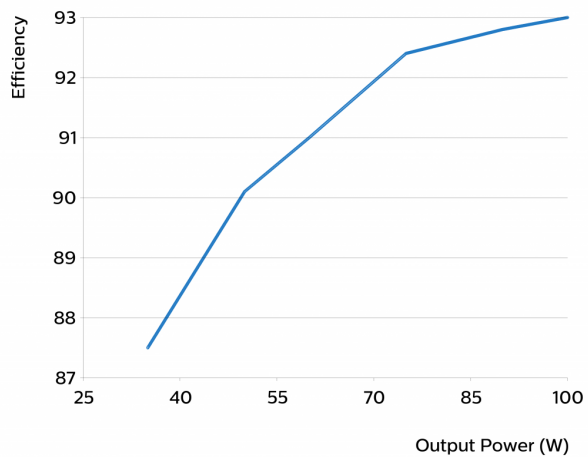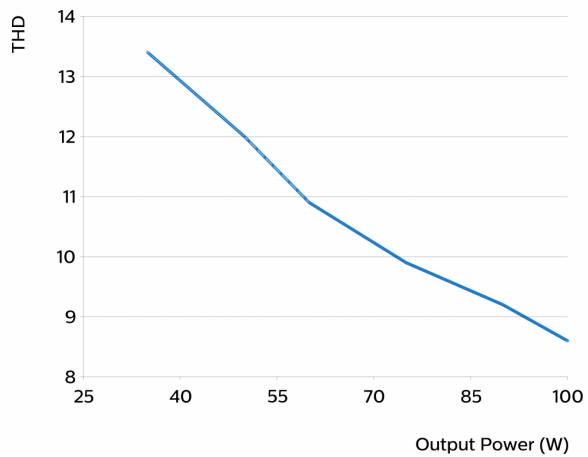| Specification item	Value
Approval marks	CCC / CE / D4i / EAC / EL / ENEC / RCM / SR / UA / WEEE
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

Operating window
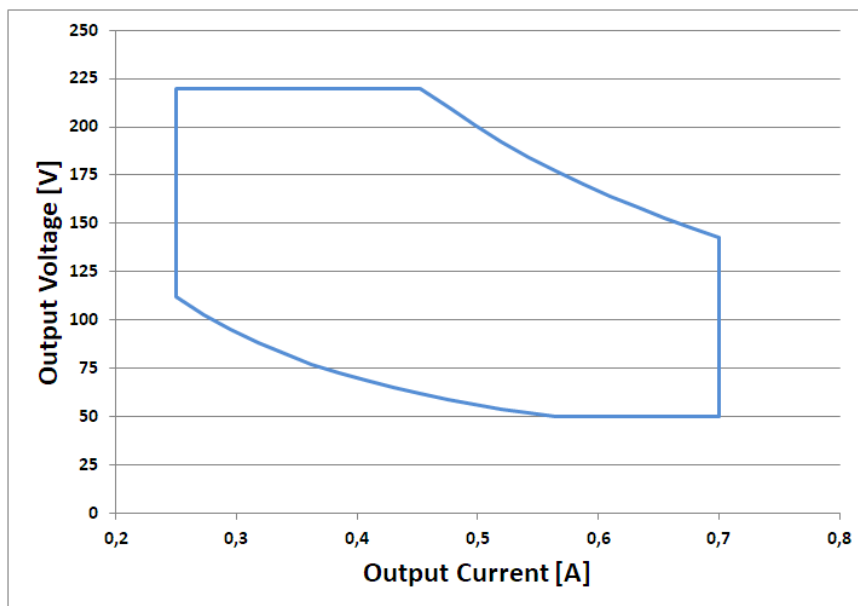
Power factor versus output power

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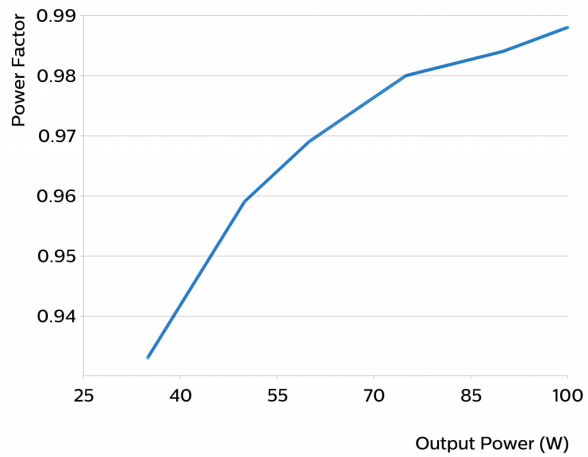
Efficiency versus output power

THD versus output power

Xitanium 100W 0.25-0.7A 220V SR 230V

October 2021

Notes

Standby Power: typical 0.3W, max 0.5W (No load on SR), max 1W (250mW load on SR).

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