Xitanium

Datasheet

Xitanium non-iso iXt SR dimmable & programmable



Xitanium 100W 0.15-0.5A 300V SR 230V iXt
9290 016 95706

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
- Industry specifications: longer lifetime, wider ambient temperature range, high surge immunity (CM/DM)

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

- Industry: warehouses, distribution centers, manufacturing
- Offices
- Healthcare
- Education
- Retail: supermarkets, shopping malls

Logistical data

Specification item	Value
Product name	Xitanium 100W 0.15-0.5A 300V SR 230V iXt
EOC	871951426413700
Logistic code 12NC	9290 016 95706
EAN1 (GTIN)	8719514264137
EAN3 (box)	8719514264144
Pieces per box	12
Weight	330 gram

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	50...60	Hz	Nominal range
Rated input current	0.49	A	@ rated output power @ rated input voltage
Rated input power	107.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.90 C		@ rated output power @ rated input voltage@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	94.0	%	@ rated output power @ rated input voltage @ max. Uout
Rated input voltage DC	186...250	V_{dc}	Performance range
Rated input current DC	≤ 0.59	A_{dc}	Performance range
Input voltage AC	198...264	V_{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range
Input voltage DC	168...275	V_{dc}	Operational range
Standby Power (no load)	0.32	W	
Isolation input to output	No		

Electrical output data

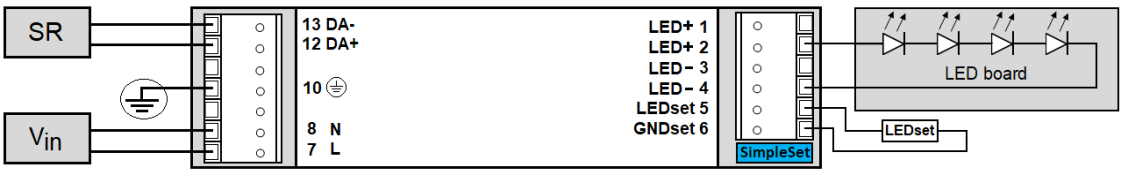
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	100...300	V_{dc}	
Output voltage max.	330	V	Maximum output voltage (rms)
Output current	150...500	mA	
Output current min programmable	150	mA	
Min output current	3.3	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 4	%	
Output P_{st}^{LM}	≤ 1.0		
Output SVM	≤ 0.6		
Output power	28.0...100.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	SR		DALI Parts: 101, 102, 207, 250, 251, 252, 253. See design-in guide at www.philips.com/oem for more controllability details.
Dimming range	1...100	%	With AOC >150mA 1% dimming possible; AOC <150mA min. physical current = 3.3mA
Isolation controls input to output	Double		acc. IEC61347-1
SR Power Supply max voltage.	22.5	V	
SR output current	52	mA	
SR Power Supply max current source	60	mA	

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	
Control wire cross-section	0.5...1.5 / 20...16	mm^2 / 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

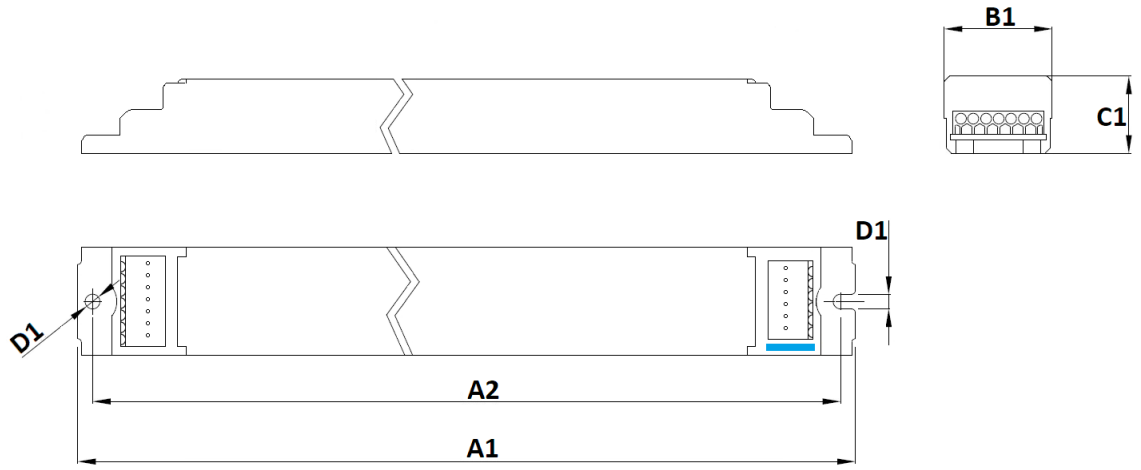


Isolation

Insulation per IEC61347-1	Input	Output	SR-interface	Housing
Input	-	No	Double	Basic
Output	No	-	Double	Basic
SR-interface	Double	Double	-	Basic
Housing	Basic	Basic	Basic	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	425	mm	
Mounting hole distance (A2)	415	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	330	gram	

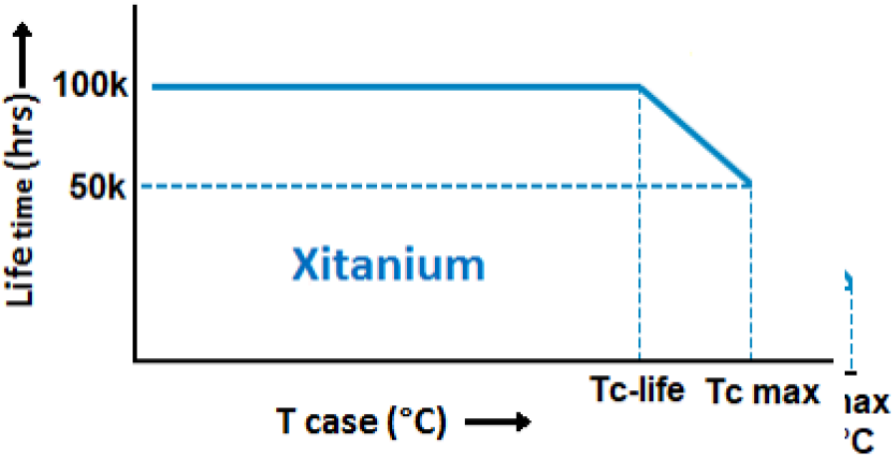


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-30...+60	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	90	°C	Lifetime 35khrs;
Tcase-life	75	°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



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
90	50000	hr	
82.5	71000	hr	
75	100000	hr	Temperature measured @Tc point
70	>100000	hr	
65	>100000	hr	

Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

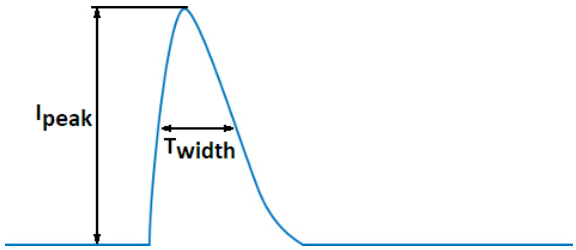
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	LEDset, Programmable, SimpleSet	150 mA	
Driver Temperature Limit (DTL)	Yes	ON	
NTC on LEDset	Yes	OFF	
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Min Dim Level (%)	Yes	1 %	
DC emergency (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	
DALI 102	Yes		Programmable via SimpleSet
DALI Power Supply (DALI part 250)	Yes	ON	
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	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 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 18	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 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)	0.5	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

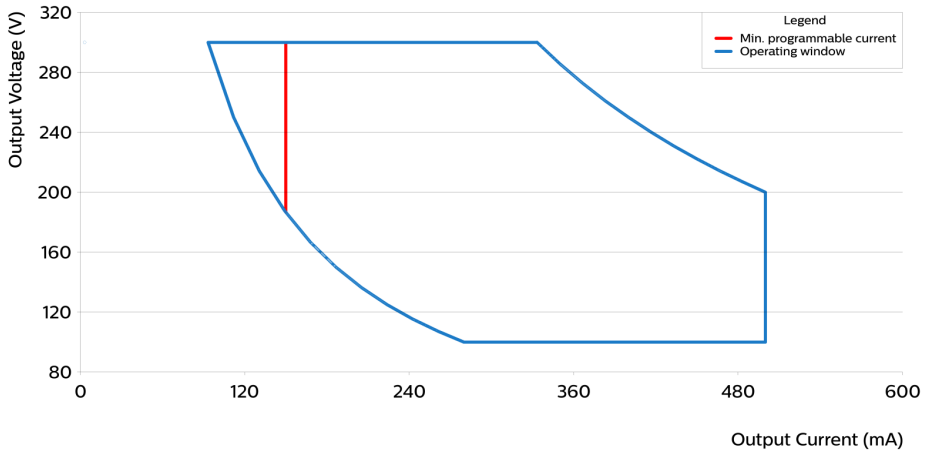
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	2	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	4	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info (Approbation)

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

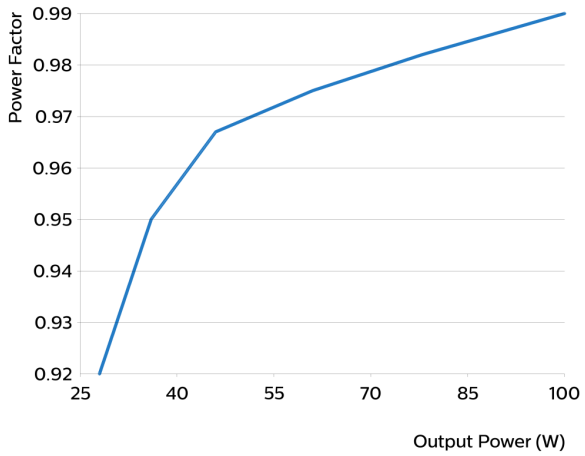
Graphs

Operating window

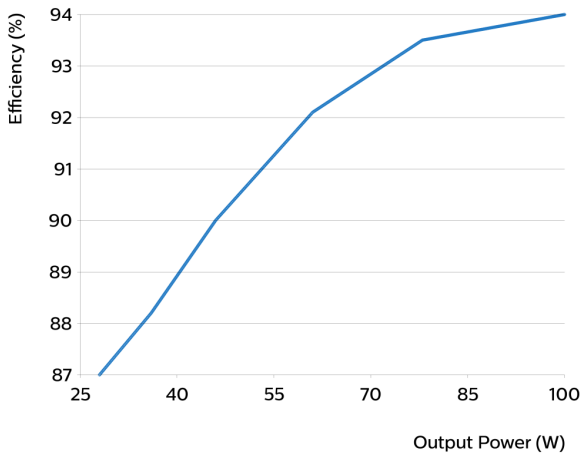


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	150	186	300	45
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	200	140	300	60
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	250	112	300	75
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	300	100	300	90
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	350	100	285	100
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	400	100	250	100
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	450	100	222	100
Xitanium 100W 0.15-0.5A 300V SR 230V iXt	500	100	200	100

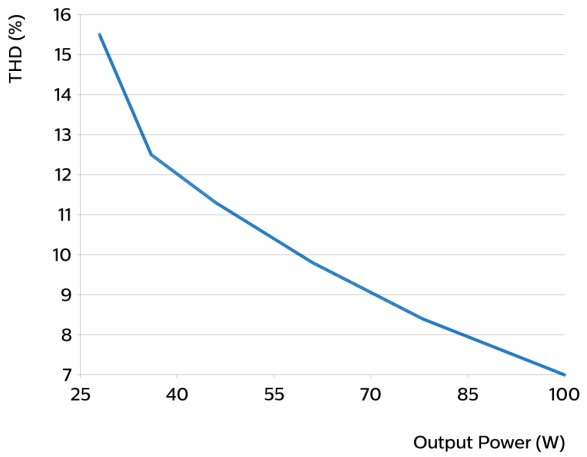
Power factor versus output power



Efficiency versus output power



THD versus output power



Notes

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

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