PHILIPS

Xitanium

LED driver

Xitanium non-isolated SR FlexTune dimmable & programmable

Xitanium 75W 0.15-0.7A 220V SR FlexTune 230V

9290 016 93806

The Philips Xitanium SR FlexTune drivers make it possible to create excellent Tunable White systems without compromising on quality of light.

The unique FlexTune dimming feature ensures flicker-free dimming performance down to 1% over the full CCT range. The drivers can be installed in both wireless SR systems (for example, in combination with EasyAir SNS210 or SNS410) as well as in wired DALI systems.

Benefits

- Excellent dimming and colour tuning quality
- Dual mode: SR or DALI mode
- Flicker-free dimming down to 1% over the full CCT range
- Easy system calibration via MultiOne
- Suitable for installation in emergency lighting systems
- Perfect system match with Fortimo LEDstrip FlexTune modules
- Compatible with EasyAir SNS210 and SNS410 sensor (wireless tunable white system)
- Compatible with DALI device type 8 (wired tunable white system)

Features

- High efficiency
- Wide operating windows
- Unique FlexTune dimming technology
- ~ 15V DALI current source power supply, max 0.5W for sensors and radios
- Highly accurate power metering
- DALI-2 and D4i certified

Application

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

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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	0.4	A	@ full output power @ rated input voltage
Rated input power	85	W	@ rated output power @ rated input voltage
Power factor	0.98		@ maximum output power @ rated input voltage
Total harmonic distortion	10	%	@ maximum output power @ rated input voltage
Efficiency	89	%	@ maximum output power @ rated input voltage
Rated input voltage DC range	186...250	V_{dc}	Performance range
Rated input current DC range	≤ 0.48	A_{dc}	Performance range
Input voltage AC range	202...254	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	0.25	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	0.15...0.7	A	
Output current tolerance	± 5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P_{st}^{LM}	≤ 1		
Output SVM	≤ 0.4		
Output power	21...75	W	
Number of output channels	2		

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	DALI, SR, Touch & Dim (TD)		DALI Parts: 101, 102, 209, 251, 252, 253
Dimming range	1...100	%	> 150mA 1% dimming; < 150mA min. current 3mA
Isolation controls input to output	SELV		acc. IEC61347-1
SR output voltage max.	20	V	
SR guaranteed current	52	mA	
SR maximum current	60	mA	

Wiring and Connections

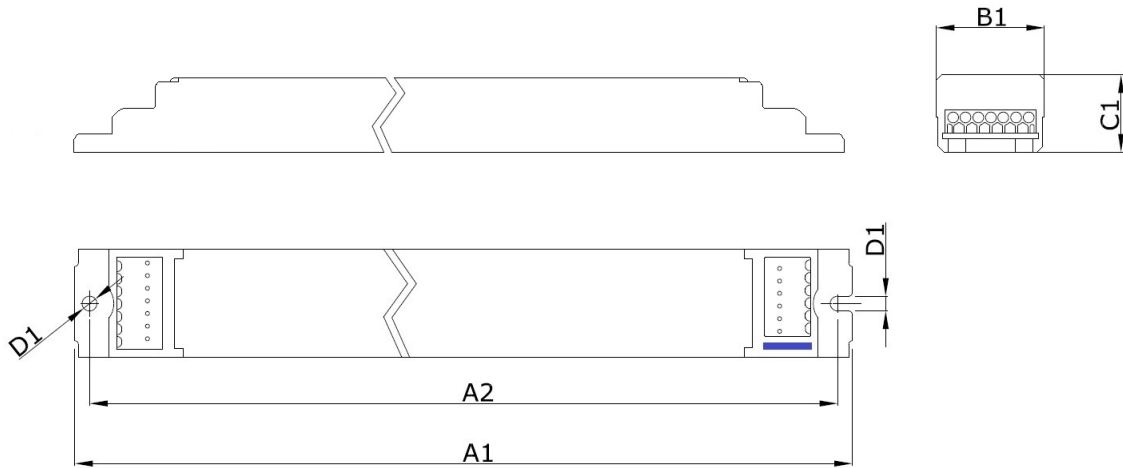| Specification item	Value	Unit	Type
Input wire cross-section	0.5...1.5 / 20...16	mm² / AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm² / AWG	WAGO744, solid wire
Output wire strip length	8...9	mm	
Maximum cable length	0.8	m	Total length of wiring including LED module, one way

Insulation

Insulation per IEC61347-1	Input	Output	SR-Interfase	Housing
Input		Non	SELV	Basic
Output	Non		SELV	Basic
SR-Interfase	SELV	SELV		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	290	gram	

Logistical data

Specification item	Value
Product name	Xitanium 75W 0.15-0.7A 220V SR FlexTune 230V
EOC	871869975309200
Logistic code 12NC	9290 016 93806
EAN1 (GTIN)	8718699753092
EAN3	8718699753108
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	Maximum temperature measured at T_{case}-point
Tcase-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%
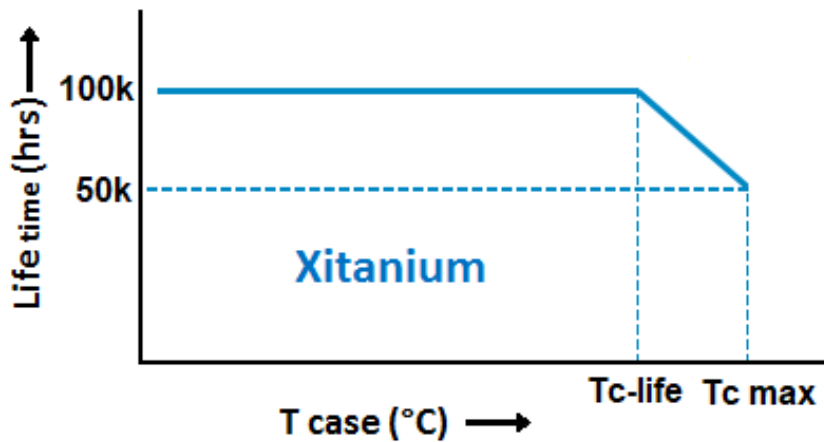
Storage temperature and humidity

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

Programmable features

Specification item	Available	Default setting	Condition
Constant Light Output (CLO)	Yes	OFF	
Adjustable Light Output (ALO)	Yes	OFF	
DALI 102	Yes		Programmable via SimpleSet
DALI 253 M	Yes		
Touch & Dim (TD)	Yes	OFF	SR PSU must be disabled in case TD function is used
Min dim level	Yes	1 %	
DC emergency (DCemDim)	Yes	ON	Default 15%, EOFx range = 1 .. 100% (EOFx = DCemDIM level)
Dimming support at DC operating	Yes	OFF	
Corridor mode	Yes	OFF	Default: T1=55s, T2=32s, T3=30min
OEM Write Protection (OWP)	Yes	OFF	
SR PSU	Yes	ON	
Luminaire Info	Yes		
FlexTune	Yes	150 mA	Set the color CoolWhite & WarmWhite, default power on color setting = 4600k

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	Yes		Accuracy = 4%
Diagnostics	Yes		

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	29.6	A	Input voltage 230V
Inrush current T_{width}	356	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 16	pcs	Indicative value
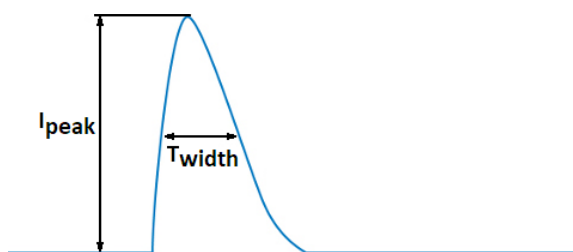
MCB	Rating	Relative number of LED drivers
B	4A	25%
B	6A	40%
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
B	32A	200%
B	40A	250%
C	4A	42%
C	6A	63%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%
C	32A	340%
C	40A	415%

Driver touch current / protective conductor current

| Specification item	Value	Unit	Condition
Typical Protective Conductor Current (ins. Class I)	0.4	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

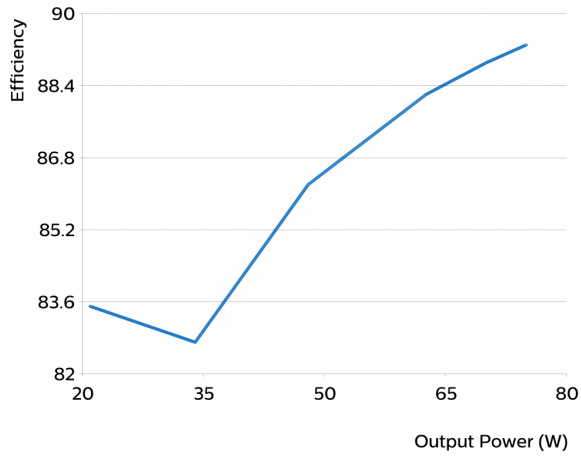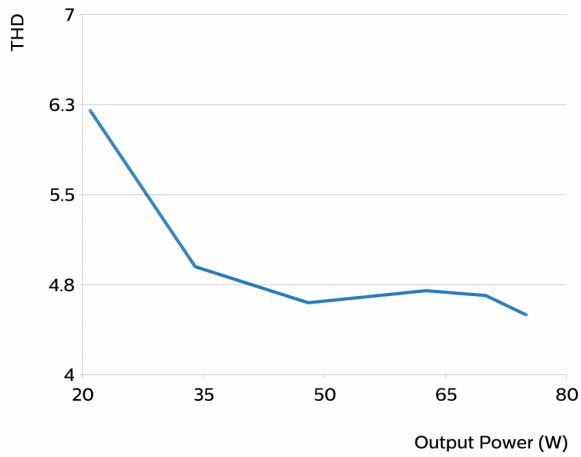| Specification item	Value
Approval marks	CCC / CE / D4i / DALI 2 / EL / ENEC / RCM
Ingress Protection classification (IP)	20

Graphs

Operating window
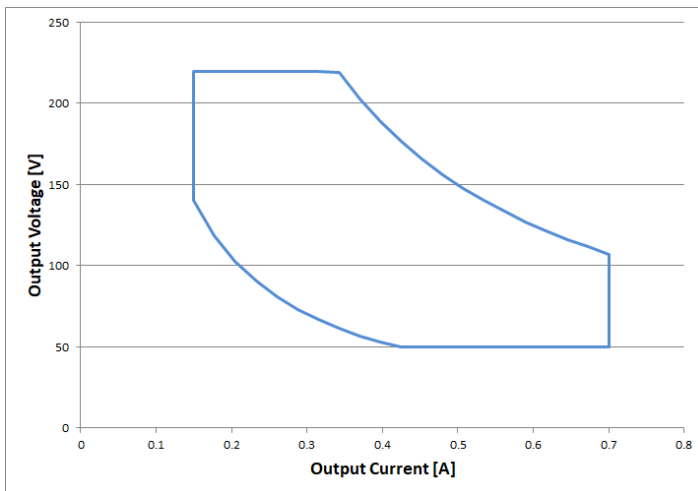
Power factor versus output power
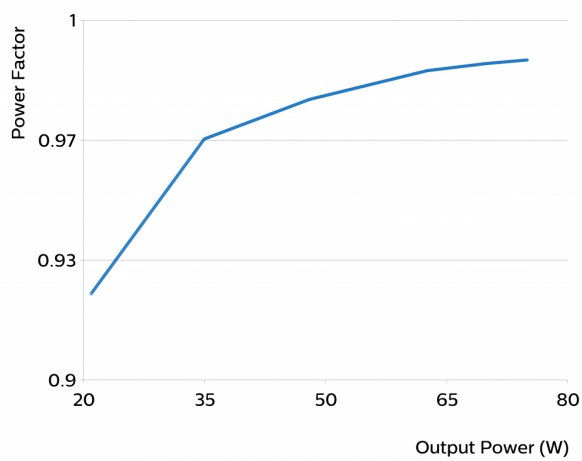
Efficiency versus output power

THD versus output power

Notes

For more information about FlexTune drivers visit the Technical Download site:
Linear non-SELV Drivers >> General information >> FlexTune-Quick-Installation-Guide