

Xitanium non-isolated SR FlexTune dimmable & programmable

Xitanium 36W 0.08-0.4A 220V SR FlexTune
230V
9290 016 93706



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 and Touch & Dim systems.

NOTE: By factory default the SR bus power supply (SR PSU) is enabled, and ready to be used with an external control device. If installing the driver in a DALI or Touch&Dim system, please make sure to disable the SR PSU on individual driver level before installation in a system.

Benefits

- Excellent dimming and color tuning quality
- Suitable for 3 types of systems: SR (wireless), DALI (wired) and Touch & Dim (push button)
- 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 LED Strip FlexTune modules
- Compatible with EasyAir SNS210 and SNS410 sensors (wireless tunable white system)
- Compatible with DALI Device Type 8 (wired tunable white system)

Application

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

Features

- High efficiency
- Wide operating windows
- Unique FlexTune dimming technology
- ~ 15V DALI current source power supply, max 0.5W for sensors and radios
- DALI-2 and D4i certified
- Adjustable Light Output (ALO)
- Constant Light Output (CLO)
- Corridor Mode (CM)
- Dimming supported during DC operation (DCemDim)
- Touch & Dim (TD)
- OEM Write Protection (OWP)
- Color type Tc (DALI part 209)
- Memory Bank 1 Extension / Luminaire Data (DALI part 251)
- Energy Reporting (DALI part 252)
- Diagnostics & Maintenance (DALI part 253)

Logistical data

Specification item	Value
Product name	Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V
EOC	871869975307800
Logistic code 12NC	9290 016 93706
EAN1 (GTIN)	8718699753078
EAN3 (box)	8718699753085
Pieces per box	24
Weight	283 gram

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	0.2	A	@ rated output power @ rated input voltage
Rated input power	42.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.98		@ maximum output power @ rated input voltage@ rated output power @ rated input voltage
Total harmonic distortion	10	%	@ maximum output power @ rated input voltage
Efficiency	88.1	%	@ maximum output power @ rated input voltage @ max. U _{out}
Rated input voltage DC	186...250	V _{dc}	Performance range
Rated input current DC	0.23	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)	0.49	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	80...400	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P _{st} ^{LM}	≤ 0.3		In performance operating window
Output SVM	≤ 0.3		In performance operating window
Output power	10.0...36.0	W	
Number of output channels	2		

Control interfaces

Specification item	Value	Unit	Condition
Control method	DALI, SR, TD		For latest DALI certification status please visit www.digitalilluminationinterface.org/products . Please refer to design-in guide at www.philips.com/oem for more controllability details.
Dimming range	1...100	%	> 80mA 1% dimming; < 80 mA min. current 3mA
Isolation controls input to output	SELV		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	0.8	m	Between driver and LED module

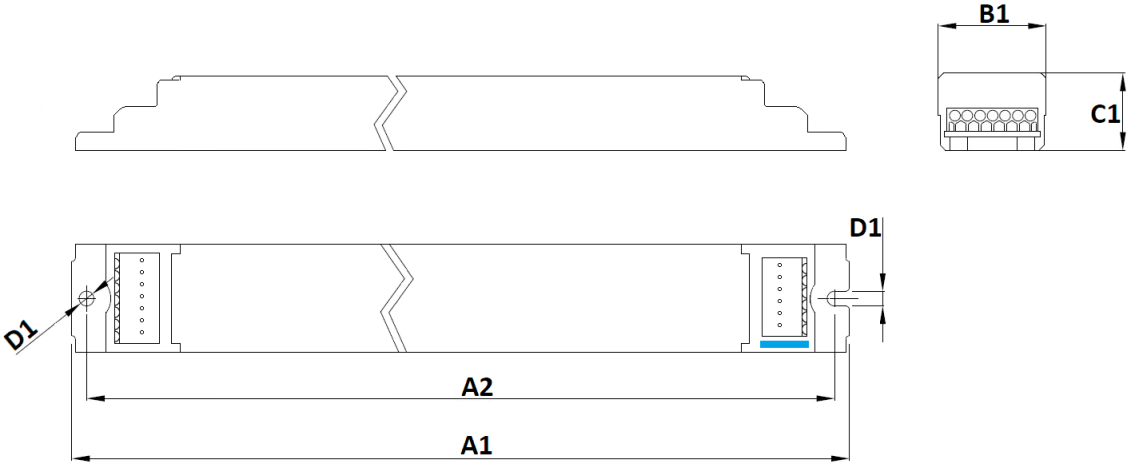


Isolation

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)	360	mm	
Mounting hole distance (A2)	350	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	283	gram	

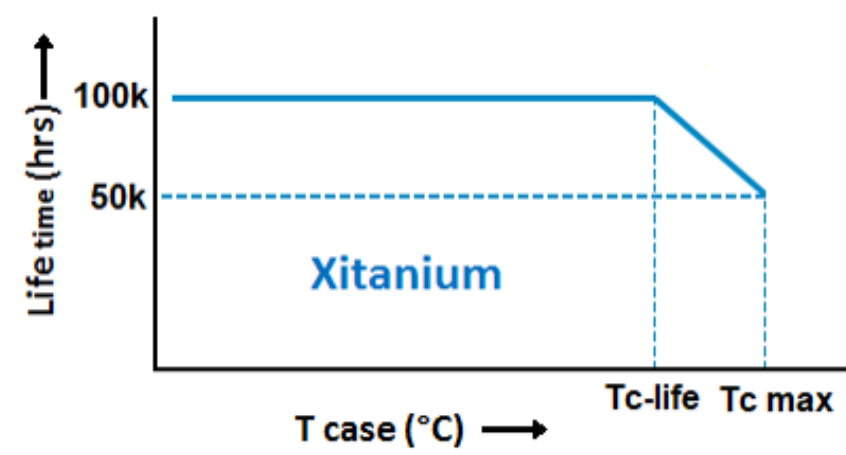


Operational temperatures and humidity

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%
Driver lifetime Tcmax	0	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Maximum failures = 10%

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

Storage temperature and humidity

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

Programmable features

Specification item	Available	Default setting	Condition
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Touch & Dim (TD)	Yes	OFF	SR PSU must be disabled in case Touch & Dim function is used
Corridor Mode	Yes	OFF	Default: T1=55s, T2=32s, T3=30min
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 MultiOne
FlexTune (DALI part 209)	Yes		Set the color CoolWhite & WarmWhite, default power on color setting = 4600k
DALI Power Supply (DALI part 250)	Yes	ON	Disable SR PSU before mounting drivers in inter-luminaire wired DALI network.
Luminaire Info (DALI part 251)	Yes		
Luminaire maintenance (DALI part 253)	Yes		

Non-programmable features

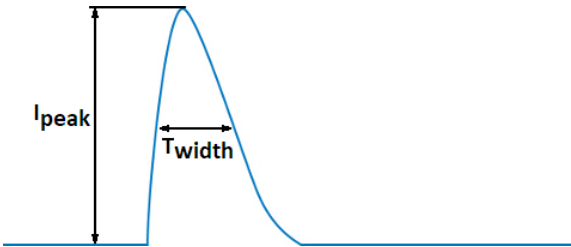
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598
Output Overvoltage Detection	Yes	
Energy metering (DALI part 252)	Yes	Accuracy = 4%
Diagnostics (DALI part 253)	Yes	
Diagnostics via Signify tool	Yes	

Inrush current

Specification item	Value	Unit	Condition
Inrush current	15.2	A	Input voltage 230V
Inrush peak width	292	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 24	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)	0.4	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

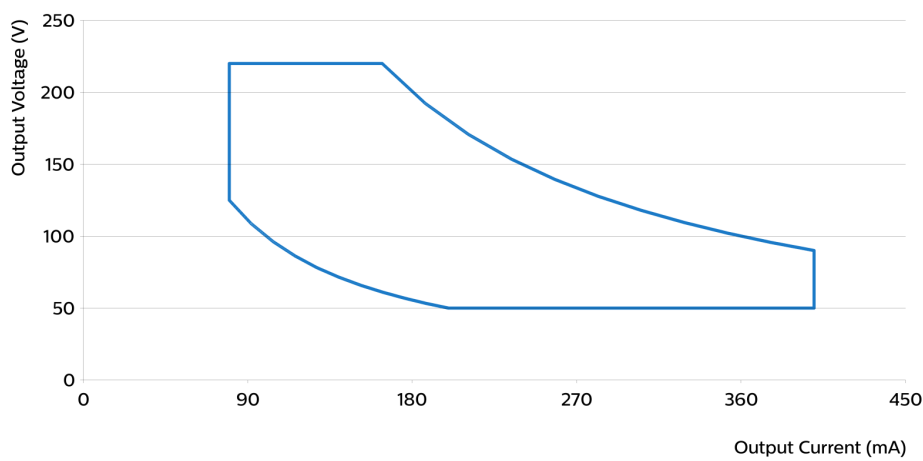
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info (Approbation)

Specification item	Value
Approval marks and Certifications	CCC / CE / D4i / DALI 2 / EL / ENEC / RCM / SR / WEEE
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

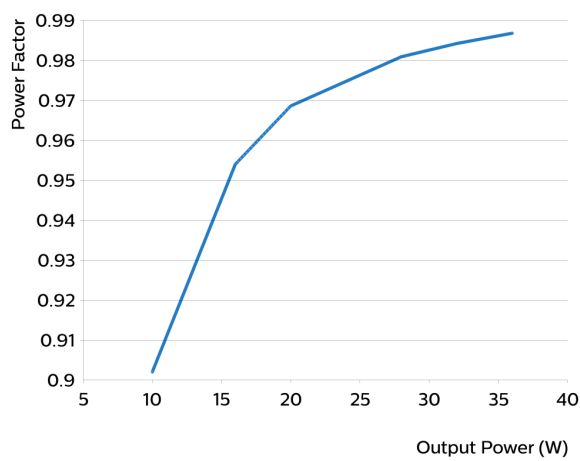
Graphs

Operating window

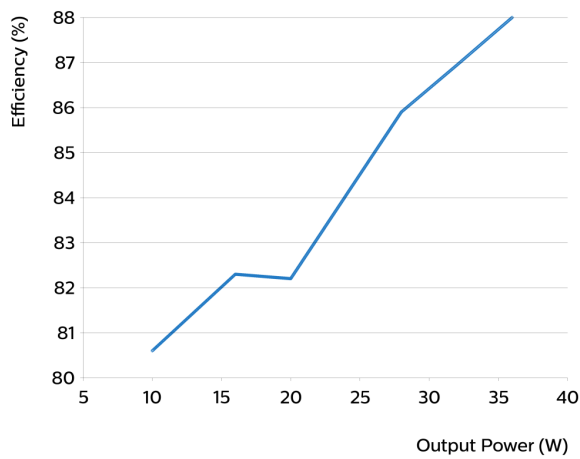


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	80	125	220	17.6
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	130	76	220	28.6
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	180	55	200	36
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	230	50	156	36
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	280	50	128	36
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	330	50	109	36
Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V	400	50	90	36

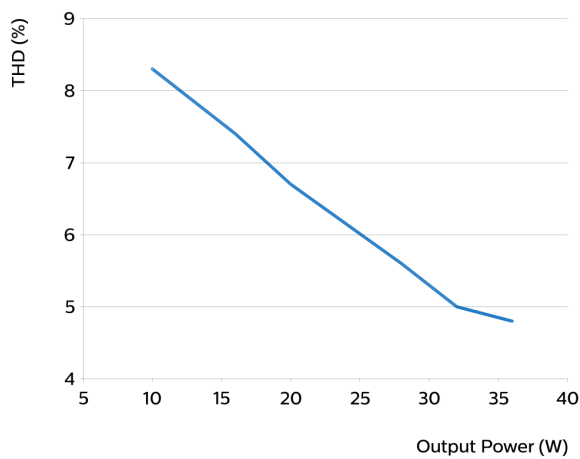
Power factor versus output power



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](#)