PHILIPS

Xitanium

LED drivers

Down- and spotlight

Enabling the future with LED drivers for retail premises

For today, for tomorrow

Retail

Xitanium LED down- and spotlight drivers **expand your application possibilities**

To ensure you stay ahead of lighting trends, our range of Xitanium LED down- and spotlight drivers for retail applications is regularly upgraded to improve performance, flexibility and reliability. The latest portfolio widens your application possibilities even further, and now includes miniature Touch DALI types for even smaller luminaire designs.

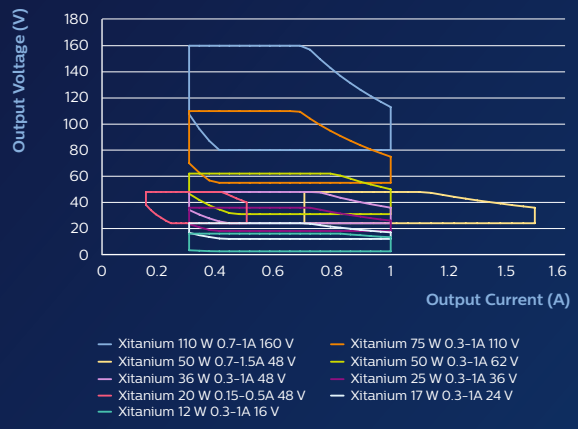
Wireless programming

To make it easier and faster to program Xitanium LED drivers at any stage during the manufacturing process without a connection to mains power, we have introduced Philips SimpleSet. This flexible wireless programming technology helps you meet order requirements faster, while reducing costs and inventory.

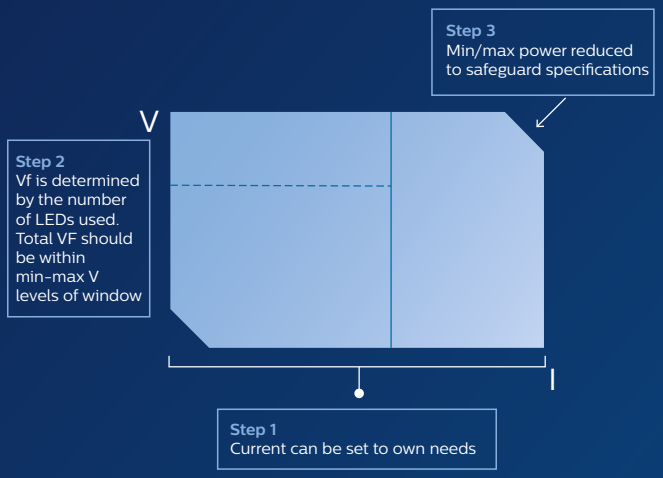
Enhanced performance

Interfacing, ripple current and dimming of the Xitanium drivers is compatible with LEDset, the interface standard for LED modules and LED drivers. This makes it easier for you to meet market requirements in terms of lumen output, luminaire customization and energy consumption by simplifying setting the LED driver current. It also improves connectivity of LED modules, whether you connect them in parallel, in series or a combination of both. And thanks to output current ripple of less than 4%, the drivers help prevent the lighting interfering with cameras and scanners in the store. The flicker-free and noise-free dimming in the Touch and DALI LED drivers is realized by using amplitude (AM) dimming.

Down and spotlight operating windows



Explanation of operating windows



Note that the relevant forward voltage (Vf) is determined by the number and type of LEDs used in the module or on the PCB. The min/max levels of the relevant operating window have to be respected in order to safeguard other driver specifications.

Designed for reliability

Our knowledge of conventional fluorescent and HID technologies enables us to design-in reliability to the Xitanium drivers and offer a five year guarantee. The reliability is further enhanced with features that protect the connected LED module, such as hot wiring, reduced ripple current and thermal derating. Almost all drivers feature central DC operation.

Operating windows to match applications

As LEDs increase in efficiency, new opportunities open up for OEMs. To help you benefit, we have created application-oriented operating windows for the LED drivers that ensure stable light output level (lumens) and consistent light quality. These operating windows enable you to offer the complexity management that is currently demanded by lighting specifiers and architects. The operating windows are stacked to enable operation of a large number of LEDs.

Industry compatible

Xitanium LED drivers are not just for operating Philips Fortimo LED modules. LED modules from other manufacturers or OEMs' own PCB designs can also be operated as long as the voltage/current setting falls in the operating window.

Design flexibility

To optimize design flexibility, we offer drivers where the output current can be programmed within the operating window or set using an external resistor. Programming is carried out using a Philips MultiOne configurator via DALI interface or wirelessly via SimpleSet (for fixed output and DALI drivers). When using a resistor outside the driver, this can be placed on the LED PCB (level 2 board), in the cable or in the LED driver's output connector.

> Xitanium LED drivers are **leading the way in terms of reliability"**

General characteristics for **Xitanium LED indoor** down- and spotlight drivers

Xitanium LED indoor down- and spotlight drivers are used in high-end stores and retail applications. They are reliable, efficient, future proof and easy to configure. The portfolio comprises fixed-output, dimmable (Touch and DALI), programmable and emergency LED drivers versions.

High reliability

Examples of functions that increase the reliability include:

- **Thermal derating** - the driver dims the LED module back to a specified level if the LED luminaire or LED module becomes too hot. This safety feature also preserves the operational lifetime.
- **Hot wiring** - this protects LED module when wiring the module and driver while driver mains is live.
- **Reduced ripple current** - by reducing the peak current, the lifetime of LED module is protected. A further reduction to 4% ensures camera- and scanner-friendly lighting performance.
- **Central DC operation** - when the central battery takes over the electrical supply as a result of mains interruption, the LED driver automatically switches from AC to DC operation mode.
- **Amplitude (AM) dimming** - this enable flicker-free and noise-free dimming of Touch and DALI versions.

High energy efficiency

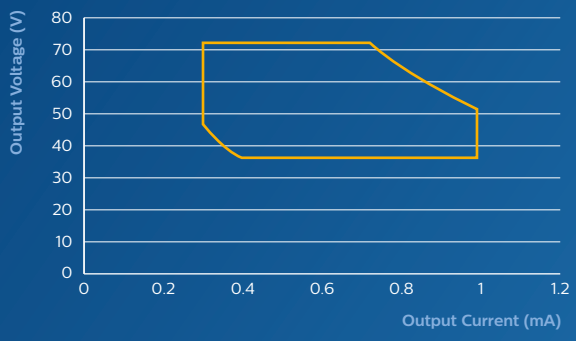
The Xitanium drivers operate at up to 94% efficiency. Note that the lower power LED drivers have lower efficiencies because fixed power losses have a more significant impact on lower power LED drivers.

Operating windows for flexibility management

The drivers' operating windows are optimized for general lighting applications. By offering a range of operating windows, we help you take care of flexibility management and LED generation upgrades. It's possible cover a wide range of applications with a single driver by choosing a current within the operating window. With our Fortimo LED modules, you can use this flexibility to differentiate your luminaire. Adjusting the current supplied to the LED module makes it possible to choose between high or low light level (lumens) and high or low efficacy. LED modules or PCB from other suppliers can also be used, and you can make use of future upgrade of LED efficiency.

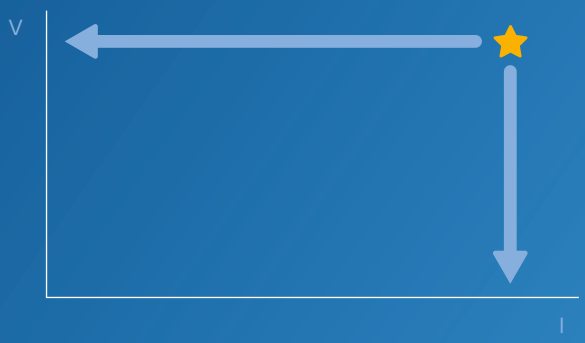
> “Configurability gives you **flexibility and differentiation** possibilities”

Typical operating window



Example of operating window. Can operate all points within window.

Typical single current specification



Example of peak design driver fixed output driver with fixed current and voltage setting (only drives a module with specs at star, in reality a small operation line).

Down- and spotlight **LED drivers**

A full range of dimmable and fixed output LED drivers are available for down- and spotlight applications. The power ratings and related operating windows range from 20 to 75 W. All Xitanium drivers are specified with an operating window and are Safety Extra Low Voltage (SELV) circuits.

Special application requirements

To meet the most demanding application requirements, many of our Xitanium drivers have additional functions or performance characteristics. These include low output current ripple (<4%), hot wiring capability, built-in 12V fan power supply, central DC operation, temperature derating and SimpleSet programming compatibility. By choosing a driver with these specifications, you can differentiate your products in the market.

Various housing designs

The housing form factors include:

- Linear housed form factor with '3-in-1' design
- /s housing identical to conventional HID housings for down- and spotlighting
- SH and WH housing with strain relief and loop through for independent use
- Mini housing for down- and spotlighting.

A Xitanium loop-through adaptor is also available for housings that do not incorporate loop-through functionality.

The specifications cover:

- Power/wattage operating windows for lumen packages and applications
- Fixed output as well as dimmable drivers for DALI protocol
- New housings for retail/track lighting
- EMEA/APR voltages (230 V)
- Single current drivers that are cost-optimized for high-volume general lighting applications in down-, spot and office lighting.

Xitanium Mini
Touch and DALI Dimmable drivers

The **smart, miniaturized** DALI driver for down- and spotlights

It's time to take the next step with Xitanium Touch and DALI range: miniaturization. The new Xitanium Mini 20 W and 36 W TD range enables the design of smaller luminaires while still offering comparable performance with alternative Touch and DALI drivers in the portfolio. Apart from miniaturization, the portfolio also helps you simplify your range without sacrificing diversity. These advances can be applied to your current as well as future indoor down- and spotlight luminaires.

- **Smart choice -** Touch and DALI drivers for dimming of a wide range of point source modules in retail, supermarket and similar commercial applications.
- **Wider operating window -** a wide range of modules and applications can be addressed thanks to 54V output voltage of the Xitanium Mini TD drivers.

- **Complexity reduction -** the new Mini TD drivers can be converted to independent drivers with an add-on strain relief cap, which is available as a separate accessory. With this feature, both spot- and downlight luminaires can be addressed with only one driver.
- **Easy to work with –** the form factor of the new Mini TD range is identical to that of the other Mini drivers. This enables you to use the same luminaire design for both DALI and fixed output luminaires.

The **Easy Design-in Tool**

Create your ideal configuration in minutes. Design the optimal LED system in the fastest, most simple way.

The Easy Design-in Tool is a powerful, time-saving way to speed up the work of those who design or define LED systems. It's a true solution composer and is ideal for all those involved in delivering added-value LED solutions right through the supply chain.

Check out our tool online!
Visit philips.com/easydesignintool

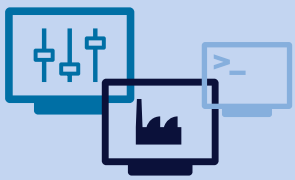
easy design-in tool

MultiOne and SimpleSet

The perfect match for simple, fast and wireless configuration

Configuring of our total programmable driver portfolio of indoor (point & linear) and outdoor drivers has never been easier! With our intuitive Multione configurator tool, you can configure a wide variety of functions in your lighting solutions. It has become a must-have in all applications where the lighting system needs to match these specific requirements. Combined with the MultiOne SimpleSet Interface, this solution is wireless! Depending on the type of driver, a combination of features can be configured. With these features you can create diversity, but also extra security, including costdown improvements.

The benefits of our MultiOne Configuration Software and MultiOne SimpleSet Interface



✓ One multi-functional tool

You can program a luminaire, test it, configure it automatically in production, read out its status and do a complete quality analysis if there are returns from the field. All with one intuitive tool compatible with all Philips configurable drivers.

✓ Ultimate flexibility

Access to the features built into the driver offers you the flexibility to configure your drivers to match specific requirements. It enables optimization of installation, last minute changes, easy diagnostics and maintenance.

✓ Innovative

We bring innovation to your business by allowing you to wirelessly program all Xitanium LED drivers using our MultiOne SimpleSet technology.

Product and ordering information

Dimmable and/or programmable drivers

Product name	Housing	Housing	Dimming range	Output current range	Output voltage range	Central DC operation	SELV	DALI / Touch & Dim & pro-grammable	SimpleSet	Order Code
	type	mm	%	A	V					EOC
Xitanium 75W SH 0.3-1.0A 110V TDI 230V	4	220 x 83 x 35	100-1	0.3-1.0	55-110	✓	✓	✓		8718291 728030 00
Xitanium 50W LH 0.3-1.0A 62V TD/I 230V	2	190 x 46 x 32	100-1	0.3-1.0	31-62	✓	✓	✓		8718291 710950 00
Xitanium 50W LH 0.7-1.5A 48V TD/I 230V	2	190 x 46 x 32	100-1	0.7-1.5	24-48	✓	✓	✓		8718291 782360 00
Xitanium 50W WH 0.7-1.5A 54V TD/Is 230V	5	200 x 74 x 32	100-1	0.7-1.5	24-54	✓	✓	✓	✓	8718696 538111 00
Xitanium 36W WH 0.3-1.0A 54V TD/Is 230V	5	200 x 74 x 32	100-1	0.3-1.0	24-54	✓	✓	✓	✓	8718696 515587 00
Xitanium 36W/m 0.3-1.05A 54V TD 230V	6	97 x 43 x 30	100-1	0.3-1.05	24-54	✓	✓	✓		8718696 748725 00
Xitanium 36W LH 0.3-1.0A 48V TD/I 230V	2	190 x 46 x 32	100-1	0.3-1.0	24-48	✓	✓	✓		8718291 729037 00
Xitanium 36W/s 0.3-1.0A 48V TD 230V	3	110 x 75 x 31	100-1	0.3-1.0	24-48	✓	✓	✓		8718291 770947 00
Xitanium 25W LH 0.3-1.0A 36V TD/Is 230V	1	150 x 46 x 32	100-1	0.3-1.0	18-36	✓	✓	✓		8728291 708032 00
Xitanium 20W WH 0.15-0.5A 54V TD/Is 230V	5	200 x 74 x 32	100-1	0.15-0.5	24-54	✓	✓	✓	✓	8718696 531884 00
Xitanium 20W/m 0.15-0.5A 54V TD 230V	6	97 x 43 x 30	100-1	0.15-0.5	24-54	✓	✓	✓		8718696 748749 00
Xitanium 20W LH 0.15-0.5A 48V TD/Is 230V	1	150 x 46 x 32	100-1	0.15-0.5	24-48	✓	✓	✓		8718291 782346 00

Fixed output

Product name	Housing	Housing	Output current range	Output voltage range	Central DC operation	SELV	SimpleSet	Order Code
	type	mm	A	V				EOC
Xitanium 75W SH 0.3-1.0A 110V I 230V	4	220 x 83 x 35	0.3-1	55-110	✓	✓		8718291 676256 00
Xitanium 50W WH 0.7-1.5A 54V Is 230V	6	200 x 74 x 32	0.7-1.5	24-54	✓	✓	✓	8718291 683644 00
Xitanium 50W WH 0.7-1.5A 54V S 230V	3	110 x 74 x 32	0.7-1.5	24-54	✓	✓	✓	8718291 683705 00
Xitanium 50W SH 0.3-1.0A 62V I 230V	4	220 x 83 x 35	0.3-1	31-62	✓	✓		8718291 676218 00
Xitanium 50W LH 0.7-1.5A 48V I 230V	2	190 x 46 x 32	0.7-1.5	24-48	✓	✓	✓	8718696 437629 00
Xitanium 50W/s 0.3-1.0A 62V 230V	3	110 x 75 x 32	0.3-1	31-62	✓	✓		8718291 676157 00
Xitanium 50W/s 0.9-1.4A 48V 230V	3	110 x 75 x 32	0.9-1.4	24-48	✓	✓		8718291 777588 00
Xitanium 50W/m 0.7-1.5A 54V 230V	5	97 x 43 x 30	0.7-1.5	24-54		✓	✓	8718696 659090 00
Xitanium 50W/m 0.7-1.5A 48V 230V	5	97 x 43 x 30	0.7-1.5	24-48		✓		8718696 437186 00
Xitanium 43W/m 0.7-1.2A 54V 230V	5	97 x 43 x 30	0.7-1.2	24-54		✓	✓	8718696 659076 00
Xitanium 36W WH 0.3-1.05A 54V Is 230V	6	200 x 74 x 32	0.3-1.05	24-54	✓	✓	✓	8718696 683620 00
Xitanium 36W WH 0.3-1.05A 54V S 230V	3	110 x 74 x 32	0.3-1.05	24-54	✓	✓	✓	8718696 683682 00
Xitanium 36W LH 0.3-1.0A 48V I 230V	2	190 x 46 x 32	0.3-1	24-48	✓	✓	✓	8718696 542439 00
Xitanium 36W/m 0.3-1.05A 54V 230V	5	97 x 43 x 30	0.3-1.05	24-54		✓	✓	8718696 659052 00
Xitanium 36W/m 0.3-1.05A 48V 230V	5	97 x 43 x 30	0.3-1.05	24-48		✓		8718291 750277 00
Xitanium 20W WH 0.15-0.5A 54V Is 230V	6	200 x 74 x 32	0.15-0.5	24-54	✓	✓	✓	8718696 683606 00
Xitanium 20W WH 0.15-0.5A 54V S 230V	3	110 x 74 x 32	0.15-0.5	24-54	✓	✓	✓	8718696 683668 00
Xitanium 20W LH 0.15-0.5A 48V Is 230V	1	150 x 46 x 32	0.15-0.5	24-48	✓	✓	✓	8718696 474044 00
Xitanium 20W/m 0.15-0.5A 54V 230V	5	97 x 43 x 30	0.15-0.5	24-54		✓	✓	8718696 659038 00
Xitanium 20W/m 0.15-0.5A 48V 230V	5	97 x 43 x 30	0.15-0.5	24-48		✓		8718291 766636 00

Fixed output single current

Product name	Housing	Housing	Output current range	Output voltage range	SELV	Order Code
	type	mm	A	V		EOC
Xitanium 48W/m 1.05A 46V SC 230V	5	97 x 43 x 30	1.05	31-46	✓	8718696 720691 00
Xitanium 38W/m 0.9A 42V SC 230V	5	97 x 43 x 30	0.9	30-42	✓	8718696 711804 00
Xitanium 34W/m 0.8A 42V SC 230V	5	97 x 43 x 30	0.8	30-42	✓	8718696 711781 00
Xitanium 32W/m 0.7A 46V SC 230V	5	97 x 43 x 30	0.7	31-46	✓	8718696 572955 00
Xitanium 28W/m 0.6A 46V SC 230V	5	97 x 43 x 30	0.6	31-46	✓	8718696 684856 00
Xitanium 23W/m 0.5A 46V SC 230V	5	97 x 43 x 30	0.5	31-46	✓	8718696 572917 00
Xitanium 21W/m 0.7A 30V SC 230V	5	97 x 43 x 30	0.7	20-30	✓	8718696 572931 00
Xitanium 16W/m 0.35A 46V SC 230V	5	97 x 43 x 30	0.35	31-46	✓	8718696 572894 00
Xitanium 10W/m 0.35A 30V SC 230V	5	97 x 43 x 30	0.35	20-30	✓	8718696 572870 00

Fixed output single current dimmable

Product name	Housing	Housing	Dimming range	Output current range	Output voltage range	SELV	Trailing edge dim	Order Code
	type	mm	%	A	V			EOC
Xitanium 15W 0.75A 20V TE SC 230V	7	100x50x19	5-100	0,75	8-20	✓	✓	871869676574600
Xitanium 14W 0.35A 40V TE SC 230V	7	100x50x19	5-100	0,35	29-40	✓	✓	871869676572200
Xitanium 10W 0.5A 20V TE SC 230V	7	100x50x19	5-100	0,50	8-20	✓	✓	871869676570800
Xitanium 10W 0.25A 40V TE SC 230V	7	100x50x19	5-100	0,25	29-40	✓	✓	871869676568500
Xitanium 8W 0.2A 40V TE SC 230V	7	85x50x19	5-100	0,20	29-40	✓	✓	871869676566100
Xitanium 7W 0.35A 20V TE SC 230V	7	85x50x19	5-100	0,35	8-20	✓	✓	871869676562300
Xitanium 6W 0.15A 40V TE SC 230V	7	85x50x19	5-100	0,15	29-40	✓	✓	871869676560900
Xitanium 4W 0.1A 40V TE SC 230V	7	85x50x19	5-100	0,10	29-40	✓	✓	871869676558600

Accessories

Product name	Order Code
	EOC
JST to push-in adaptor	8718291 245254 00
Xitanium LH Loop-through adaptor	8718291 770299 00
Strain Relief Blocks*	8718696 583197 00
Strain Relief Blocks DALI	8718696 767351 00
Strain Relief Blocks TE	8718696 774021 00

* Not suitable for 50 W/m Rset driver only.

Rset

Product name	Value	Type	12 NC code	Order Code
				EOC
Fortimo LED Rset 300mA	560	Poke-in	929000912506	8718696401934 00
Fortimo LED Rset 300mA connector	560	JST	929000912606	8718696401958 00
Fortimo LED Rset 500mA	1200	Poke-in	929000912706	8718696401996 00
Fortimo LED Rset 500mA connector	1200	JST	929000912806	8718696402016 00
Fortimo LED Rset 750mA	2050	Poke-in	929000912906	8718696402030 00
Fortimo LED Rset 750mA connector	2050	JST	929000913006	8718696402054 00
Fortimo LED Rset 950mA	3090	Poke-in	929000913106	8718696402078 00
Fortimo LED Rset 950mA connector	3090	JST	929000913206	8718696402092 00
Fortimo LED Rset 1200mA	4870	Poke-in	929000913306	8718696402115 00
Fortimo LED Rset 1200mA connector	4870	JST	929000913406	8718696402139 00

For more information see datasheet

Xitanium and Fortimo - **partners in performance**

Luminaire performance is determined by the sum of its component parts, each carefully designed or selected to meet specific application requirements. In addition to the Xitanium LED drivers featured here, we also offer an extensive range of Fortimo LED lighting modules. Pair components from these complementary families and you'll benefit from design-in simplicity, flexibility, compatibility and exceptionally long life. You'll also enjoy the convenience of dealing with just one knowledgeable supplier of these vital luminaire components.

www.philips.com/technology