

**PHILIPS**

Fortimo

LED system

Square



# Ideal solution for **high-performance** LED office luminaires

Fortimo LED systems offer the freedom to differentiate on lumen output, efficacy and lifetime.

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Fortimo LED Square systems are ideal for office applications where the luminaires require a very homogeneous exit surface window.”



Fortimo LED Square systems are ideal for **recessed, surface mounted and suspended office luminaires**



Fortimo LED Square 2500 lm HV/LV



Fortimo LED Square 380 mm 5000 lm HR or LV

Fortimo LED Square systems consist of white light LED modules with square outer dimensions delivering high energy efficiency and high quality of homogeneous light. These smart systems are completed with the Xitanium drivers offering the flexibility to adjust current settings to differentiate on lumen output, efficacy and lifetime. Fortimo LED Square systems are ideal for office applications where the luminaires require a very homogeneous exit surface window. Typical applications are recessed, surface mounted and suspended office luminaires.



# High quality of white light

## **CRI >80**

Color Rendering Index (CRI) is a quantitative measure of a light source's ability to reveal the colors of various objects faithfully in comparison with a natural or incandescent light source. Philips LED Square modules are specified with a minimum CRI of 80. CRI >80 is more than adequate for general lighting applications.

## **3 SDCM**

Standard Deviation of Color Matching (SDCM) relates to color shift and is measured in 'MacAdam Ellipses'. A 1-step MacAdam ellipse defines a zone in the color space within which the human eye cannot perceive any difference in color. Many LEDs are binned at the 4-7 step level, at which it is possible to perceive differences in color between LEDs that are apparently the same color. Most fluorescent tubes also fall into the 4-7 SDCM zone. The lower the number of MacAdam ellipses, the better the color quality. The

Fortimo LED Square delivers 3 SDCM, thereby minimizing differences in color that are visible to the human eye and maintaining the right balance between cost and performance.

## **CCT 3000 K, 4000 K and 6500 K**

Fortimo LED Square systems are available in three color temperatures, offering a choice of warm white, neutral white and daylight to cover most applications.

- Warm white (around 3000 K)
- Neutral white (around 4000 K)
- Daylight (around 6500 K)

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**Choice of an isolated (low-voltage) or non-isolated (high-voltage) LED system.”**



## Smart Systems

### Xitanium Drivers

At Philips we believe that the LED module and driver should be designed for each other, making the system even more reliable. Our Philips system warranty ensures that in the event of a failure or malfunction you only have to contact one supplier to resolve the problem. Xitanium window drivers offer the freedom to adjust current settings and to differentiate in terms of lumen output, efficacy and lifetime. The corresponding linear Xitanium driver portfolio includes isolated and non-isolated drivers, in fixed light output, 1-10 V and DALI versions.

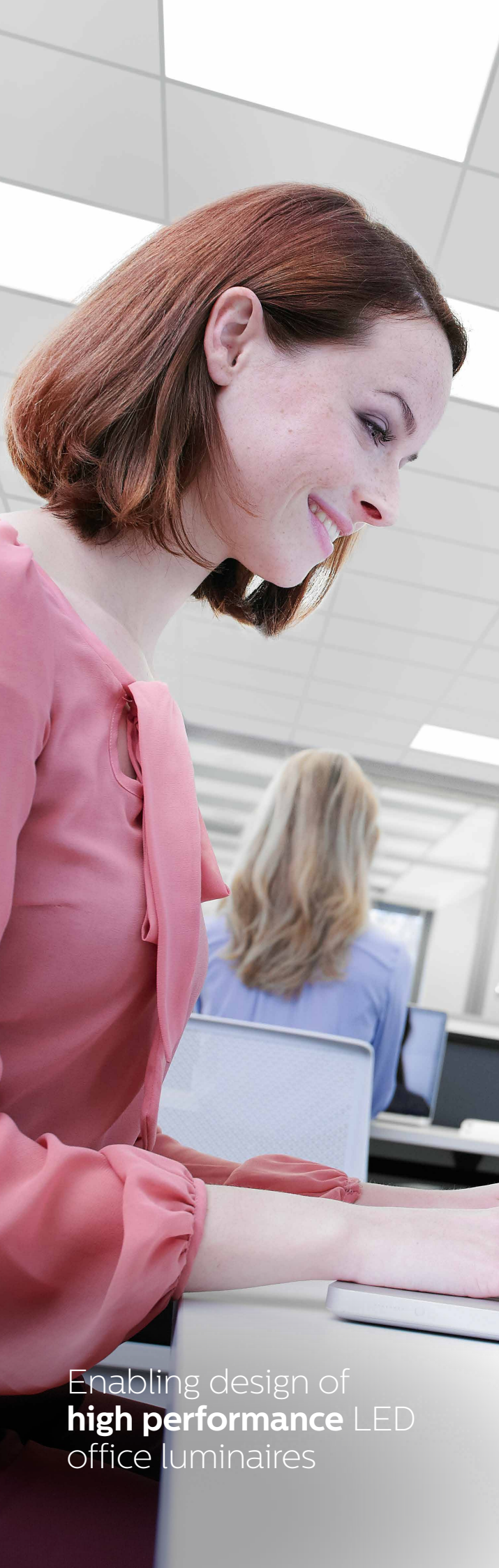
### High voltage vs low voltage

The Fortimo LED Square portfolio offers a choice of isolated (low-voltage) or non-isolated (high-voltage) systems. With non-isolated LED systems, the luminaire must be a Class I luminaire so that there is no possibility of any accidental contact with the live parts in the system. A non-isolated system has the advantage of being more efficient, cheaper and the driver has shorter dimensions. An isolated system allows you to make open-louvered Class II luminaires.

### Compatibility

It is possible to combine modules in the same luminaire; a system can be made up of a combination of modules. A typical Fortimo LED Square system consists of:

- A number of Fortimo LED modules
- One Xitanium LED driver
- Wires from driver to module, between modules and return end wires.



Enabling design of  
**high performance** LED  
office luminaires

## Fortimo LED Square 2500 lm



The Fortimo LED Square 2500 lm is a high performance solution offering best-in-class efficiency up to 175 lm/w. The rectangular square (260 x 520mm) is designed to reduce material and assembly cost for the OEM, compared to the 260 x 250mm design of the previous generation and many other brands. The footprint however is backwards compatible and the LED pitch remains unchanged. A typical system consists of two LED modules and driver.

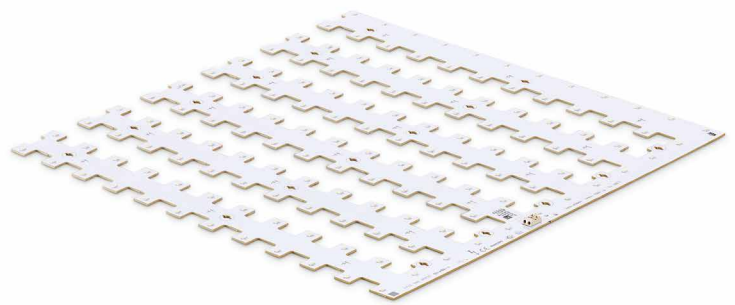
### Key features and benefits:

- LED module efficiency up to 175 lm/w
- Long life-time: >50,000 hours
- High color rendering (CRI >80)
- Excellent color consistency of 3 SDCM
- Choice of color temperatures (3000 K, 4000 K and 6500 K)
- Tunable lumen output, efficacy and lifetime
- Wide temperature (Tc) range from -40 °C to +80 °C
- Push-in connectors enabling automated wiring
- Five year system warranty



Enabling design of  
**cost efficient** LED  
office luminaires

## Fortimo LED Square 5000 lm



The Fortimo LED Square 5000 lm (380 x 380 mm) design leads to cost effective lighting solutions while generating 5000 lm. A system consists of one LED Square module and driver. The luminaire design can have a smaller exit window than the traditional 600 x 600 mm design, or differentiate on light distribution in combination with designed optics.

### Key features and benefits:

- LED module efficiency up to 143 lm/w
- Long life-time: >50,000 hours
- High color rendering (CRI >80)
- Excellent color consistency of 3 SDCM
- Choice of color temperatures (3000 K and 4000 K)
- Tunable lumen output, efficacy and lifetime
- Wide temperature (Tc) range from -40 °C to +80 °C
- Push-in connectors enabling automated wiring
- Five year system warranty

# Product and ordering information

## Product information LED Square 2500 lm

Commercial name	Order code (EOC)
Fortimo LED Square 2500lm 830 HV/LV1	87186964 71555 00
Fortimo LED Square 2500lm 840 HV/LV1	87186964 71579 00
Fortimo LED Square 2500lm 865 HV/LV1	87186964 71593 00

## Product information LED Square 5000 lm

Commercial name	Order code (EOC)
Fortimo LED Square 380mm 5000lm 830 HV1	87186964 47437 00
Fortimo LED Square 380mm 5000lm 840 HV1	87186964 47512 00
Fortimo LED Square 380mm 5000lm 830 LV1	87186964 47413 00
Fortimo LED Square 380mm 5000lm 840 LV1	87186964 47499 00

## Non-isolated LED system (HV)

Driver type	Commercial name	LED Square 2500 lm	LED Square 5000 lm	Order code
		SQ systems	SQ systems	EOC
DALI	Xitanium 150W 0.2-0.7A 300V TD 230V iXt	4	-	87182917 68265 00
	Xitanium 110W 0.2-0.6A 215V TD 230V iXt	3, 4	1, 2	87182917 36295 00
	Xitanium 75W 0.12-0.4A 215V TD 230V	3, 4	1	87182916 84022 00
	Xitanium 36W 0.12-0.4A 110V TD 230V	2	-	87182916 84046 00
	Xitanium 17W 0.12-0.4A 54V TD 230V	1	-	87182911 98048 00
1-10 V	Xitanium 75W 0.12-0.4A 220V 1-10V 230V	3, 4	1	87186964 69682 00
	Xitanium 36W 0.12-0.4A 115V 1-10V 230V	2	-	87186964 69705 00
	Xitanium 17W 0.12-0.4A 54V 1-10V 230V	1	-	87182911 98062 00
Fixed output	Xitanium 75W 0.12-0.4A 220V 230V	3, 4	1	87186964 40025 00
	Xitanium 36W 0.12-0.4A 115V 230V	2	-	87186964 40001 00

## Isolated LED system (LV)

Driver type	Commercial name	LED Square 2500 lm	LED Square 5000 lm	Order code
		SQ systems	SQ systems	EOC
DALI	Xitanium 75W 0.7-2A 54V TD 230V	3, 4	1, 2	87182912 11884 00
	Xitanium 36W 0.3-1A 54V TD 230V	1, 2	1	87182916 57422 00
1-10 V	Xitanium 75W 0.7-2A 54V 1-10V 230V	3, 4	1, 2	87182916 96445 00
	Xitanium 36W 0.3-1A 54V 1-10V 230V	1, 2	1	87182916 84060 00
Fixed output	Xitanium 75W 0.7-2A 54V 230V	3, 4	1, 2	87186964 68890 00
	Xitanium 36W 0.3-1A 54V 230V	1, 2	1	87186964 68876 00





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Data subject to change.