



PHILIPS

LED tubes

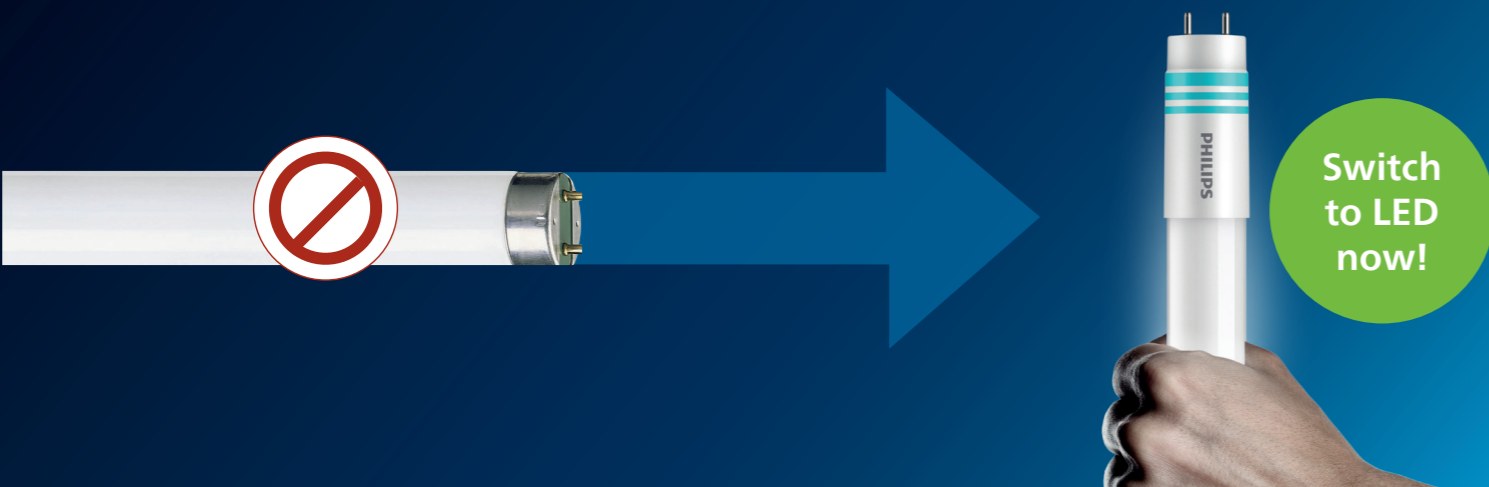
Real pros have the perfect LED tube for every job

Discover our wide portfolio of efficient LED tubes for every application area, demand and budget.



philips.co.uk/ledtube

**REAL
PROs**
**REAL
QUALITY**



LEDtube wins in every way

Light quality

LEDtube

- Very high light quality
- Instant 100% brightness without start-up delay or flickering
- Optically efficient – emits light only towards usage direction

Fluorescent

- Optically inefficient – light needs to be reflected and redirected
- Flicker upon power-up
- Delay time prior to full luminance

Efficiency and robustness

LEDtube

- Highest efficacy up to 210lm/W
- Up to 75% less energy compared to fluorescent
- Low failure rate
- Up to 10 years warranty
- Long lifetime of up to 100,000 hours

Fluorescent

- Lower system efficiency due to losses associated with omnidirectional light output, as well as EM & HF ballast losses
- Hazardous substances - broken tubes release a small amount of toxic mercury as a gas
- Lifetime between 5,000 to 20,000 hours

Cost of ownership

LEDtube

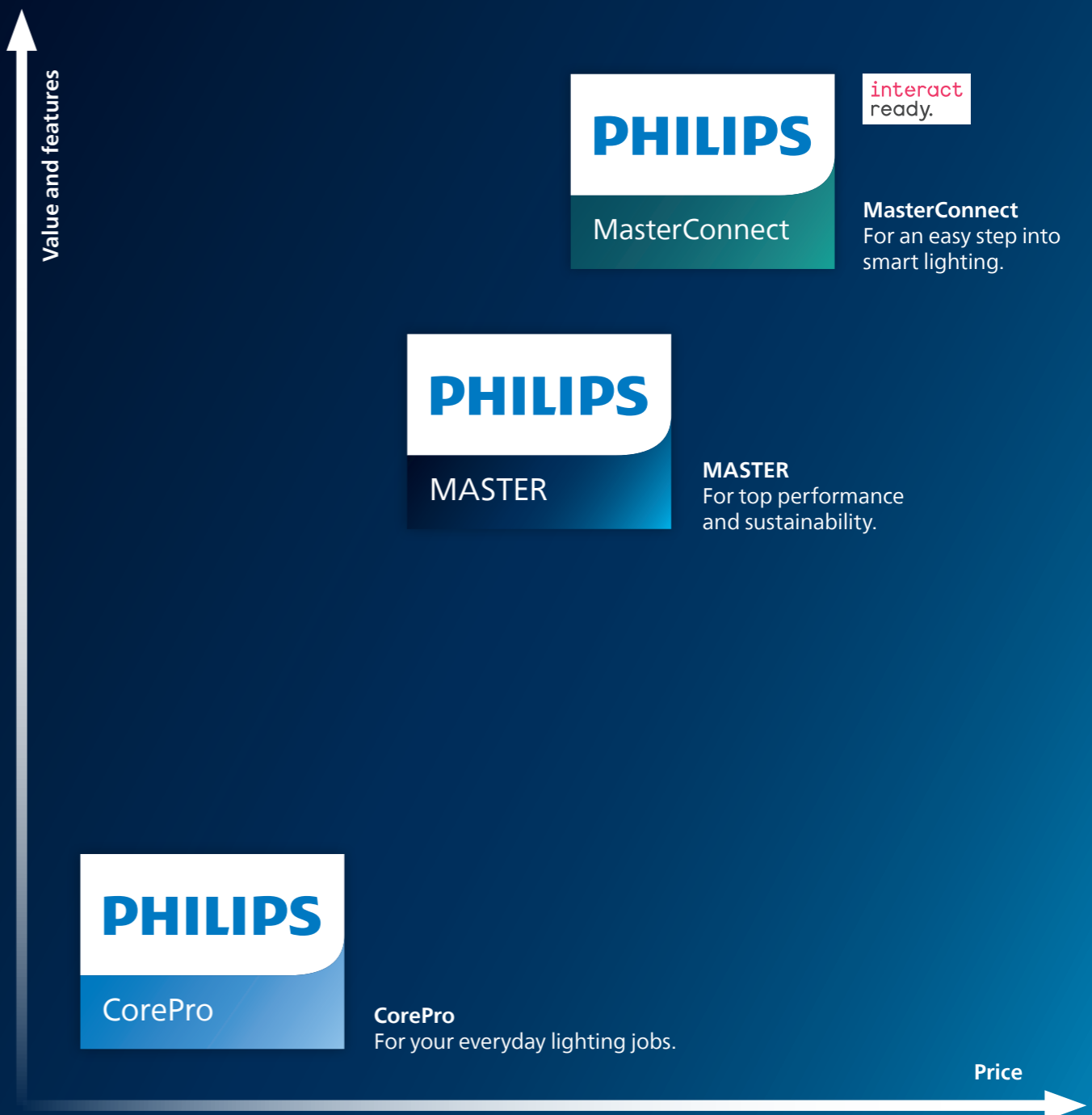
- Relatively high initial costs – but low lifetime costs
- Less maintenance needed – low frequency to change a tube after installation
- Payback time typically within a year with great reduction of energy consumption

Fluorescent

- Cheap to purchase, but much shorter service life
- Will require several replacements plus monitoring and replacing aging or expired components within the lifetime of a single LED alternative

philips.co.uk/ledtube

Finding the right LED tubes for different plans, needs and budgets is easy with the extensive Philips portfolio. It ensures that you always have a quality solution at the price you want.



Real pros choose Philips LED tubes for:



Fast and easy installation

Philips LED tubes are true retrofit, making it the fastest-to-install solution.



Hassle-free compatibility

- No wires to replace or drivers to change
- InstantFit solutions work with HF electronic ballasts
- Universal LED tubes available – compatible with most ballast types*

Philips LEDtube T5

- has industry leading ballast compatibility performance* that supports:
- fixed output ballast
- intelligent/multi-watt ballast
- dimming ballast (DALI, 1-10V)

Philips LEDtube T8

- Breakthrough design with >10 IPs that give best-in-class compatibility with High-Frequency ballast
- >45 compatible ballasts per product



Pin safety

- Safe to touch the end cap when installing
- Integrated driver isolated from touchable parts
- Meets UL and IEC pin safety requirements



Trusted performance

- Low early failures
- Warranty up to 10 years
- High resistance to switching cycles

*More details can be found in published ballast compatibility list [here](#)

Product overview

CorePro

Value and features: 

MASTER

Value and features: 

CorePro LEDtube EM/Mains T8



- Best value for money solution to upgrade to LED
- Truly retrofit, safe and hassle-free installations
- Up to 110lm/W efficacy
- Glass platform that optimizes the usage of luminaire optics

Click here to see all products

MASTER LEDtube EM/Mains T8



- Retrofit existing T8 lamps on EM ballast or mains
- >50% energy savings compared to fluorescent tubes with up to 170lm/W
- Up to 40,000 hours lifetime

Click here to see all products

MASTER LEDtube InstantFit HF T8



- Industry-leading HF ballast compatibility
- Up to 155lm/W energy efficiency
- Shatterproof solution thanks to plastic design according to IEC 61549
- Rotatable end-cap for various applications
- Higher flux through smaller beam angle

Click here to see all products

MASTER Ultra Efficient T8



- Absolute performance in energy-saving: up to 44% compared with standard LED tubes with efficacy of 210lm/W
- Ultra long lifetime of 100,000 hours – more than 3x longer than standard LED tubes
- Plastic design makes it truly shatterproof according to IEC 61549 standards

Click here to see all products

CorePro LEDtube Universal T8



- Best value for money solution to upgrade to LED
- Universal compatibility: one fits for all
- Up to 110lm/W efficacy
- Glass platform that optimizes the usage of luminaire optics

Click here to see all products

MASTER LEDtube Mains T5



- Optimized glass design to reduce glare
- Up to 155lm/W energy efficiency
- Operates on direct mains

Click here to see all products

MASTER LEDtube InstantFit HF T5




- Optimized glass design to reduce glare
- Up to 155lm/W energy efficiency
- Unbeatable HF ballast compatibility, with support of dimming ballast


Click here to see all products



MasterConnect

Value and features: 

MasterConnect LEDtube EM/Mains T8



- Smart retrofit LED solution that brings wireless connectivity to existing luminaires
- Up to 90% of energy savings than fluorescent lamps via advanced lighting controls
- Works seamlessly with Interact Pro system
- Scalable and upgradable from stand-alone to cloud-based solutions

interact ready.

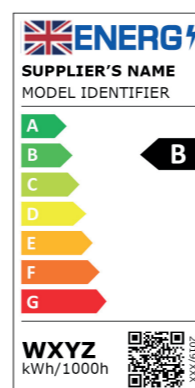
Click here to see all products

Always compliant, always up-to-date

New regulations for more sustainability

As of September 2021, the UK is implementing two updated regulations, both with the goal of further expanding the lighting industry's lead in sustainability by delivering significant energy savings for lighting products and systems.

- **The Ecodesign Regulation (SLR):** Aims to improve product performance and sustainability
- Products that fail to meet requirements will be phased out
- **The Energy Labelling Regulation:** Introduces a new consumer-friendly energy label to empower end users to choose energy efficient products
- The new scale reflects how efficient a product is – the definition of A to G is changed based on the new efficacy requirements
- The Government is convinced of the many benefits of switching to more environmentally friendly, energy efficient LED lighting: With the implementation of Ecodesign (SLR) Regulation on September 1st, 2021 and with the amended RoHS (Reduction of Hazardous Substances) directive at the start of 2022, UK & EU countries will phase out numerous light sources, for example CFL-ni, linear fluorescent lamps (T5/T8) may no longer be placed on the marketing in the UK & EU from February 24, 2023 and August 24, 2023 respectively.



September 2021

Stroboscopic effect:
 $SVM^1 \leq 0,9^2$

Low-flicker qualities:
 $P_{stLM} \leq 1$

September 2024

Stroboscopic effect:
 $SVM^1 \leq 0,4^2$

New regulation for optimized light quality

The Single Lighting Regulation (SLR) also aims to optimize the functional requirements for light quality – above all the stroboscopic effect and flicker of mains voltage light sources. Starting from September 1, 2021 the low-flicker qualities and stroboscopic effect will be governed and further regulated until 2024.

With Philips LED tubes you are well prepared for the upcoming regulations: all our MASTER LEDtubes meet the 2024 requirements already!

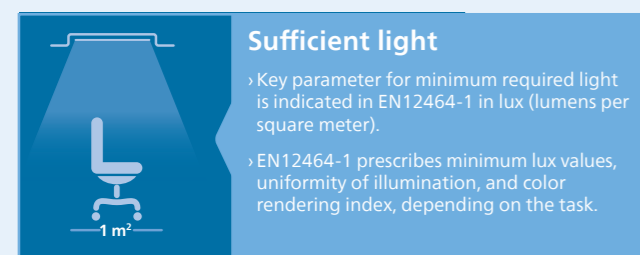
Click here and learn more about the new regulations and how the Philips LED portfolio offers you everything you need for the upcoming changes:
philips.com/ledconversion

Finding the right output

For ultra-output applications, our solutions meet lighting industry standards (EN12464-1) by providing high light levels without causing discomfort or glare³.

Lux

Working, typing reading and data processing require sufficient light with a minimum lux level.



Unified Glare Rating (UGR)

The amount of glare, annoyance or reflection created by high or non-uniform brightness must be kept to a minimum.

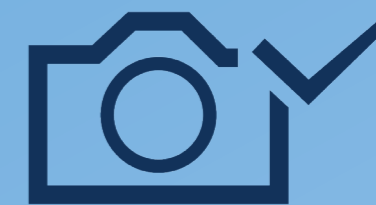


¹ SVM = stroboscopic effect visibility measure

² Exemptions: light sources for outdoor, industry and other uses with a color rendering CRI ≤ 80

³ Final light quality, besides the LED tube, also depends on application circumstances like e.g. type of luminaire used and amount of daylight.

Real pros choose light that looks good on camera



Introducing the new camera friendly feature for MASTER LEDtube EM/Mains T8¹ and InstantFit HF T8². This innovative product design ensures no visible flicker on camera, giving you assurance of a dependable light source when working with cameras³

New camera friendly feature in detail

You may have experienced this occasionally – the light looks perfect to your eyes but flickers on the screen when filming a video. In high power factor LED product, the ripple current through LEDs brings fast change in light, which will not be detected by human eyes. However in case the light and camera shutter are out of sync, it might be captured on the screen.

The use of cameras (phone/digital camera/webcam/security camera etc.) has become part of our daily lives and now more than ever, means that we need light that also looks good on camera. Perfect for use in office, retail, industry or education. The Philips MASTER range brings light quality to the next level. With this update you can still rely on the top performance features from this range.

Key Benefits:

- Up to 3700lm ultra light output with best-in-class energy efficiency
- Truly shatterproof according to IEC 61549 thanks to plastic design
- Rotatable end-caps for maximized installation flexibility
- Higher flux through smaller beam angle
- Up to 75,000 hrs lifetime which greatly reduce replacement cycles

New!



[1] Including MASTER LEDtube EM/Mains T8 High Output, Ultra Output.

[2] Performance is ballast dependent. More details can be found in published ballast compatibility list.

[3] Tested in Signify lab with most commonly used consumer phone, PC and CCTV cameras with frequency $\leq 2\text{kHz}$ *

For warranty conditions, visit www.lighting.philips.com/main/support/support/warranty

Real pros help their customers realise ultra energy savings



Introducing the Philips MASTER LEDtube Ultra Efficient T8: our most energy efficient LED tube yet.

Are your customers worried about their energy costs?

With energy cost going through the roof, many companies are more aware of their energy costs consumption than ever. Lighting on average represents up to 25% of electricity consumption in buildings², so there is much to gain. Did you know there is great potential to save energy, even if you already have LED lights?

With the new Philips Ultra Efficient LEDtube you have the perfect retrofit lamp to help your customers save energy and money with high-quality, long-lasting and ultra energy efficient LED.

Unbeatable arguments for your customers

- Saves up to 44% in energy costs compared to standard LED tubes³
- Ultra long lifetime of 100,000 hours – more than 3x longer than standard LED tubes
- Less than 5 months payback time compared with fluorescent tubes
- 10 years warranty

The Philips MASTER LEDtube Ultra Efficient is also available with a class B energy rating¹. To learn more visit: philips.co.uk/ledtube

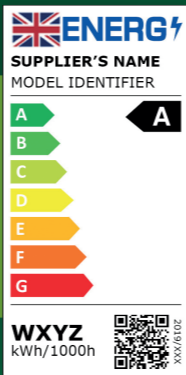
¹ According to the updated European Energy Labelling Regulation (09/2021)

² According to Signify modeling and market intelligence data

³ Standard LED tubes³ refers to Philips CorePro LEDtube EM/mains Ultra Output

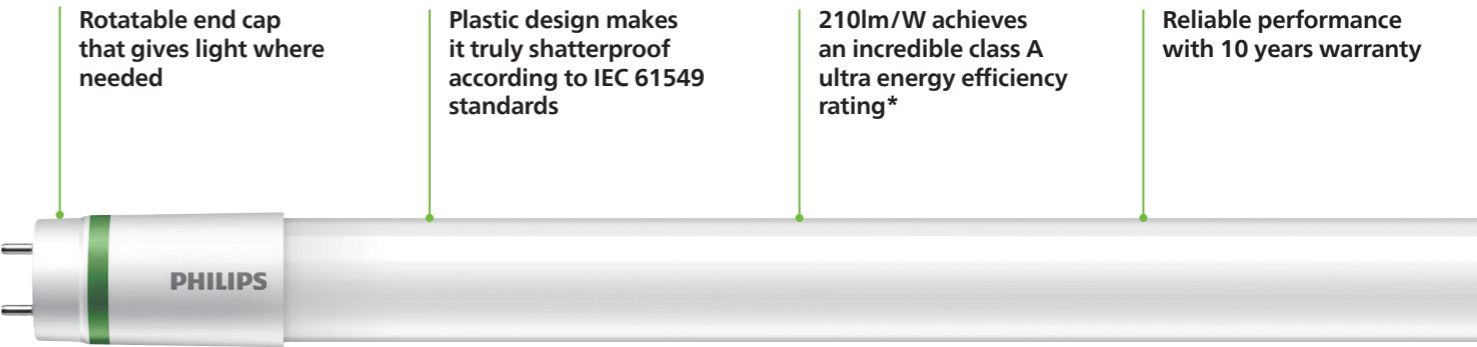


A-class rating¹ for first-rate savings



The Philips MASTER LEDtube Ultra Efficient

All the benefits of LED lighting and more.



*According to the updated European Energy Labelling Regulation (09/2021)

Cost and CO₂ savings right from the start

When updating from fluorescent tubes, your customers can expect a full return on investment in only 5 months. A typical small warehouse will save £13,661 by replacing 100 x 58W fluorescent tubes with 17.6W Ultra Efficient A-class LED tubes.¹

	Standard LED tube ²	MASTER LEDtube UE	Fluorescent tube	MASTER LEDtube UE
Lifetime	30,000 hrs	100,000 hrs	20,000 hrs	100,000 hrs
Lamp wattage	31.5W	17.6W	58W	17.6W
Total savings/year		£3,544		£13,661
Payback period		1.5 years		0.4 years

Number of lamps	100	Energy costs	0.29 €/kWh ³	Lamp cost/year	£4.65	Total costs/year/lamp	£49.80
Burning hours per year	8760 hrs ²	Replacement cost/year/lamp	£0.44	Energy costs/year/lamp	£44.71		

Compared to a fluorescent tube, a new Philips MASTER LEDtube UE can reduce CO₂ emissions by up to 2,285 kg over its lifetime³ – equivalent to the emissions absorbed by more than 103 trees.⁴

Compared to a standard LED tube, a new Philips MASTER LEDtube UE can reduce CO₂ emissions by up to 584 kg over its lifetime³ – equivalent to the emissions absorbed by more than 26 trees.⁴

¹ Calculation for a typical warehouse based on 100 x 58W fluorescent lamps with a lifetime of 20000 hours vs 100 x 17.6W Ultra Efficient A-class LED tubes with a lifetime of 100,000 hours; £0.29 energy cost/hour; £5 replacement cost per lamp; 8760 burning hours per year. These calculations are based on average assumed costs

² Standard LED tube refers to Philips CorePro LEDtube EM/mains Ultra Output operating on direct mains

³ Calculation based on CO₂ gas emissions of 0.42kg/kWh.

⁴ Based on multiple scientific literature, an average fully grown tree can absorb 22 kg CO₂ per year.

Sustainability

With Philips MASTER LEDtube Ultra Efficiency you can offer your customers an innovative and value-adding product to minimize their energy consumption.

Designed for you and the planet

Real pros choose Dimmable lights

Philips MASTER LEDtube InstantFit HF T5 is equipped with our latest technology breakthrough.

IP protected 'Super Compatibility' design enables compatibility with various ballast types, including dimming ballasts



PHILIPS

LED tubes

Real pros change to LEDtubes now

The new, easy-to-install Philips CorePro LEDtube Ultra Output T8.

Discover
3 reasons to
switch now!



Product highlights

Safe Installation

Pin safety for safe installation

True Retrofit, True T5 Shape

Both the end-cap and the tube have a true T5 shape. This ensures 100% fitting into existing luminaire.

No Bending

No bending issues thanks to the solid Glass Design

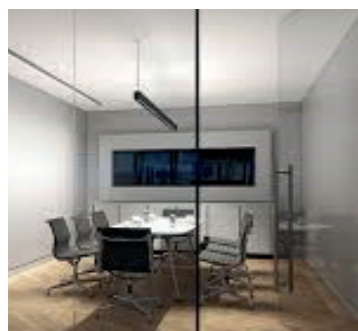


High Comfort Light with reduced glare

Industry leading ballast compatibility with

- Fixed output ballast
- Intelligent/multi-watt ballast
- Dimming ballast (DALI, 1-10V)

Typical use cases



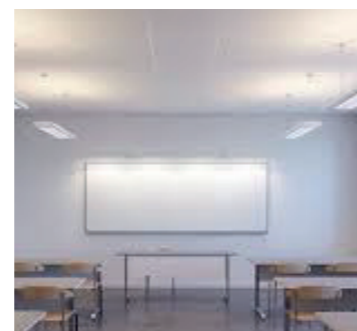
Office Space

Office space with dimming capability for comfortable light at any moment.



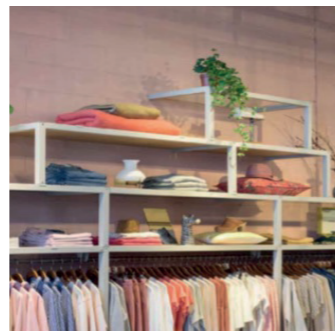
Industry

Increase your energy saving without any hassle.



Classroom

Optimise comfort by adjusting the light level for every task.



Retail

Optimise shelf lighting hassle free with LED lighting hassle-free

With the new Philips CorePro LEDtube Ultra Output T8, making the switch from fluorescent to energy- and cost-saving LED is fast, easy, and hassle-free. Plus there are plenty of additional good reasons to switch:

1. Fluorescent tubes to be banned soon

- Fluorescent T8 tubes will be phased out from 1st September 2023 due to EU & UK regulations¹
- Be best prepared for the switch to LED with Philips LED tubes!

2. Save money straight away

- Saves up to 56% energy compared to a conventional fluorescent equivalent
- Philips LEDtubes pay for themselves within a few months
- Twice the lifetime of fluorescent means less maintenance – and with that an even better overall TCO

3. Hassle-free 1-to-1 replacement

- True retrofit, making it the fastest-to-install solution saving you time and money
- Designed for EM ballast operation, and if needed on direct mains
- Fits straight into existing luminaires

Switching to LED tubes always pays off

Philips LED tubes provide you with unbeatable quality, easy-to-install solutions for every applications. It's never been easier to switch from conventional to LED.










- Available in many sizes
- Substantial energy savings
- Long lifetime and low maintenance
- Ultra bright, flicker-free output
- Various color temperatures available
- No toxic materials, e.g. mercury



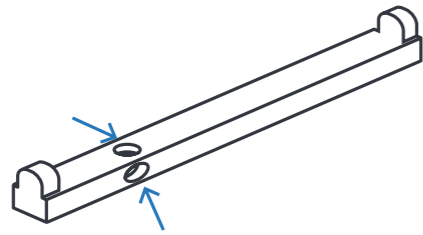
Visit philips.co.uk/ledtube for more product information or for any enquiries, please contact trade.sales@signify.com

¹ According to the RoHS (Reduction of Hazardous Substances) directive and European Single Lighting Regulation. Products already placed on the market may still be sold after these dates, but they may not be placed on the market.

Choose the right LED tube for every application

		T8 fixture						T5 fixture			
		CorePro LEDtube SO	Corepro LEDtube UO	Corepro LEDtube UO	MASTER LEDtube HO	MASTER LEDtube UO	MASTER LEDtube UE	MasterConnect LEDtube	MASTER LEDtube HE	MASTER LEDtube HO	MASTER LEDtube UO
		up to 2200 lm	up to 3500lm	up to 3500lm	up to 3100 lm	up to 3700 lm	up to 3700 lm	up to 3700 lm	up to 3000 lm	up to 3900 lm	up to 5600 lm
Application areas	Value and features:	 									
	Industry Burning hours: varies, max. 24/7 Light requirement: 200–500+ lux		✓	✓	✓	✓	✓	✓		✓	✓
	Warehouses/factories Burning hours: 12 hrs/day to 24/7 Light requirement: 200–300 lux		✓	✓	✓	✓	✓	✓		✓	✓
	Car park Burning hours: 24/7 Light requirement: 200+ lux	✓	✓	✓	✓			✓		✓	
	Supermarket/retail Burning hours: 12 hrs/day to 24/7 Light requirement: 500+ lux		✓	✓	✓	✓	✓	✓		✓	
	Office/school/healthcare Burning hours: usually 12 hrs/day Light requirement: 500+ lux		✓	✓	✓	✓	✓	✓	✓		
	Public buildings Burning hours: 12 hrs/day to 24/7 Light requirement: 100–500+ lux		✓	✓	✓			✓	✓	✓	

Find the right Philips LED tube for every application and demand: philips.co.uk/ledtube



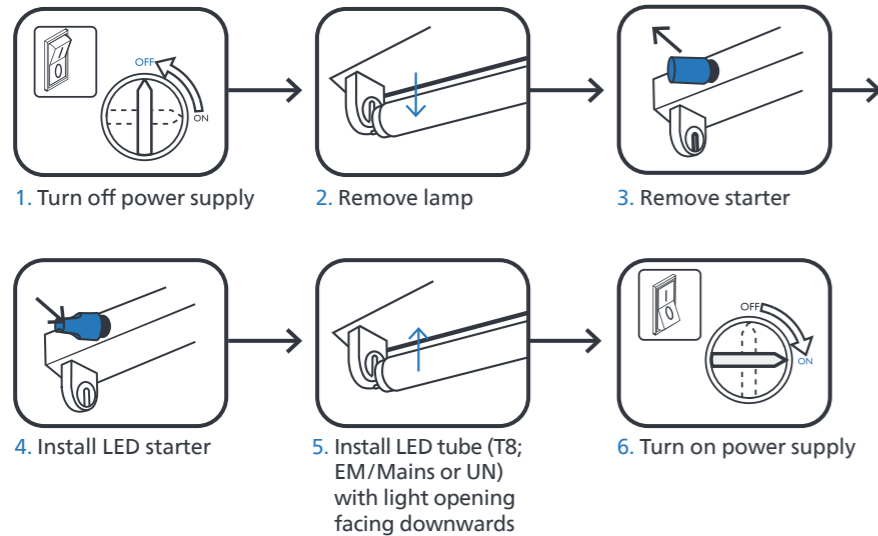
Does your luminaire have a starter?

Yes No

What type of LEDtube do I need?

T8

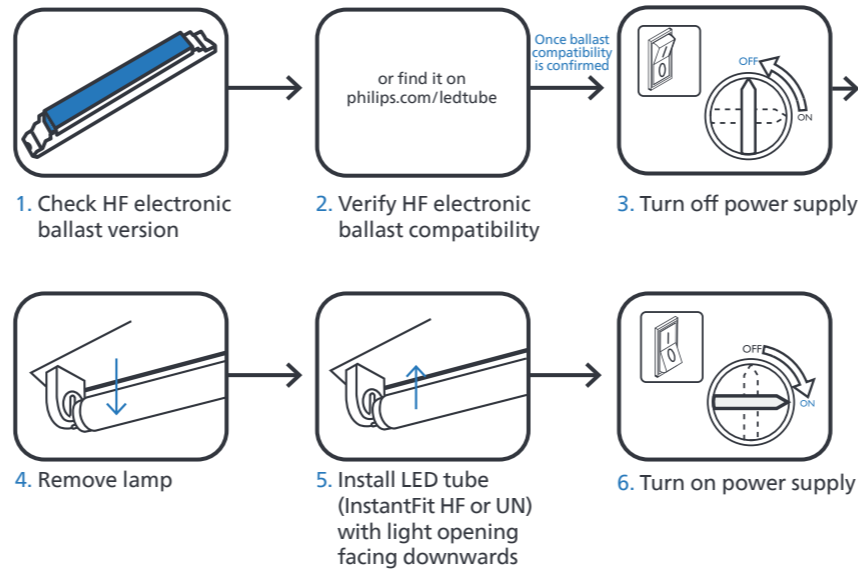
Installation instructions for Electro-magnetic Ballast (EM)



T8

T5

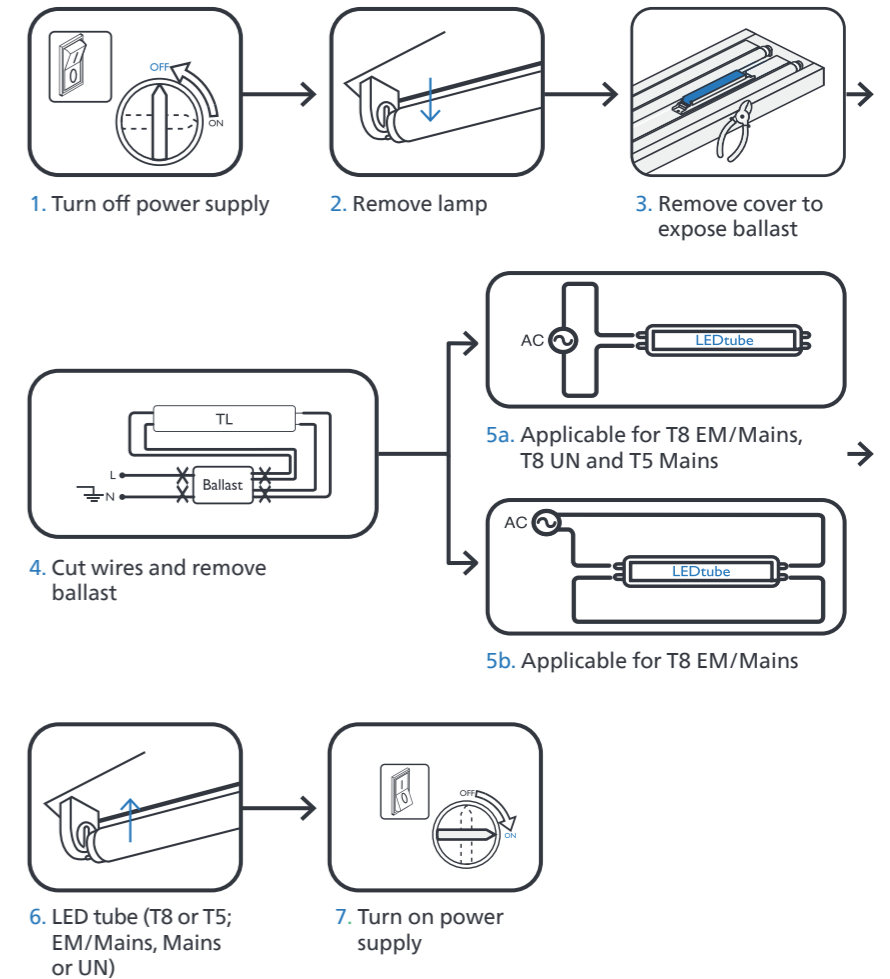
Installation instructions for High-frequency Electronic Ballast (HF)



T8

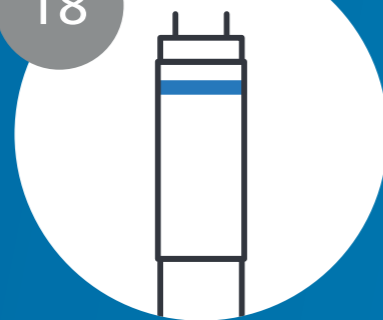
T5

Installation instructions for direct mains connection



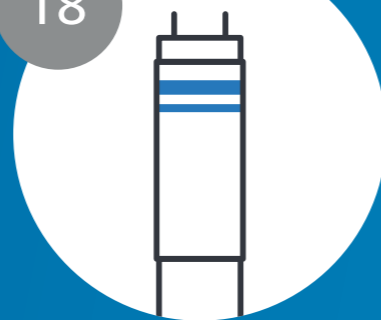
Pro tip for choosing a Philips LED tube: Watch out for the rings!

T8



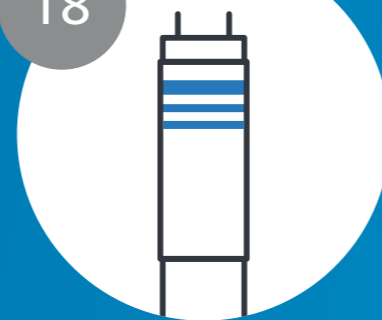
One ring: EM/Mains
(Electro-magnetic ballast or direct mains)

T8



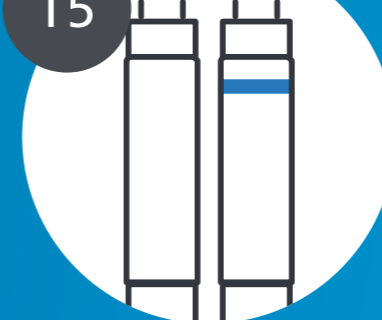
Two rings: HF
(High-frequency Electronic ballast)

T8



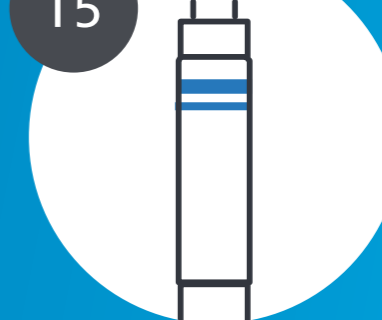
Three rings: UN
(Universal)

T5



No ring/one ring: Mains
(Electro-magnetic ballast or direct mains)

T5



Two rings: HF
(High-frequency Electronic ballast)



Signify, previously known as Philips Lighting, is the world leader in connected LED lighting systems, software and services. We proudly market the best lighting brands in the world, including Philips and Interact.

PHILIPS

The Philips brand stands for quality and energy-efficiency in light. For over 125 years, Philips products have been at the forefront of innovation. Today Philips is recognized as the leading brand in lighting.

interact

The Philips brand stands for quality and energy-efficiency in light. For over 125 years, Philips products have been at the forefront of innovation. Today Philips is recognized as the leading brand in lighting.

You and Signify – a reliable partnership

Close cooperation before, during and after projects is important to us. Our local service teams make sure you always get the competent support and information you need.

We are closely working with local wholesalers to offer you flexible and on-time delivery – and product availability you can rely on.

To help you stay on top of your game the [Signify Lighting Academy](#) offers a comprehensive range of educational resources for you to grow your expertise and get certified.

Brighter lives, better world

Signify is 100% carbon neutral since September 2020.

We recycle up to 90% of our manufacturing waste.

We use 100% renewable electricity.

Our paper packaging for LED lamps and luminaires is saving over 500,000 kilos of plastic waste per year.

Thank you for choosing Philips products offered by Signify and joining us on our mission!



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