

The Philips logo, consisting of the word "PHILIPS" in a bold, blue, sans-serif font, is positioned in the upper left corner of the advertisement. It is set against a white background that has a curved bottom edge, which transitions into a dark blue background below it.

PHILIPS

MASTER LEDtube

A man in a blue shirt is holding a long, white Philips LED tube light horizontally. He is looking at the light with a focused expression. The background is a blurred industrial or warehouse setting with metal structures and overhead lighting.

The right LED tube every time

Whatever you need, the Philips MASTER LEDtube portfolio offers it all. From optimised energy efficiency, to the highest light output for even the most demanding applications.

The right LED tube every time

Whatever you need, the Philips MASTER LEDtube portfolio has it all. We've repositioned the way that our lamps are labelled into two categories of light output – High and Ultra output. A simple change that will make it even easier to choose the right lamp, for the right application. From optimised energy efficiency to the highest light output.

A simple switch that comes in a choice of three lengths and colour temperatures, with the option of rotating end-caps. So with our lamps, you have the right LED tube every time.



“

The new LED tubes provide a power saving of 53% per fitting.”

Ulrik Leth, Electricity Installer
Dansk Supermarked A/S

The right tube, right now

Our portfolio of LED tubes is now available with a range of options in High and Ultra Output.

Save on energy costs

LED tubes are up to 65% more efficient than TL-D lamps, so you can save on energy costs without compromising on light quality.

Long-lasting and reliable

With a lifetime of 50,000 hours they outshine TL-D lamps by 25,000 hours for lower maintenance and operation costs.

High quality of light

Our LED tubes won't flicker or cause glare. The 100% instant light has a high colour consistency and uniform visual appearance in a choice of colour temperatures.

NEW Ultra output, ultra efficient

Choose Ultra Output for ultra efficiency of 148 lm/W and exceptional light quality. Philips has a long history of ground-breaking innovation in lighting technologies. Our Ultra Output LED tubes are specially designed for demanding applications that require a high light output to comply with ergonomic norms. In fact they raise the bar in lighting efficiency and comfort by meeting all office, supermarket and healthcare standards.

A green choice

LED tubes are a mercury-free alternative to traditional fluorescent tubes, a responsible choice that can also contribute towards your green credentials.

100% safe installation

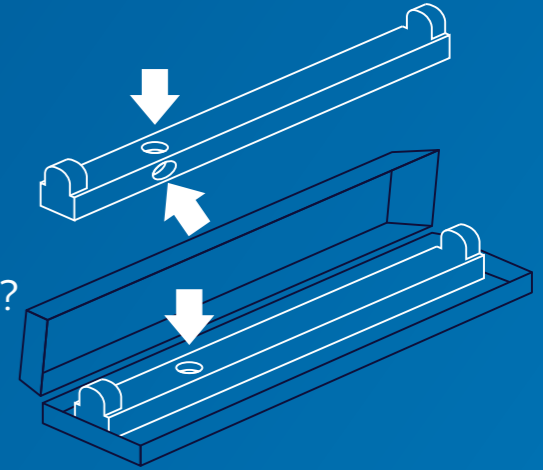
LED tubes are the fastest and easiest way to upgrade existing luminaires to LED technology. Installation is 100% safe and 0% hassle with a simple lamp-for-lamp replacement.

Ultra
Output HF
available
NOW





Finding the right fit



1 Does your luminaire have a starter?

This illustration shows its typical location in an open or closed luminaire with the length of 1200 and 1500 mm tubes.

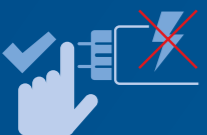
The right choice

As you'd expect from the world's leading name in lighting, our quality and attention to detail means that we can also make your life safer and easier.



HF compatibility**

No wires to replace, no hassle changing drivers; our InstantFit solution works with High Frequency electronic ballast, making it easy and safe for all installation methods. All you have to do is slot the tube into your existing fitting.



Pin safety

With Philips products you can safely touch the other end-cap when installing the tube. The integrated driver is also safely isolated from touchable parts. Philips LED tubes adhere to all UL and IEC pin safety requirements.



Rotating end-caps

In many applications the pin fitting is rotated. This can be a problem as LED tube only provide directional light. MASTER LEDtubes have rotating end-caps to allow you to rotate the tube by up to 90 degrees. So you can always direct the light to best effect.



5 Year Warranty

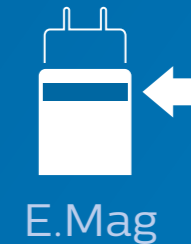
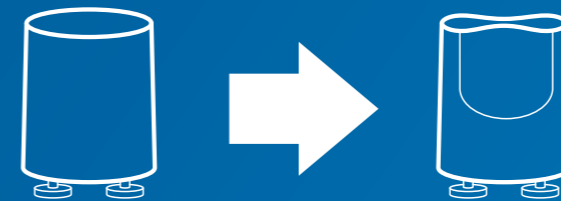
Philips MASTER LEDtubes come with a 5 year warranty.*

*Warranty period in open luminaire with a 10mm gap. Based on 20,000 hrs. See the Philips website for details. www.philips.co.uk/lighting

**Please refer to the site www.philips.co.uk/ledtubes for the latest information about transformer compatibility.

2 Yes.

The luminaire works on Electro Magnetic ballast. Simply replace the old starter with the new (E.Mag) LED starter included in the packaging. Choose the LED tube with one ring on the cap.

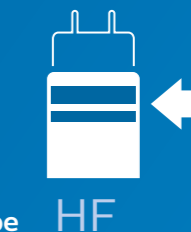


No.

The luminaire works on High Frequency electronic ballast (HF). Choose MASTER LEDtube InstantFit with the end-cap with two rings. No need to change drivers or rewire. It's a plug and play solution that works straight out of the box.

Quick and easy installation.

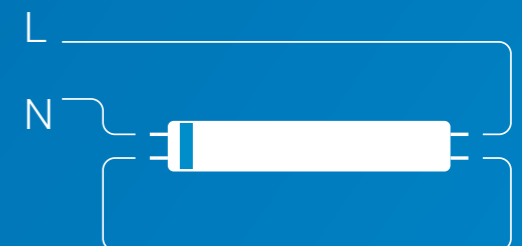
Check the ballast compatibility list on www.philips.co.uk/ledtube



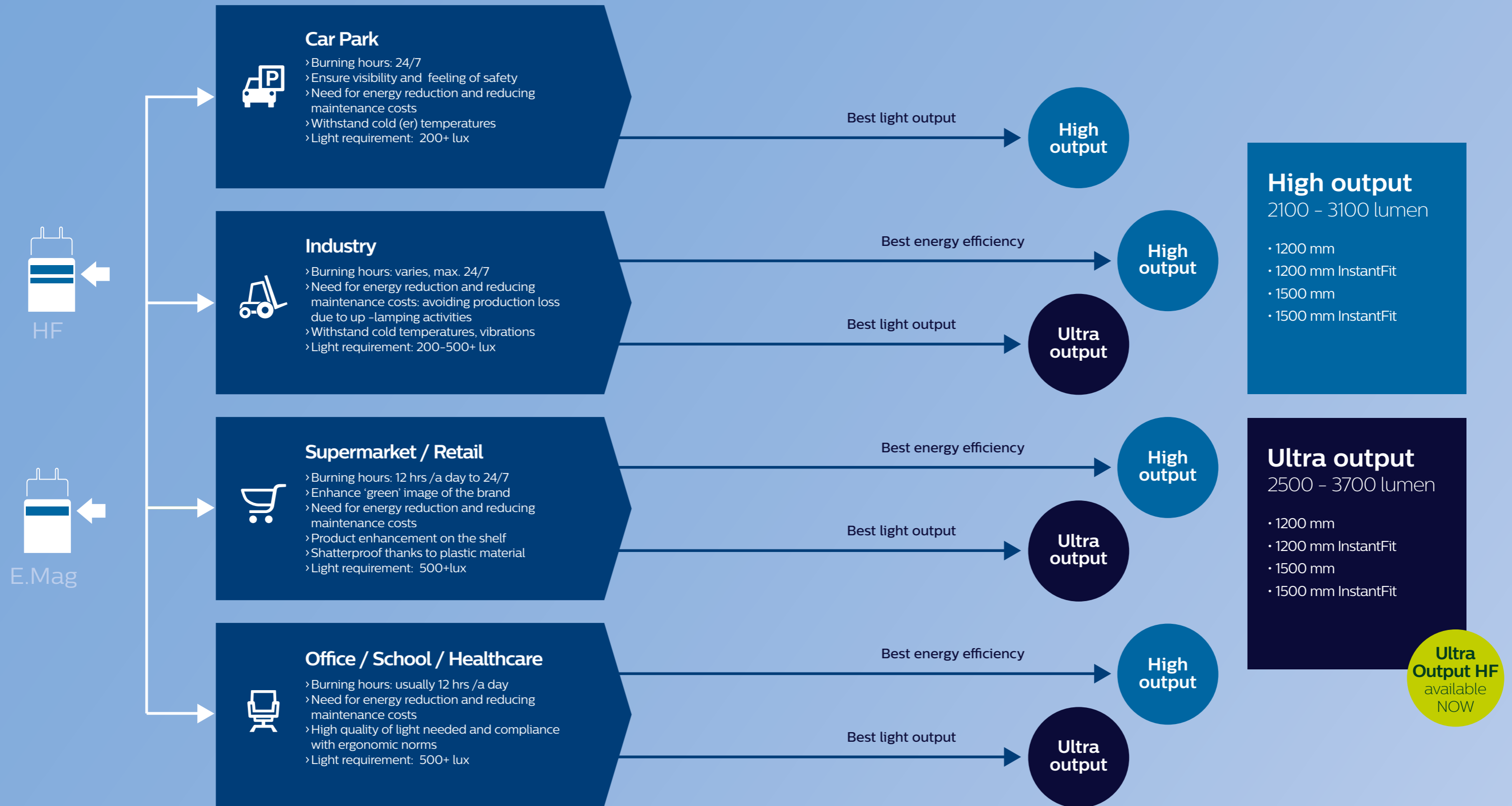
3 No.

Your luminaire works on High Frequency Electronic Ballast (HF) but you can't use MASTER LEDtube InstantFit or your ballast is not compatible.

Cut wires, remove ballast and connect direct to mains. Use the MASTER LEDtube EM with one ring on the cap.



Finding the right tube



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 glare*.

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



Sufficient light

- Key parameter for indicating the amount of minimum required light is indicated in EN12464-1 in lux (unit of illuminance per square meter).
- EN12464-1 prescribes minimum lux values, uniformity of illumination, and colour rendering index, depending on the task.



Discomfort glare

- Sensation of annoyance or reflection caused by high or non-uniform brightness (eg. on computer screen).
- Amount of glare is indicated in EN 12464-1 standard by Unified Glare Rating (UGR).

Lighting requirements

EN12464-1 prescribes minimum lux values, uniformity of illumination and colour rendering index, depending on the task



Supermarkets / Retail

- For Supermarket and Retail applications 500 lux counts as minimum value.
- UGR standard for Supermarket applications is also set at max 19 UGR.



Industry

- For Industry applications, there are many sub segments, each having their own specific standards, in storage industry segment 300 lux counts as minimum value.
- UGR standard for Industry applications is set at max 25 UGR.



Office / School / Healthcare

- For Office applications 500 lux per square meter counts as minimum value for writing, typing, reading, data processing, conference and meeting rooms.
- UGR standard for Office applications is set at max 19 UGR.
- For most Healthcare applications 200 lux counts as minimum value.
- UGR standard for applications is set at max 22 UGR.

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



Finding the right solution for your application



High output for higher standards in car parks

High Output LED tubes raise the standards in car parks even higher. With a light output of up to 3100 lumen they provide maximum visibility and safety – particularly important in car parks that operate right around the clock.

	Fluorescent TL-D 1500 mm	MASTER LEDtube HO 1500 mm
High Output 2100 - 3100 lumen	588 lx	660 lx
Longer lifetime	15,000 Hrs	50,000 Hrs
Energy savings 64%	72W	23W
Average buying price installer ex VAT	£1.66	£35.42
Total costs / year	£66.67	£29.17

Based on UK average of 10 pence/kW hours (including maintenance and lamp replacement cost)


£3348

Savings / year

11 months

Payback period

Number of lamps	85
Burning hours per year	8,760 Hrs
Energy costs	£0.10/kWh

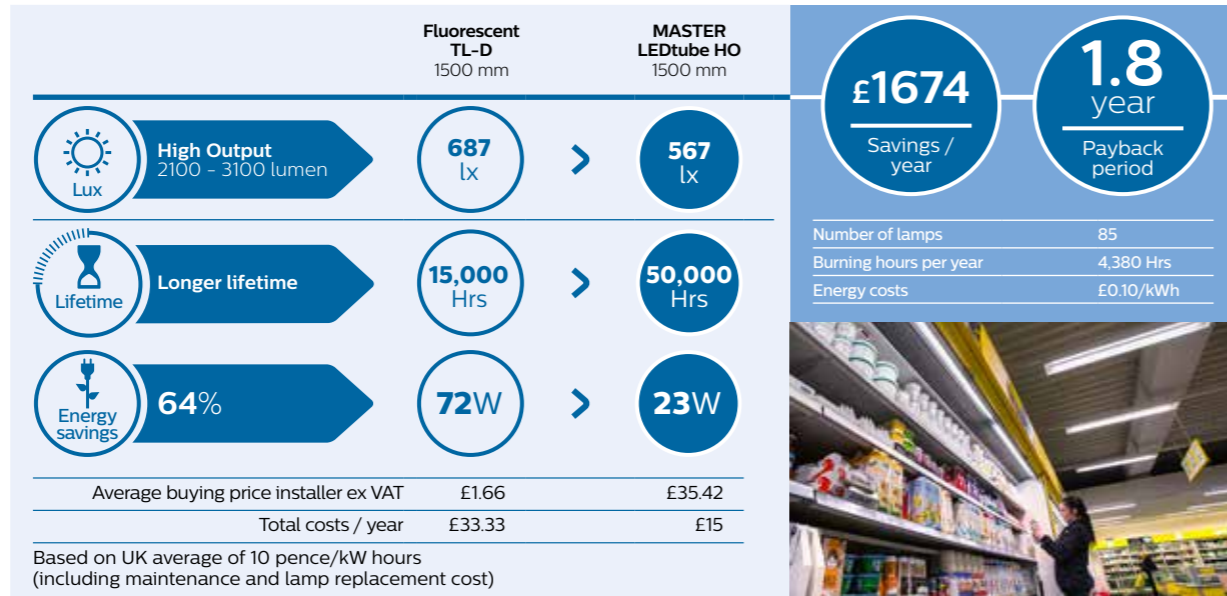


Choose High Output LED tubes for high light output with the best lm/W



High output on the high street

Retail stores and hospitality venues know light has the power to attract. It creates irresistible displays, brings brands to life and encourages customers to spend longer in store. With our LED tubes you can light up sales at the same time as reducing energy and maintenance costs.

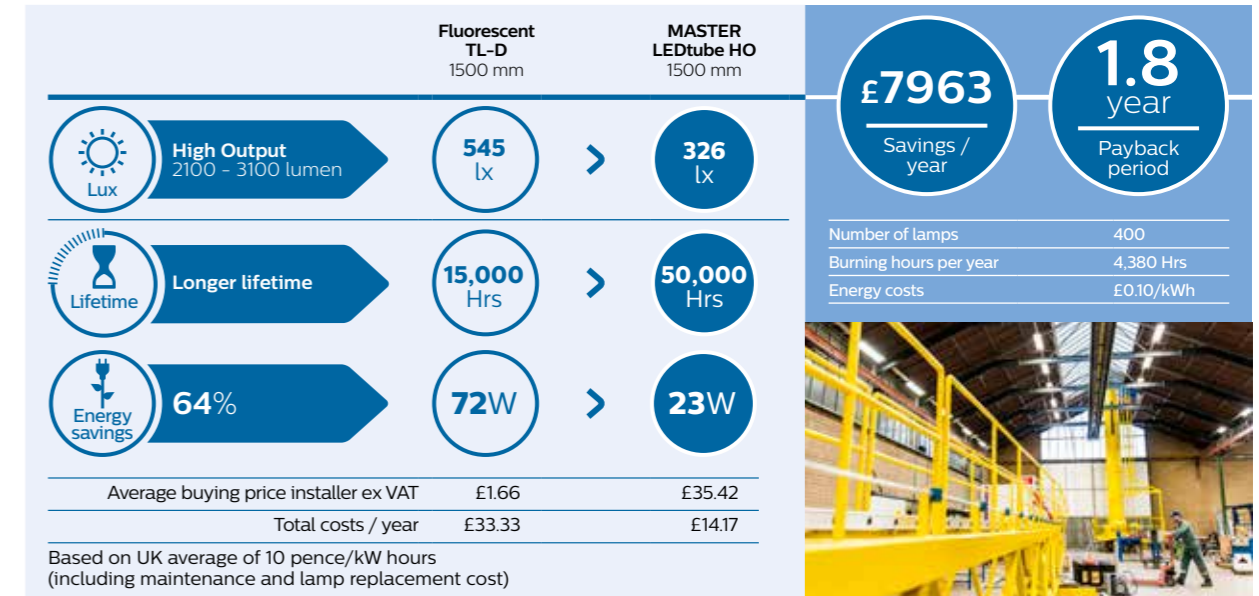


› Choose High Output LED tubes for **high light output** with the **best lm/W**



High output for highly-efficient industry

Industry demands high visibility, efficiency and safety. But 24/7 operations can run up expensive energy bills. Our solutions save energy and maintain their energy efficiency, even in extremely cold conditions. So they reduce maintenance costs and avoid expensive production down time.

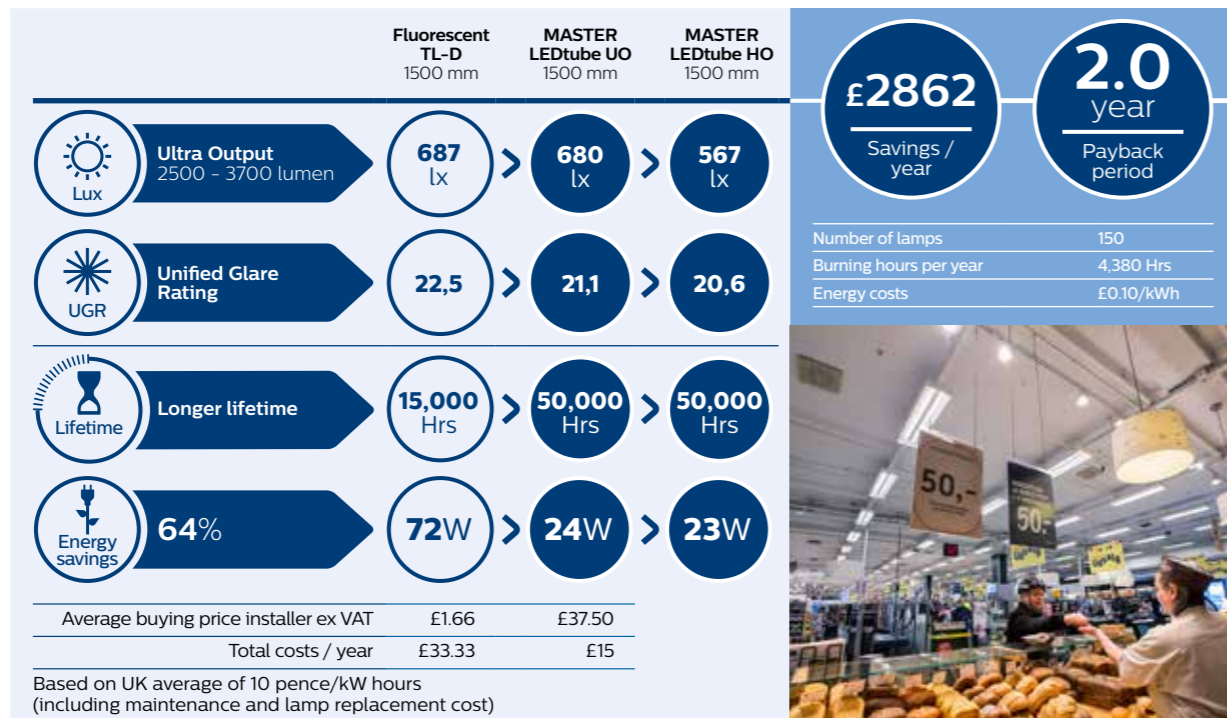


› Choose High Output LED tubes for **high light output** with the **best lm/W**



Ultra output for ultra efficient supermarkets and retail

Beautiful lighting brings out the best in the products on display and enhances the shopping experience for customers. But with lamps burning for up to 18 hours a day, food retailers want solutions that will reduce energy and maintenance costs – and show their green credentials in the best light.

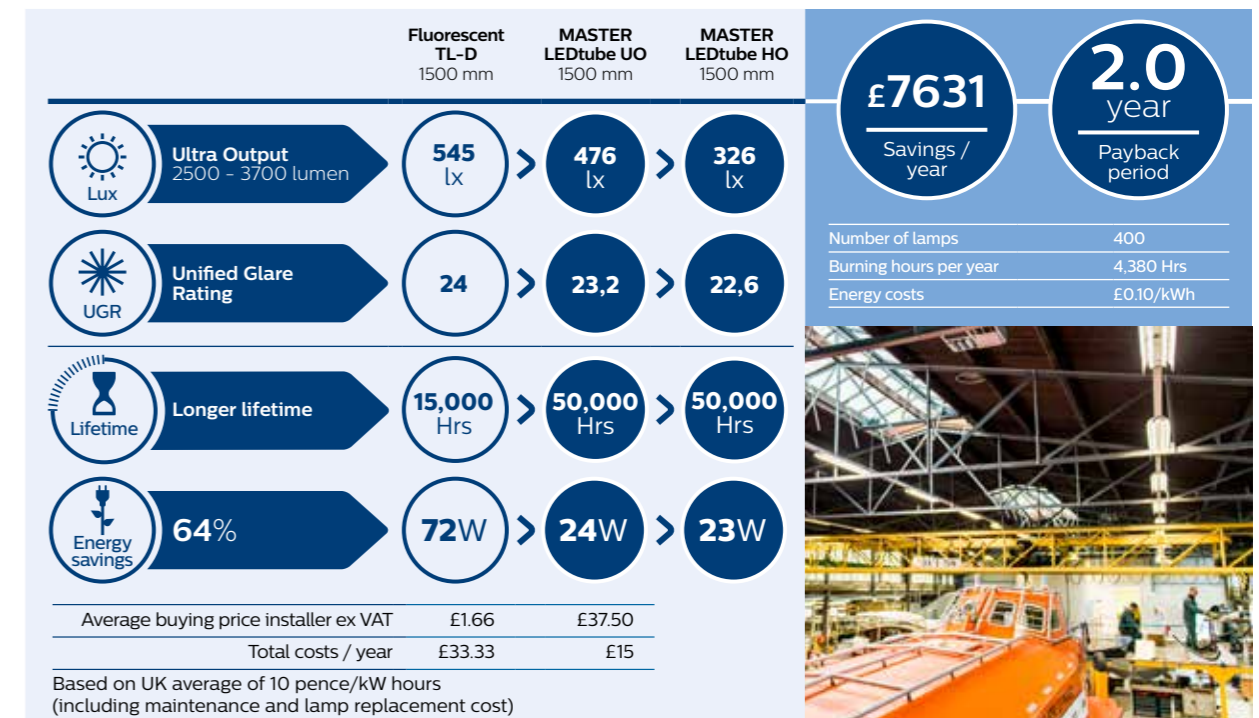


› Choose Ultra Output LED tubes for **ultra efficiency** in the most demanding supermarket and retail applications



Ultra output for ultra-efficient industry

In ultra-demanding applications, our Ultra Output LED tubes take safety and performance to the next level. With a super bright light output of up to 3700 lumen they offer the best light output for maximum visibility and minimal maintenance.

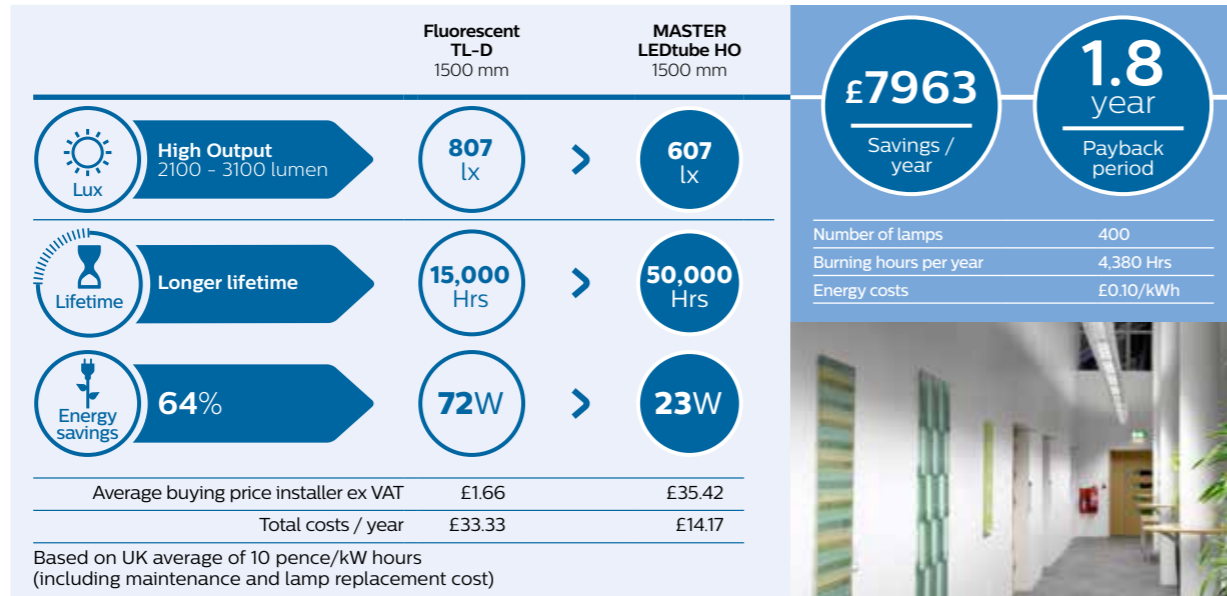


› Choose Ultra Output LED tubes for the **best light output** in the most demanding industry applications



High output for highly efficient offices

With a light output of up to 3100 lumen, our High Output LED tubes provide brilliant light quality with the best lumen per watt. A simple switch for offices and healthcare settings that save on energy but feel bright and welcoming.

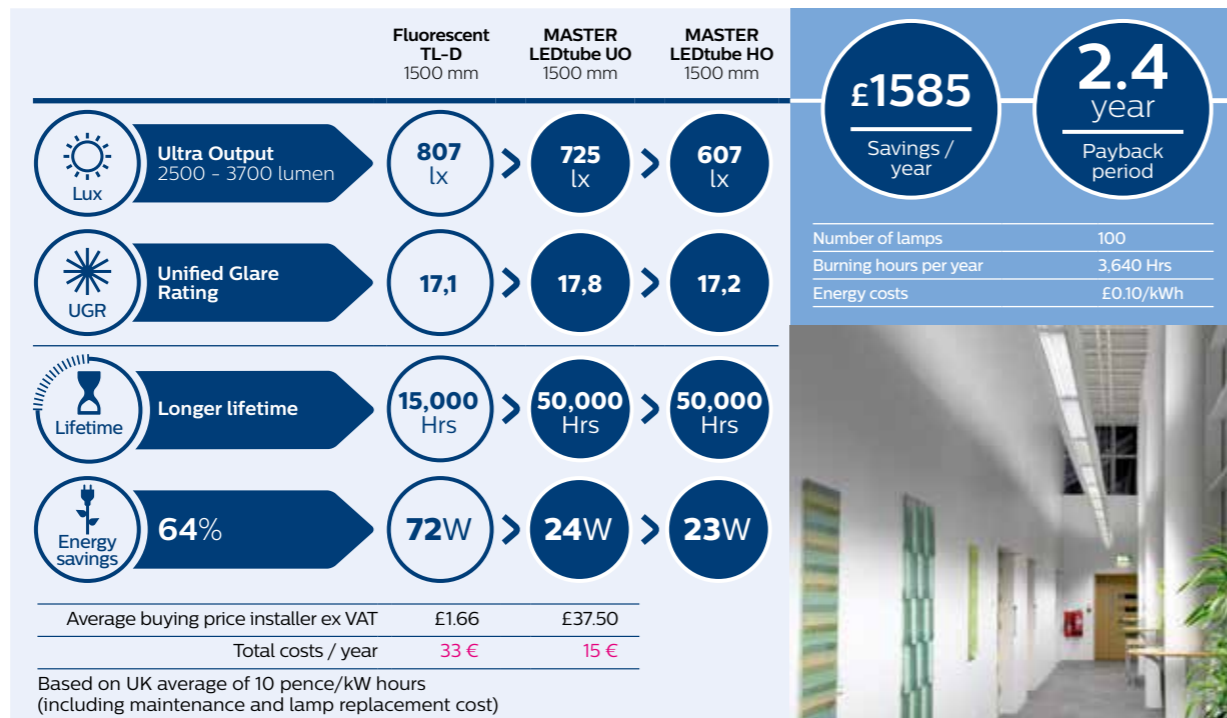


› Choose High Output LED tubes for **high light output** with the **best lm/W**



Ultra output for ultra-efficient offices

Office and school lighting can influence energy levels, performance and wellbeing. Our solutions shine with impressive, high quality light to create the most comfortable ambience that complies with all office norms and still saves on energy. So business is always a pleasure.



› Choose Ultra Output LED tubes for the **best light output** in the most demanding office and healthcare applications

Calculate your own **savings** on www.philips.co.uk/ledtube



Case study

Multi-storey savings with MASTER LEDtube

Background

As part of its ongoing carbon reduction programme, St Helens Metropolitan Borough Council has upgraded lighting in a multi-storey car park from fluorescent to LED lighting.

The Solution

Around 500 Philips MASTER LEDtube, supplied through Specialist Lamp Distributors (a subsidiary of Edmundson Electrical), have been retrofitted to existing twin T8 fluorescent luminaires at the car park. As well as improving the lighting quality and visibility for drivers, the project has delivered significant reductions in energy and maintenance costs.

Frank Kelly Building Services Engineering Manager for the Council, explained: "Upgrading to LED light sources seemed to be the obvious solution and a key consideration was ensuring that light levels would be maintained, given the safety aspects of car park lighting. Having considered a number of options it was clear that Philips offered the quality and reliability that we required," he continued.

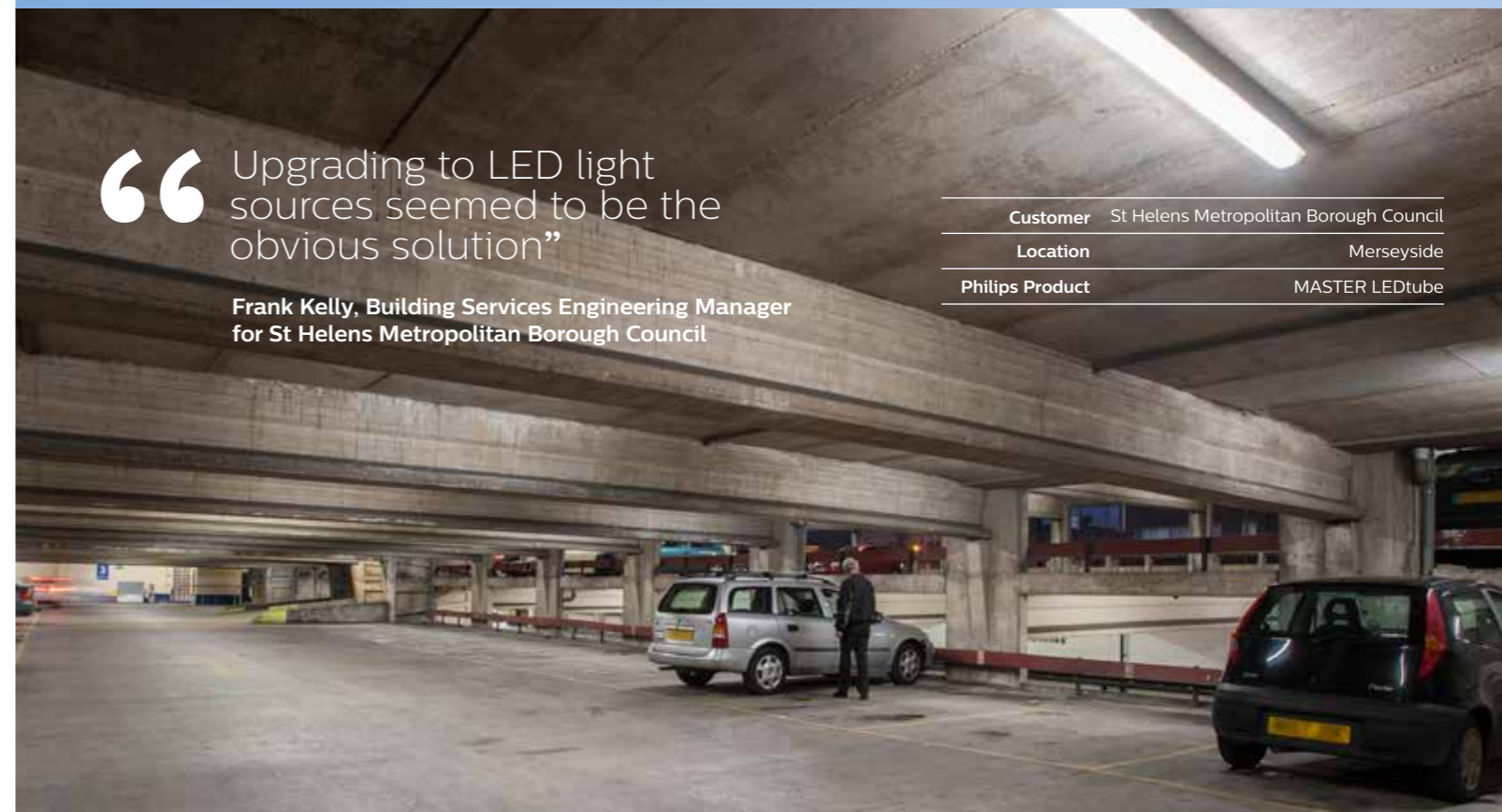
The MASTER LEDtube design integrates LED light sources into a traditional fluorescent-style tube. The work was carried out with minimum disruption to car park users, thanks to the ease of simply retrofitting the MASTER LEDtube into the existing fittings. In addition, the unique design of MASTER LEDtube creates a perfectly uniform visual appearance that cannot be distinguished from traditional fluorescent.

In order to qualify for Council funding, the project needed to deliver a return on investment within four years. This will be achieved through the savings on energy consumption alone. Plus there will be a significant reduction in the costs associated with changing lamps, as the MASTER LEDtube will provide a 40,000 hour life, compared to a typical life of 15,000 hours for the previous T8 tubes.

“Upgrading to LED light sources seemed to be the obvious solution”

Frank Kelly, Building Services Engineering Manager for St Helens Metropolitan Borough Council

Customer	St Helens Metropolitan Borough Council
Location	Merseyside
Philips Product	MASTER LEDtube



Technical specifications

MASTER LEDtube High Output

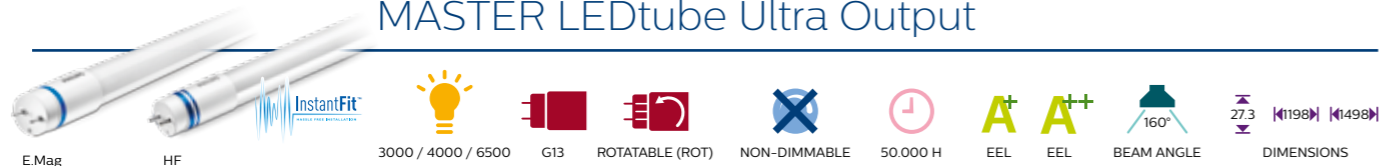


Product type */**	LED	Rotatable endcap	Lumen output	Operation	Beam angle	CRI	Colour temperature	EOC 1 pcs (C)*
MASTER LEDtube (E.Mag)	W		lm		°		K	8718696 8718291
1200mm HO 16W830 T8 RN*	16	Yes	2000	E.Mag & Mains	160	83	3000	65664800
1200mm HO 16W840 T8 RN*	16	Yes	2100	E.Mag & Mains	160	83	4000	65666200
1200mm HO 16W865 T8 RN*	16	Yes	2100	E.Mag & Mains	160	83	6500	65668600
1500mm HO 23W 830 T8	23	Yes	2900	E.Mag & Mains	160	83	3000	78956700
1500mm HO 23W 840 T8	23	Yes	3100	E.Mag & Mains	160	83	4000	78958100
1500mm HO 23W 865 T8	23	Yes	3100	E.Mag & Mains	160	83	6500	78960400
MASTER LEDtube (HF)	W		lm		°		K	8718696
1200mm HO 18W830 T8 InstantFit	18	Yes	2000	HF	160	83	3000	51456600
1200mm HO 18W840 T8 InstantFit	18	Yes	2100	HF	160	83	4000	47125800
1200mm HO 18W865 T8 InstantFit	18	Yes	2100	HF	160	83	6500	47127200
1500mm HO 25W830 T8 InstantFit	25	Yes	2900	HF	160	83	3000	51458000
1500mm HO 25W840 T8 InstantFit	25	Yes	3100	HF	160	83	4000	40886500
1500mm HO 25W865 T8 InstantFit	25	Yes	3100	HF	160	83	6500	40888900

* RS = Region Southern Europe / RN = Region Northern Europe

** EEL 1200 mm and 1500 mm E.Mag versions A++ / EEL 1200 mm and 1500 mm HF versions A+

MASTER LEDtube Ultra Output

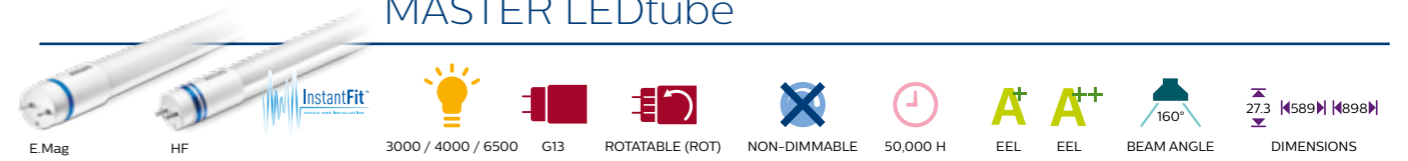


Product type	LED	Rotatable endcap	Lumen output	Operation	Beam angle	CRI	Colour temperature	EOC 1 pcs (C)*
MASTER LEDtube (E.Mag)	W		lm		°		K	8718696
1200mm UO 18W 830 T8 RN*	18	Yes	2300	E.Mag & Mains	160	83	3000	56527800
1200mm UO 18W 840 T8 RN*	18	Yes	2300	E.Mag & Mains	160	83	3000	56529200
1200mm UO 18W 865 T8 RN*	18	Yes	2500	E.Mag & Mains	160	83	6500	56531500
1500mm UO 25W 830 T8	25	Yes	3400	E.Mag & Mains	160	83	3000	46157000
1500mm UO 25W 840 T8	25	Yes	3700	E.Mag & Mains	160	83	4000	46159400
1500mm UO 25W 865 T8	25	Yes	3700	E.Mag & Mains	160	83	6500	46163100
MASTER LEDtube (HF)	W		lm		°		K	8718696 8718696
1200mm UO 21W830 T8 RN* Instant Fit	21	Yes	2300	HF	160	83	3000	55282700
1200mm UO 21W840 T8 RN* Instant Fit	21	Yes	2500	HF	160	83	4000	55278000
1200mm UO 21W865 T8 RN* Instant Fit	21	Yes	2500	HF	160	83	6500	55280300
1500mm UO 26W830 T8 InstantFit	26	Yes	3400	HF	160	83	3000	55288900
1500mm UO 26W840 T8 InstantFit	26	Yes	3700	HF	160	83	4000	55284100
1500mm UO 26W865 T8 InstantFit	26	Yes	3700	HF	160	83	6500	55286500

* RN = Region Northern Europe

** EEL 1200 mm and 1500 mm E.Mag versions A++ / EEL 1200 mm and 1500 mm HF versions A+

MASTER LEDtube



Product type */**	LED	Rotatable endcap	Lumen output	Operation	Beam angle	CRI	Colour temperature	EOC 1 pcs (C)*
MASTER LEDtube (E.Mag)	W		lm		°		K	8718696 8718696
600mm 9W 830 T8 RN*	9	Yes	1000	E.Mag & Mains	160	83	3000	57279500
600mm 9W 840 T8 RN*	9	Yes	1050	E.Mag & Mains	160	83	4000	57281800
600mm 9W 865 T8 RN*	9	Yes	1050	E.Mag & Mains	160	83	6500	57283200
MASTER LEDtube (E.Mag)	W		lm		°		K	8718696 8718291
900mm 15W 840 T8 RN*	15	Yes	1575	E.Mag & Mains	160	80	4000	47121000
900mm 15W 865 T8 RN*	15	Yes	1575	E.Mag & Mains	160	80	6500	47123400
1800mm 25W 840 T8	25	Yes	3700	E.Mag & Mains	160	85	4000	48037300
MASTER LEDtube (HF)	W		lm		°		K	87186965
600mm 10.5W 830 T8 InstantFit	10.5	Yes	1000	HF	160	83	3000	5965900
600mm 10.5W 840 T8 InstantFit	10.5	Yes	1050	HF	160	83	4000	5967300
600mm 10.5W 865 T8 InstantFit	10.5	Yes	1050	HF	160	83	6500	5969700

* RN = Region Northern Europe

** EEL 1200 mm and 1500 mm E.Mag versions A++ / EEL 1200 mm and 1500 mm HF versions A+

Protection starter



34.5
21.5
DIMENSIONS

Product type	EOC 10 pcs (I)
Accessory	8718291
Starter EMP	72928000



Please refer to the site www.philips.com/masterledlamps for the latest information about dimming MASTER LEDlamps and about transformer compatibility.

