



# Why Philips LEDtube?

LED Lamps EMEA  
February 2015

**PHILIPS**

Content

Why Philips?

Why LEDtubes?

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# Why Philips?

Innovation leader in linear lighting

Lighting experience

Real quality of light

**PHILIPS**



Best  
Product

- Quality
- Ballast compatibility

Best  
Portfolio

- Extensive portfolio
- Product range for all types of applications

Best  
Partner

- For installers
- For end-users

# Innovation leader in linear lighting



Philips has a long history of **ground-breaking innovation** in linear fluorescent lighting technologies. LED integration delivering 200 lm/W and added integrated intelligence are the latest additions and we continue the **future in lighting**, today.

# Lighting expertise



Philips has a proven track record of reliable lighting in challenging and safety-critical environments. Customers value our **extensive experience** and **know-how**.

A woman and a child are sitting at a table, painting together. The woman is smiling and looking at the child's work. The child is focused on painting a wooden stick. On the table, there are several bottles of paint in various colors (blue, yellow, red, green) and a palette. A large lamp with a white shade is positioned above them, casting a warm light. The background is a blurred indoor setting.

## Real quality of light

Philips products deliver claimed specifications, with all required certifications and are compliant with the latest regulations.



# Real quality of products

Phillips offers and guaranties the quality of their products. This is done be extensive research and careful development:

- Lifetime prediction models and **real time** measurement. First LEDtube ON from 2008 onwards
- Accelerate lifetime tests and reports i.e LM79 / LM80
- Due to special **LED binning process** and use of best **phosphors** to maintain right color points
- To lower the dark spots we place our LED series and parallel combined.
- **Optimized** heat sink design to keep the LED cool



# Why LEDtubes?

Great potential to reduce energy

Offering low initial cost and installation effort

Key benefits



# Great potential to reduce energy

LED tubes can easily replace fluorescent TL lamps

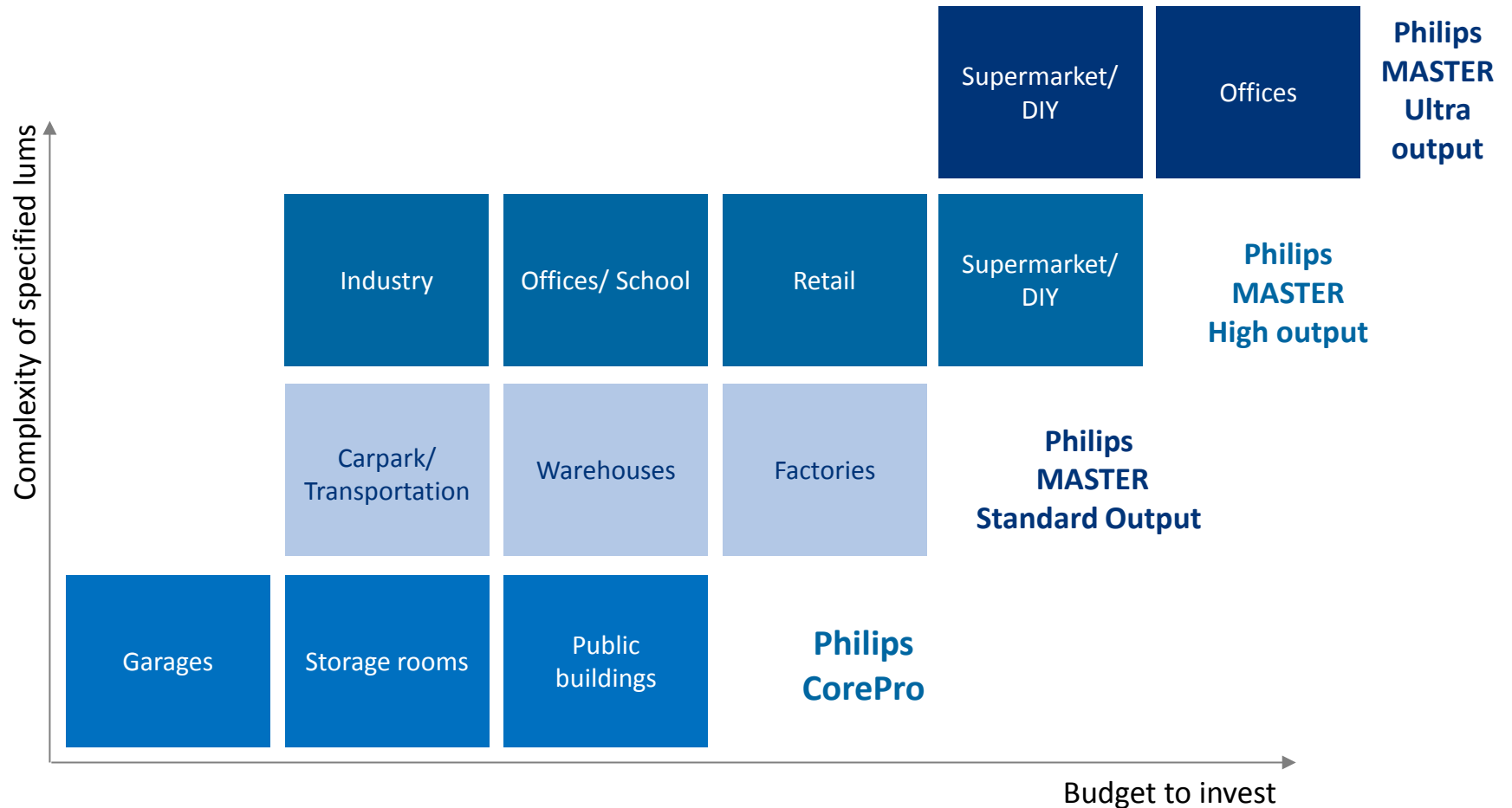
- Lighting consumes 19 % of the global electricity supply (IEA)
- Linear fluorescent lighting accounts for a significant part of the **total electricity consumption** of lighting
- Linear LED lamps (LED tubes) are able to directly replace linear fluorescent (TL) lamps while sustaining the installed luminaire base
- Because LED tubes are more energy efficient, **energy savings** of **40 to 65 %** can be achieved, depending on the type of installation and the application
- Efficiency measures in lighting offer one of the most attractive **financial returns**, well above initial investments and therefore generate cost reductions to the end user.

In short:

**LED tubes are low hanging fruit to reduce energy!**

# Key application areas for LEDtubes

Depending on budget to invest and complexity of lums



# Offering **low initial cost** and **installation effort**

## LED tubes enable a fast and efficient upgrade to LED lighting

Different LED alternatives for linear fluorescent lighting and their characteristics:

	LED Tube retrofit	Panel/Kit retrofit	New Luminaires
Installation time	Lowest	Low	High
Purchasing price	Low	Medium	High
New look	No	Yes	Yes
Energy saving in troffer-type application	Less	More	More
Energy saving in batten-type application	Same	Same	Same

# Key benefits of LEDtubes

## Energy efficient

- Around 40 to 65% more efficient if compared with TL-D lamps, saving on energy costs

## Long lasting and robust solution

- With lifetimes up to 40,000 hours (vs. 15,000 hours TL-D), reducing maintenance costs
- The performance is not affected by low(er) temperatures
- Most tubes are made of shatter-proof plastic
- Suitable for a wide range of applications

## Simple lamp-for-lamp replacement

- Easy upgrade from current conventional TL-D fixture to LEDtubes (hassle free)
- Re-using the existing fixture without major modifications, using a similar tube form-factor

## High quality of light

- No flickering or stroboscopic light
- High color consistency
- Instant 100% light

## Mercury-free



# Why **Philips** LEDtubes?

**Superior** product differentiators

The right LEDtube **every time**

**Broad Philips MASTER LEDtube portfolio** to fulfill every need

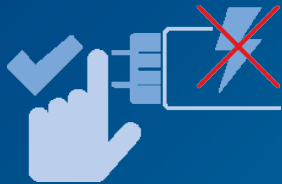
Inspiring **customer** experiences

# Superior product differentiators



## HF compatibility

No wires to replace, no hassle changing drivers; InstantFit is a retrofit solution that works with High Frequency electronic ballast, making it 100% safe for all installation methods and slots into your existing fitting.



## Pin safety

It is important that there is no hazardous current and voltage on the cap pin when the other pin is inserted into the fixture. If one side of the LED tube is inserted into the lampholder the other pins are accessible for the installer. Philips LED tubes adhere to the pin safety requirements of UL and IEC for all the products.



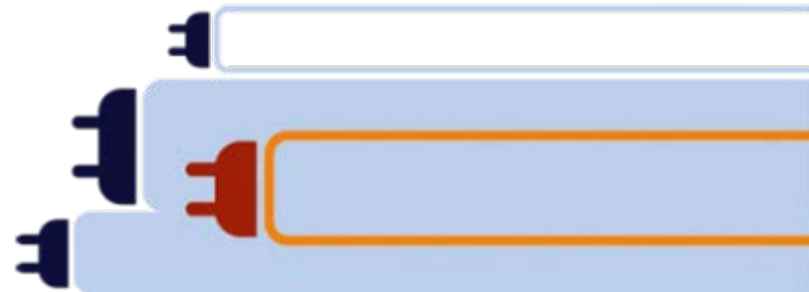
## Rotating end-caps

In a lot of applications the pin fitting is rotated. This can be a problem as the LEDtubes only provide directional light. Therefore Philips MASTER LEDtubes offer rotating end-caps.

# The right LEDtube every time

Whatever you need, the Philips **MASTER LEDtube** portfolio has it all. We've repositioned the way that our lamps are labelled into three new categories of light output – **Standard, 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 color temperatures, with the option of rotating end-caps. So with our lamps, you have the right LEDtube every time.





# Broad Philips **MASTER LEDtube** portfolio to fulfill every need

## **Standard output**

1600 - 2000 lumen

- 1200 mm ROT
- 1200 mm InstantFit
- 1500 mm
- 1500 mm ROT InstantFit

## **High output**

2100 - 3100 lumen

- 1200 mm ROT
- 1200 mm ROT InstantFit
- 1500 mm ROT
- 1500 mm ROT InstantFit

## **Ultra output**

2500 - 3700 lumen

- 1200 mm ROT
- 1500 mm ROT

Available from May 2015 onwards

# LEDtubes increasingly fulfill customer needs

Supported by **performance, compatibility and cost breakthroughs**



## Car Parks/ Back of house

- Burning hours 24/7
- Ensure visibility and feeling of safety
- Need for energy reduction and reducing maintenance costs
- Withstand cold (er) temperatures
- Light requirement: 200+ lux



## Transportation

- Burning hours 24/7
- Ensure visibility and feeling of safety
- Need for energy reduction and reducing maintenance costs (very important)
- Vibration resistant
- Light requirement: 200 to 500 lux



## Food Retail

- Burning hours 18hrs / day
- Enhance 'green' image of the brand
- Need for energy reduction and reducing maintenance costs (avoid disruption)
- Prevent merchandise from (broken) glass
- Light requirement: 300 to 500+lux



## Retail Shops & Hospitality

- Burning hours 12hrs / day to 24/7
- Enhance 'green' image of the brand
- Need for energy reduction and reducing maintenance costs
- Product enhancement on the shelf (R)
- Light requirement: 500+lux



## Industry

- Burning hours : varies, max. 24/7
- Need for energy reduction and reducing maintenance costs: avoiding production loss due to up-lamping activities
- Withstand cold temperatures, vibrations
- Light requirement: 200-500+ lux



## Office/School/Healthcare

- Burning hours : usually 12 hrs / day
- Need for energy reduction and reducing maintenance costs
- High quality of light needed and compliance with ergonomic norms
- Light requirement: 500+ lux



## Car Park

- › Burning hours: 24/7
- › Ensure visibility and feeling of safety
- › Need for energy reduction and reducing maintenance costs
- › Withstand cold (er) temperatures
- › Light requirement: 200+ lux

Best energy efficiency

Best light output

Standard output

High output



## Industry

- › Burning hours: varies, max. 24/7
- › Need for energy reduction and reducing maintenance costs: avoiding production loss due to up-lamping activities
- › Withstand cold temperatures, vibrations
- › Light requirement: 200-500+ lux

Best energy efficiency

Best light output

High output

Ultra output



## Supermarket / DIY

- › Burning hours: 12 hrs /a day to 24/7
- › Enhance 'green' image of the brand
- › Need for energy reduction and reducing maintenance costs
- › Product enhancement on the shelf
- › Shatterproof thanks to plastic material
- › Light requirement: 500+lux

Best energy efficiency

Best light output

High output

Ultra output



## Office

- › Burning hours: usually 12 hrs / a day
- › Need for energy reduction and reducing maintenance costs
- › High quality of light needed and compliance with ergonomic norms
- › Light requirement: 500+ lux

Best energy efficiency

Best light output

High output

Ultra output

# Inspiring customer experiences

Proof points in various end-user segments



# Paris Public Transport System (RATP)

“ The first project in Censier Daubanton station, RATP measured **64 % energy savings**. The illumination of the Paris Public Transport System represents 12 % of its electricity consumption. LED generates energy savings and reduces maintenance costs while also improving the environmental impact of dust, **heat and vibrations.**”

**Gil Riemenschneider**

RATP Project manager Lighting LED



# Car Park St. Helens Metropolitan Borough Council

“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.”

**Frank Kelly**

Building Services Engineering Manager for  
St Helens Metropolitan Borough Council

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# Dansk Supermarked

“We get the same level of brightness, a good colour rendering of the goods and much longer lifespan of the light sources, saving us **more than half the energy consumption.**”

**Ulrik Leth**

Electricity Installer Dansk Supermarked A/S



# Shipbuilding company Verhoef Access Technology

“It was time to replace the existing fluorescent lighting again, so it was the perfect moment to change over to a more **energy-efficient** and **maintenance-free** alternative. After comparing the various suppliers, the MASTER LEDtube from Philips came out as the best. And during extensive testing in the factory, we saw that what Philips promised on paper was also **realised in practice.**”

**Dick Verhoef**

Facility Manager at Verhoef Access Technology

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# Gas Natural Fenosa Offices

“We have seen **enormous savings** since we have installed MASTER LEDtube InstantFit. We have seen so far **good results** and **light quality** that have been achieved with respect to the previous technologies that we have installed in our offices.”

**Ramón Silvero**

Project Manager Lighting Area

Gas Natural Fenosa

# MASTER LEDtube Standard Output



4000/6500



G13



ROTATABLE  
(ROT)



NON-DIMMABLE



40,000 H



EEL



BEAM ANGLE



DIMENSIONS



Product type	LED	Traditional	Rotatable endcap	Lumen output	Operation	Beam angle	CRI	Color temperature	EOC 1 pcs (C)*
MASTER LEDtube	Wattage	Equivalent		Lumen				K	
1200mm ROT	14.5W	36 W	Yes	1600 lm	EM & Mains	150°	83	4000	8718292179308300
1200mm ROT	14.5W	36 W	Yes	1600 lm	EM & Mains	150°	83	6500	8718292179310600
1500mm	20 W	58 W	No	2000 lm	EM & Mains	150°	83	4000	8718292173451200
1500mm	20 W	58 W	No	2000 lm	EM & Mains	150°	83	6500	8718292173453600
1200mm InstantFit	16.5 W	36 W	No	1600 lm	HF	150°	83	4000	8718292172885600
1200mm InstantFit	16.5 W	36 W	No	1600 lm	HF	150°	83	6500	8718292172887000
1500mm ROT InstantFit	22 W	58 W	Yes	2000 lm	HF	150°	83	4000	871869640078400
1500mm ROT InstantFit	22 W	58 W	Yes	2000 lm	HF	150°	83	6500	871869640080700

# MASTER LEDtube High Output



4000/6500



G13



ROTATABLE  
(ROT)



NON-DIMMABLE



40,000 H




EEL



BEAM ANGLE



DIMENSIONS

Product type	LED	Traditional	Rotatable endcap	Lumen output	Operation	Beam angle	CRI	Color temperature	EOC 1 pcs (C)*	
MASTER LEDtube	Wattage	Equivalent		Lumen				K		
	1200mm ROT	20 W	36 W	Yes	1900 lm	EM & Mains	150°	83	3000	871869642198700
	1200mm ROT	20 W	36 W	Yes	2100 lm	EM & Mains	150°	83	4000	871869642200700
	1200mm ROT	20 W	36 W	Yes	2100 lm	EM & Mains	150°	83	6500	871869642202100
	1500mm ROT	23 W	58 W	Yes	2900 lm	EM & Mains	150°	83	3000	8718292178956700
	1500mm ROT	23 W	58 W	Yes	3100 lm	EM & Mains	150°	83	4000	8718292178958100
	1500mm ROT	23 W	58 W	Yes	3100 lm	EM & Mains	150°	83	6500	8718292178960400
	1200mm ROT InstantFit	18 W	36 W	Yes	2100 lm	HF	150°	83	4000	May 2015
	1200mm ROT InstantFit	18 W	36 W	Yes	2100 lm	HF	150°	83	6500	May 2015
	1500mm ROT InstantFit	25 W	58 W	Yes	3100 lm	HF	150°	83	4000	871869640886500
	1500mm ROT InstantFit	25 W	58 W	Yes	3100 lm	HF	150°	83	6500	871869640888900



Thank you