

# Switch out of date HID for out of this world LED

Philips TrueForce LED lamps provide an easy LED solution to replace HPL, HID, SOX as well as SON-T lamps.

Enjoy the benefits of LED like improved energy efficiency and long lifetime, while keeping your initial investment low. With the right lamp size and light distribution, you can easily fit TrueForce LED lamps into your customers existing system, thereby enhancing the light quality without having to change the light fixtures or sacrifice the light effect. Our highest standard LED technology guarantees low maintenance and has a five-year warranty.

Great light should go anywhere, which is why the Philips TrueForce LED range feels at home in a number of applications, from industry and retail to urban, street, and road.

And because budgets can be as varied as applications, the TrueForce family comes in TrueForce LED and the even more cost-effective TrueForce Core LED. Both offer outstanding performance that lasts and performs longer.

# For more information visit: philips.com/trueforce-led-lamps



#### **Easy adoption**

No need to change the fixture!



#### **Right light distribution**

Enhances comfort and safety in multiple application areas.



#### Fast payback

It usually takes less than two years for LED lamps to pay for themselves.



#### Low investment, long lifetime

The long lifetime of up to 50,000 hours makes LED a clever investment.



#### Sustainability

Low energy consumption and a longer lifetime make LED lighting the sustainable choice.



#### **Highest standard LED technology**

Low maintenance and up to 5 years warranty pay off!

Finding the right lamps 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.

Value and features



TrueForce

#### TrueForce

Robust lighting solutions for top performance and more sustainability.



TrueForce Core

#### **TrueForce Core**

Trusted, reliable, great value lighting for your everyday lighting jobs.

Price

### Everywhere amazing



#### **Industry and Retail**

Replace conventional HPL lamps to improve light quality, safety and productivity.



#### Urban

Easily fit TrueForce LED lamps into existing systems and make urban locations more sustainable, brighter and safer.



#### **Road, Street and Landscape**

Big in performance and low in maintenance: use TrueForce LED lamps to replace conventional SOX, SON-T and CDO lamps.

# **Product overview**

Find the right Philips TrueForce lamp for every application and demand using our handy product finder: philips.com/productfinder

**TrueForce Core** 





#### TrueForce

#### Value and features:





#### **TrueForce Core LED HPL**



Philips Trueforce Core LED HPL lamps offer you an easy, short-payback LED solution to replace HID lamps in road, street and other public areas, as well as industrial buildings and warehouses.

- Similar look & feel as conventional HID SON/HPL lamps
- Perfect fit in HID luminaires on existing mains connection only.
- IP65 design suitable for indoor and outdoor applications

Click here for more details

#### **TrueForce Core LED SON-T**



Replace conventional SON-T lamps with highly efficient, cost-saving LED in road applications. As a quick payback solution these lamps combine instant savings with a low initial investment.

- First full glass LED lamp for road lighting
- Enables up to 60% energy saving compared to conventional road lighting and lower initial investment
- High efficiency GaN driver design

Click here for more details

#### **TrueForce LED HPL**



Easily retrofit TrueForce LED lamps into existing systems in public urban applications like parks, squares, streets and parking areas.

- Direct retrofit no need to change the fixture
- Low initial investment and quick payback through energy cost savings
- Up to 6KV surge protection
- Light in weight

Click here for more details

#### **TrueForce LED SON-T**



Your easy and short-payback LED solution to replace HID lamps in urban and road applications.

- Easy retrofit solution, no changing of luminaire's ballast or reflector necessary
- Cost saving with short payback time
- Low initial investment
- Two versions: InstantFit; EM/Mains Voltage

Click here for more details

### **TrueForce Core LED highbay HPL**



Easily replace HID lamps in warehouses, factories, shops and transport hubs and provide instant savings with low initial investment.

- Enhance lighting quality with easy adoption
- Low initial investment and quick payback through energy cost savings
- Light on the wider working space
- Wide beam angle (WB 240°)

Click here for more details

### TrueForce LED highbay universal HPI



Bring all the benefits of replacing HID with LED to industrial and retail facilities like warehouses, factories, shops and

- Quick and easy payback solution to
- Two beam angles: narrow beam (NB 60°); wide beam (WB 120°)

Click here for more details

#### **TrueForce LED SOX**



The perfect fit LED solution for SOX system retrofit in road, street and tunnel applications.

- Direct retrofit for traditional SOX system with TrueForce LED SOX lamp and integrated LED driver
- Low initial investment and quick payback through energy cost savings

Click here for more details







transport hubs.

- replace HID lamps in highbay applications
- Direct retrofit no need to change the fixture
- Compatible with both 250W and 400W gears

# Real pros tell

# HID to hit the road

Discover the new Philips TrueForce Core LED SON-T - the first full glass LED lamp for road lighting.

#### **Benefits and features**

- First LED lamp for road lighting made from glass
- Enables up to 60% energy saving compared to conventional road lighting
- Lower initial investment, shorter payback time
- High efficiency thanks to advanced driver design (GaN technology)
- Lifetime of 25,000 hours
- Direct retrofit Mains only solution with E27/E40 cap
- Up to 7500 lm output thanks to mega-filament
- IP65 for long-lasting outdoor use
- Good color rendering (Ra 70) and color temperatures of 3000 and 4000 K



2.882€

< 14 months

### Instant savings ahead

Conventional SON-T

TrueForce Core LED SON-T



4380 hrs<sup>2</sup>

0.12 €/kWh



15,000











≈35€
43.50 €

Relative annual cost/lamp 7.62 €

Make the sustainable choice: Over its lifetime, the new Philips TrueForce Core LED SON-T saves the equivalent of the CO<sub>2</sub> emissions absorbed by 2,673 trees!







# **Exceeding expectations**with TrueForce LED SON-T

#### **Background**

Stratford-upon-Avon, a medieval market town in England's West Midlands, is the 16th-century birthplace of William Shakespeare. As you might expect from a town steeped in history, Stratford-upon-Avon has a large number of Heritage lanterns. Whilst much of Warwickshire County Council's residential and traffic routes have already been upgraded to LED, the Heritage lanterns had not been.

The main concern in upgrading was maintaining the structural integrity of the lanterns. Whilst replacing the lanterns was considered, the cost was deemed prohibitive.

A small trial of Philips TrueForce LED SON-T lamps was installed.

#### The solution

Philips TrueForce LED SON-T lamps were selected, as the product offered a like for like replacement into the existing lantern using the existing optic to photometrically replace the SON-T & CDO-TT lamps.

Philips TrueForce LED SON-T lamps offer an easy and short payback LED solution to replace High Intensity Discharge (HID) lamps. The products bring the energyefficiency and long lifetime benefits of LED to HID replacement, while providing instant savings with a low initial investment. With the right lamp size and light distribution, you can easily retrofit TrueForce LED SON-T lamps into the existing systems without changing the luminaire's ballast or reflector while enhancing the lighting quality.

Following trials, Warwickshire County Council took the decision to replace all Heritage and Beta 5 lanterns with Philips TrueForce. The upgrade means that energy usage will be more than halved.

With the improved energy efficiency, the payback period on the installation will be less than two years.

"We were confident using a Philips lamp that we were getting a top product but TrueForce has exceeded our expectations."

Mike Cunningham, Street lighting Manager, Warwickshire County Council



# **Choose the right TrueForce LED lamp**







## Urban Post top, Heritage Teardrop, Pendant



ı	Highbay / Midbay



Conventional oval shape



Wattage:	TrueForce			TrueForce			TrueForce		
HPL E27 50W	Core LED HPL 13W	МО	×	Core LED HPL 13W	МО	×	Core HB 20W	МО	×
HFL E27 30W	Core LED HPL 21W	МО	×						
	Core LED HPL 26W	МО	×	Core LED HPL 26W	МО	×	Core HB 35W	МО	×
HPL	Core LED HPL 18W	МО	0	Core LED HPL 18W	МО	0	Core HB 30W	МО	×
E27 80W	LED HPL 28W	MV	×				Core HB 20W	МО	×
	LED HPL 21W	MV	0						
	Core LED HPL 36W	МО	×	Core LED HPL 36W	МО	×	Core HB 35W	МО	0
HPL	Core LED HPL 26W	МО	0	Core LED HPL 26W	МО	0	Core HB 30W	МО	0
E27 125W	LED HPL 42W	MV	×						
	LED HPL 28W	MV	0						
HPL	Core LED HPL 36W	МО	×	Core LED HPL 36W	МО	×			
E40 125W	LED HPL 42W	MV	×						
HPL	Core LED HPL 36W	МО	0	Core LED HPL 36W	МО	×			
E40 200W	LED HPL 42W	MV	0						x x 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Core LED HPL 18W	МО	0						
SON	Core LED HPL 26W	МО	×						
E27 50W	LED HPL 21W	MV	0						
	LED HPL 28W	MV	×						
	Core LED HPL 26W	МО	0						
SON	Core LED HPL 36W	МО	×						
E27 70W	LED HPL 28W	MV	0						
	LED HPL 42W	MV	×						
SON	Core LED HPL 36W	МО	0						
E40 100W	LED HPL 42W	MV	0						
MH E40 250W					LED HP	UN 95V	V	UN	×
MH E40 400W				L	ED HPI	UN 140	W	UN	×
HPI E40 250W					LED HP	UN 95V	v	UN	×
HPI E40 400W				L	ED HPI	UN 140	W	UN	×



Conventional tubular shape





Wattage:	TrueForce					
SON-T PIA	Core LED SON-T 17W	МО	0			
E27 50W	LED SON-T 25W	IF/MV	×			
	Core LED SON-T 26W	МО	0			
SON-T PIA E27 70W	LED SON-T 35W	IF/MV	0			
	LED SON-T25W	IF/MV	0			
	Core LED SON-T 40W	МО	0			
SON-T PIA E40 100W	LED SON-T 55W	IF/MV	0			
	LED SON-T 68W	IF/MV	×			
SON-T PIA E40 150W	LED SON-T 68W	IF/MV	0			
SON-T	Core LED SON-T 26W	МО	0			
E27 70W	LED SON-T 35W	IF/MV	×			
SON-T	Core LED SON-T 40W	МО	0			
E40 100W	LED SON-T 55W	IF/MV	×			
SON-T E40 150W	LED SON-T 68W	IF/MV	0			
CDO	Core LED SON-T 26W	МО	0			
E27 50W	LED SON-T 25W	IF/MV	0			
CDO E27 70W	LED SON-T 35W	IF/MV	0			
CDO	LED SON-T 55W	IF/MV	0			
E40 100W	LED SON-T 68W	IF/MV	×			
CDO E40 150W	LED SON-T 68W	IF/MV	0			
SOX B22 35W / 26W				LED SOX 18W	MV	>
SOX B22 55W / 36W	]			LED SOX 28W	MV	>
SOX B22 55W	1			LED SOX 36W	MV	>

#### Symbols and abbreviations

**TrueForce Core LED lamps:** 

convenient and cost-effective

TrueForce LED lamps:

top-quality and robust

X True replacement:

initial perceived light effect/lux levels of LED lamp is the same or better than conventional HID

#### O Average equivalence:

average perceived light effect / lux levels of LED lamp during the life comparable to conventional

#### UN Universal:

Plug & play solution with existing gear, no need to re-wire or remove any components. Can also work with direct mains voltage input to save additional energy.

#### MV EM/Mains:

The solution works both with EM ballast or connected directly to Mains. When being connected directly to mains you achieve even more energy savings. When connected to the existing EM ballast, the ignitor as well as a parallel compensation capacitor should be removed to decrease the power factor.

#### IF InstantFit:

Plug & play solution with existing gear, no need to re-wire or remove any components.

#### MO MainsOnly

Plug & play solution by removing existing gear, need to re-wire or remove any ballast/ignitor/ capacitor.

# Get ready to save energy and costs



#### Road

Designing and installing road lighting comes with a lot of demands – lamps need to be highly efficient, robust and low in maintenance. Installation should be fast and easy and ideally the price doesn't blow your budget. At the same time, the right lighting can improve road safety and comfort. It can save energy and reduce the environmental impact.

	SON-T	TrueForce LED SON-T IF	TrueForce LED SON-T MV	TrueForce Core LED SON-T				
Lifetime	15,000 hrs	50,000 hrs	50,000 hrs	25,000 hrs				
Lamp wattage	70W <b>&gt;</b>	35W	35W	26W				
Average buying price/ lamp installer	16 €	98.00 €	98.00 €	43.50 €				
Total costs/year/lamp*	57.99 €	34.78 €	30.05 €	27.42 €				
Number of lamps		100						
Burning hours/year		4,380	4,380 hrs					
Total savings/year		2,374 €	2,847 €	3,057 €				
Payback period	yback period 3.5 ye		2.9 years	0.9 years				
		Choose TrueForce LED SON-T lamps for extra durable lighting with top performance and great energy savings.  Choose TrueForce Co LED SON-T lamps for extra reliable road lighting with an attractive payback time.						



#### 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.

	HPL		TrueForce Core LED HPL				
Lifetime	15,000 hrs	>	25,000 hrs				
Lamp wattage	80W	>	18W				
Average buying price/ lamp installer	5.5 €	>	29.75 €				
Total costs/year/lamp*	60.71€	>	20.81 €				
Number of lamps			100				
Burning hours/year			4,380 hrs				
Total savings/year			3,990 €				
Payback period			0.6 years				
	To any		Choose TrueForce Core LED HPL lamps for low-maintenance retail lighting with a low initial investment and an attractive payback time.				



#### Industry

In ultra-demanding applications, 24/7 operations can run up expensive energy bills. With high energy-efficiency, reduced maintenance and a much longer lifetime switching to LED lamps pays off – in most cases, the energy savings in the first year alone are higher than the purchase price of the lamp!

	T.	
	400W HPI	TrueForce LED highbay universal HPI
Lifetime	15,000 hrs	50,000 hrs
Lamp wattage	400W <b>&gt;</b>	140W
Average buying price/ lamp installer	23 €	185€
Total costs/year/lamp*	240.32 €	92.86 €
Number of lamps		100
Burning hours/year		4,380 hrs
Total savings/year		14,746 €
Payback period		1.1 years
		Choose TrueForce LED highbay universal for extra durable lighting with top performance and great energy savings.



#### Urban

LED lighting helps urban areas feel safer and more inviting as well. By switching from conventional HPL to TrueForce LED HPL lamps, you can improve safety and liveability, while saving energy and reducing the environmental impact of a city.

	125W HPL		TrueForce LED HPL	TrueForce Core LED HPL			
Lifetime	15,000 hrs	>	50,000 hrs	25,000 hrs			
Lamp wattage	125W	>	42W	36W			
Average buying price/ lamp installer	5.50 €	>	89.25 €	50€			
Total costs/year/lamp*	84.88 €	>	32.96 €	33.81 €			
Number of lamps		100					
Burning hours/year		4,380 hrs					
Total savings/year			5,192 €	5,107 €			
Payback period			1.6 years	0.9 years			
			Choose TrueForce LED HPL lamps for extra durable lighting with top performance and great energy savings.	Choose TrueForce Core LED HPL lamps for reliable lighting with an attractive payback time.			

All calculations are based on the European average of 12 cent/kW hour. \*Including maintenance and lamp replacement cost.

# Philips LED vs. HID



# Replace outdated HID with outstanding LED

Ever wonder what's better when it comes to urban and road applications: HID or LED?

We took a closer look at the main factors you might conside r when choosing lighting products. You'll see that with all the advantages of LED lamps, it's hard to find anything that's not to like.

And it gets even better: Switching from HID to LED is easy with the Philips TrueForce LED range that offers a direct retrofit alternative for many conventional lamp types – without losing the familiar look and feel.

Choose TrueForce LED for projects that demand especially high-quality and robust LED lamps – and TrueForce Core LED for more cost-effective and convenient solutions. Turn the leaflet around for all recommendations for urban and road applications.

Real pros switch to LED now!





# Efficiency and robustness

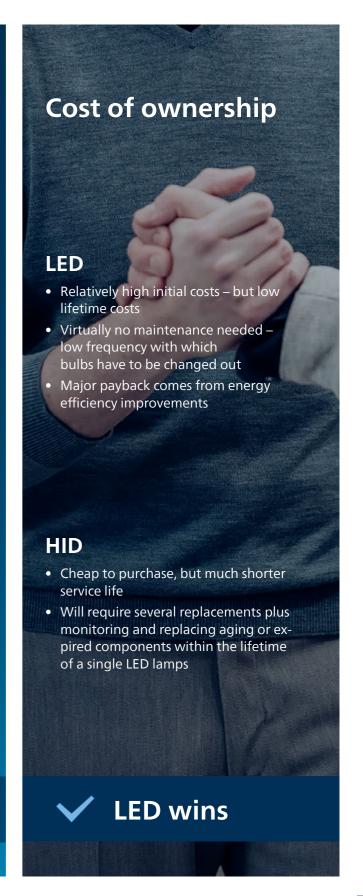
#### LED

- Highest system efficacy
- Shock resistant, robust technology
- with low failure rate
- Up to 5 years warranty
- Long lifetime of up to 50,000 hours
- IP ratings for outdoor usage

#### HID

- Lower system efficiency due to losses associated with omnidirectional light output
- Fragile, can fail in a number of ways
- Broken bulbs release a small amount of toxic mercury as a gas
- Approximately half the lifetime of LED





## **Choose Philips LED lighting for:**

## A reliable partnership

- Close cooperation before, during and after projects is important to us. Our large 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.

### The best products

- We're setting new standards for high-quality products that result in less maintenance, fewer technical hiccups and strengthens your reputation as a reliable lighting expert.
- Philips LED products are designed with easy installation in mind, saving you time and money.
- From connected lighting solutions to 3D printed luminaires with Philips you get LED lighting that's setting the reference in the industry and that keeps you ahead of the competition.

### The widest portfolio

Whatever the need, whatever the budget: with our complete portfolio of LED lighting products you'll always have the right solution at hand.

### More sustainability

Energy efficient lighting is a fast and cost-efficient way to reduce emissions and combat climate change. To unlock this potential, we strive to bring the most energy-efficient products to the market. And we do more: by recycling up to 90% of our manufacturing waste, using 100% renewable electricity and saving over 500,000 kilos of plastic waste per year through our paper packaging!



Over 2 billion Philips LED lamps and luminaires sold worldwide\* show: Real pros trust in Philips as their partner in lighting.





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