SpeedStar

LEDs ensure a safe journey home

PHILIPS

sense and simplicity

SpeedStar, ensuring a safe journey home
(Kieselbronn, Germany)

SpeedStar - elegant style meets high-performance lighting

The introduction of SpeedStar marks the beginning of a new era for LED road lighting. For the first time, LED luminaires can cover applications ranging from motorways and urban traffic to suburban streets, replacing all existing conventional lighting sources. With over 10,000 SpeedStar products having sold in one year, the city of tomorrow is becoming a reality. The future is being lit with better-quality light that is directed at the road, consumes much less energy and features smarter lighting-level control options.

Conventional luminaires are known for their bulky chamber, with the lamps positioned in the center. LED luminaires are free from these constraints. SpeedStar's slim, simplistic, elegant design means it fits in well with a city's urban lighting plans and becomes part of the city's identity. SpeedStar is renowned for its industrial design and as the winner of iF Design, Lux Award and Red Dot Design, three of the most prestigious industrial design awards in Europe.

LUX AWARDS 2011 WINNER

product design award 2011

reddot design award
best of the best 2011

LEDGINE

SpeedStar integrates the most efficient LED platform, LEDGINE, with optimized spacing and an efficacy of up to 111 lm/W at system level. The LED platform ensures you achieve unparalleled energy savings.

LEDGINE is perfectly adapted to LED road-lighting requirements. It combines the following features to give you the best Total Cost of Ownership: serviceability, upgradeability, lighting quality, multiple applications.

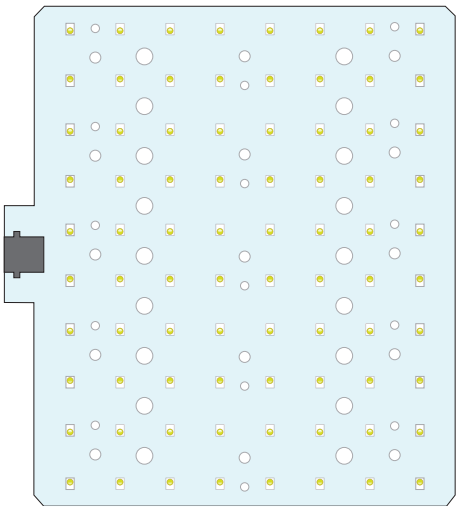
SpeedStar attains the highest performance using only flat glass to preserve the dark sky (0 candela at 90°/ glare control) and ensures the best maintenance factor.

Great Energy Saving with LEDGINE Platform
Up to 80% savings on energy compared with HPL

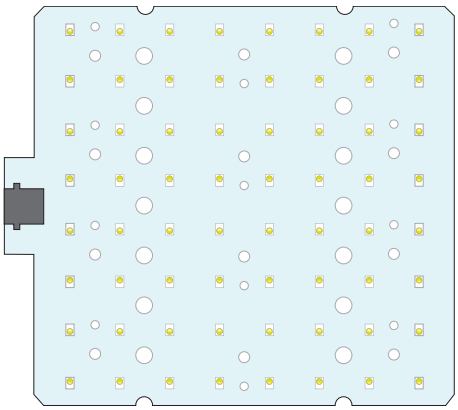
Compared with conventional light sources (e.g. HPL), LEDGINE can reduce energy consumption by up to 80%, thereby helping to reduce CO_2 emissions. LEDs are highly efficient, have an extremely long lifetime (>60,000 hours) and require very little maintenance. What's more, because the LEDGINE module is a building block that has been designed to allow easy upgrades, you will also benefit from future efficiency gains as well. In conjunction with its dedicated controls, LEDGINE is ready to deliver optimized energy savings.

Light exactly what you want, and only use the energy you need

With between 16 and 80 LEDs per board and very flexible drivers, LEDGINE enables you to link precisely the amount of LEDs you need to achieve the right light level, especially for refurbishment projects. This means you consume no more than the energy you actually need.



PCB 80/72 (249x226.5 mm)



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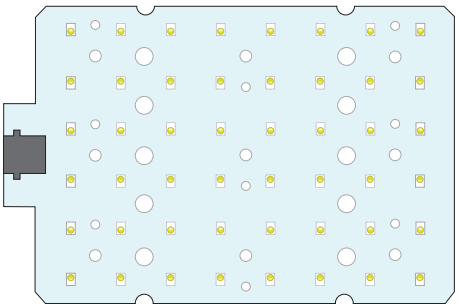

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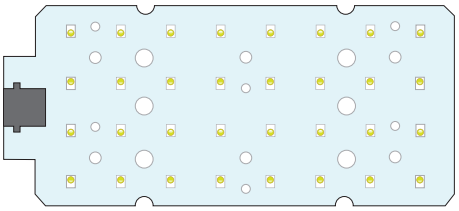
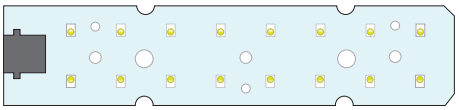


PCB 32/24 (99x226.5 mm)



PCB 16 (49x226.5 mm)

SpeedStar - a sustainable luminaire thanks to intelligent controls

Philips control systems make it possible to adjust the light level of SpeedStar precisely to suit the application in order to maximize energy savings. With today's electronic and LED technology, a fixed-output solution no longer makes sense. Very simple stand-alone control devices such as Lumistep or Dynadimmer will give you up to 20% energy savings. The advanced networked control systems with Starsense wireless and powerline can achieve an impressive 40% energy saving. Combined with our Citytouch platform it enables the users to manage all the lighting systems for an entire city from a single, intuitive online user interface.

CityTouch

LEDGINE is perfectly adapted to LED road-lighting requirements.
It combines the following features to give you the best Total Cost of Ownership: serviceability, upgradeability, lighting quality, multiple applications.

Control system	User benefits	Control options	User benefits	Energy saving
Networked				
Lightpoint management Starsense wireless	Enables **full control** and **monitoring** of each **individual** light point	DALI	• Global universal interface (compatibility) • On/Off switching • Calamity functionality • Provide detailed info on lamp system	Maximum energy savings up to 40%
		1-10 V	• Simple stepless dimmingw	
Group management Starsense powerline	Enables **monitoring and** control **across groups** of light points	Mains dimming *	• Simple dimming by lowering mains	Energy savings up to 25%
		SDU Pilot line *	• Simple dimming by extra control line	
Stand-alone				
Lightpoint control	Enables local setting to ensure **the right amount** of efficient light in the **right place** at the **right time**	Light level adjustment Dynadimmer Lumistep	• Adjust the light level to the application • Programmable auto dimming (5 steps) • Auto dimming (1 step)	Energy savings up to 20%

* For suitable installations only

Best Light Quality with LEDGINE Optics System

Lighting quality

The multi-layer optics allow customized solutions for any major road, urban street, city center or residential application, with the option to upgrade quickly and simply at any time in the future. This enables significant energy savings through 1-to-1 replacement of HID installations without any compromise on lighting quality or safety.

Lighting Quality

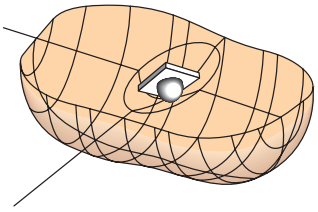
Our optical system differentiates on the basis of:

- Excellent facial recognition to promote safety and security
- Surrounding ratio in line with expectations (no sharp cut-offs)
- Excellent uniformity thanks to a very smooth light distribution
- Controlled beams to ensure minimum glare
- Dark sky-friendly (0 candela). The flat glass closure ensures excellent night preservation.

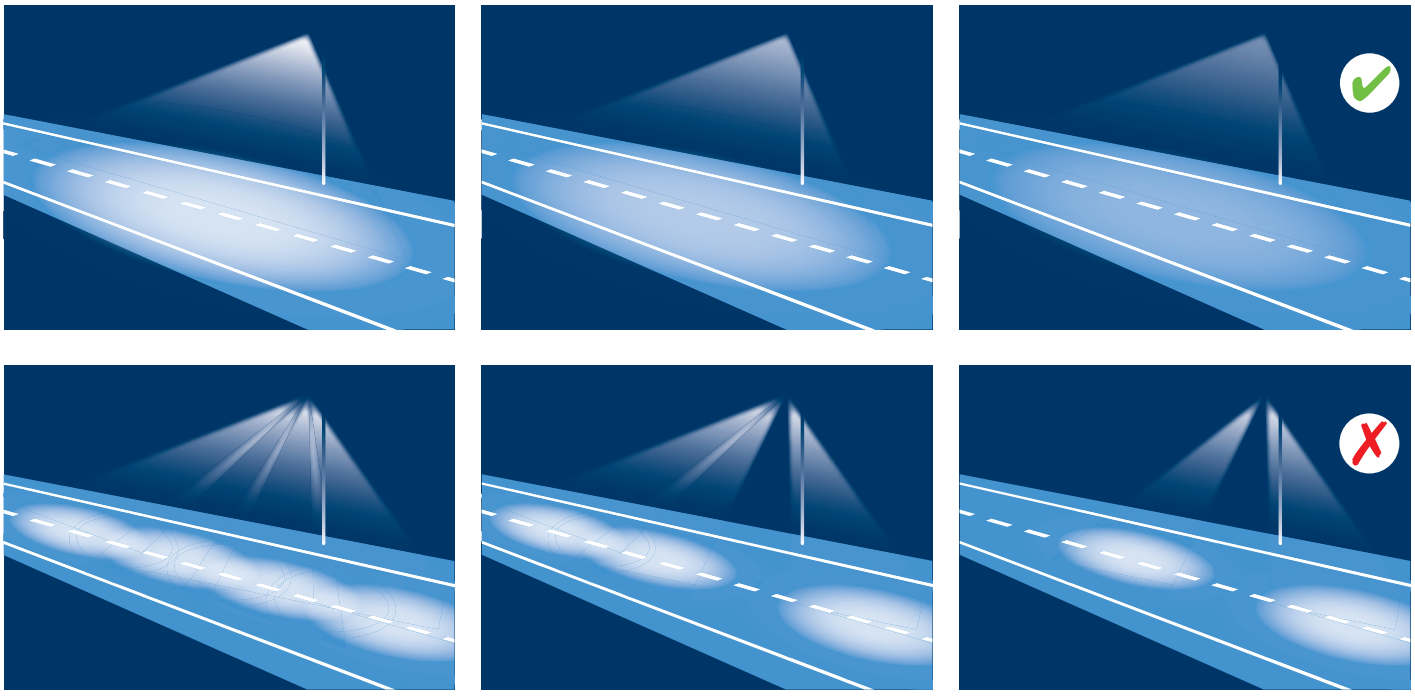
Unique optical system enables perfect lighting

The multi-layer system is based on three aspects:

- Our patented lens, which offers an excellent spread of light from each individual LED
- The distance between the LEDs, which is optimized to ensure that every LED lights up the required surface area
- Every single LED delivers the full light distribution, allowing perfect lighting uniformity



Patented lens

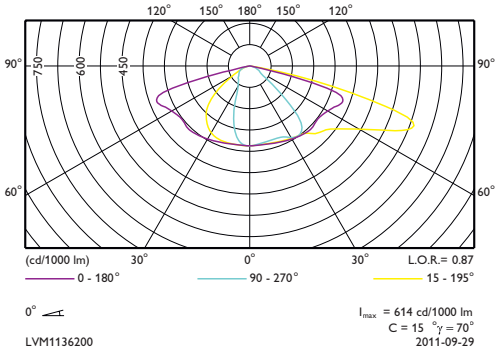


The multilayer optical system ensures an excellent uniformity and consistent light distribution during the system lifetime.

SpeedStar - application coverage

The new LEDGINE LED platform enables high levels of energy savings and great flexibility in applications.

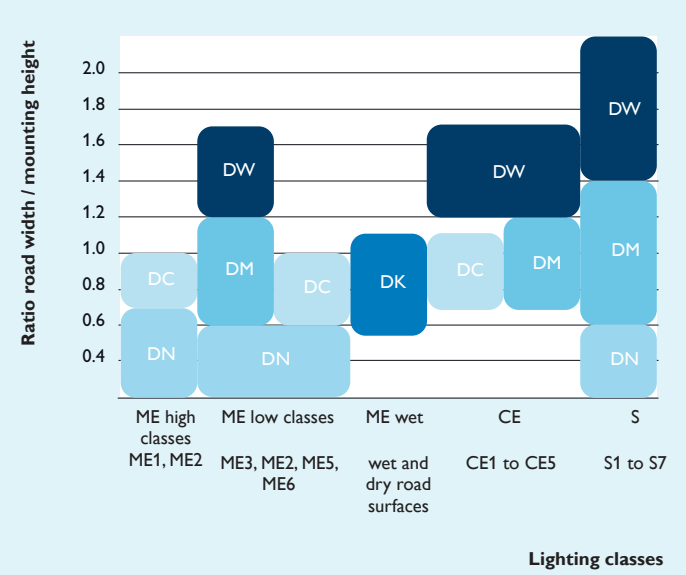
	SpeedStar Medium	SpeedStar Large
Green line	Up to 11 440 lm	up to 20,800 lm
Economy line	Up to 16 600 lm	up to 28,700 lm
Light Source Efficacy (lm/W)	139 lm/W	139 lm/W
Luminaire Efficacy Rating LER (lm/W)	111 lm/W	109 lm/W
Light distribution	DN (Narrow), DM (Medium), DW (Wide), DC (Comfort), DK (Wet Road), Asymmetrical (A), Symmetrical (S) and Pedestrian crossing (DP)	



BGP322 T35 1xGRN98-2S/740 DM

LEDGINE optics

You are guaranteed to find the best optics to suit your lighting class, road width and installation requirements among the five optics available with LEDGINE.

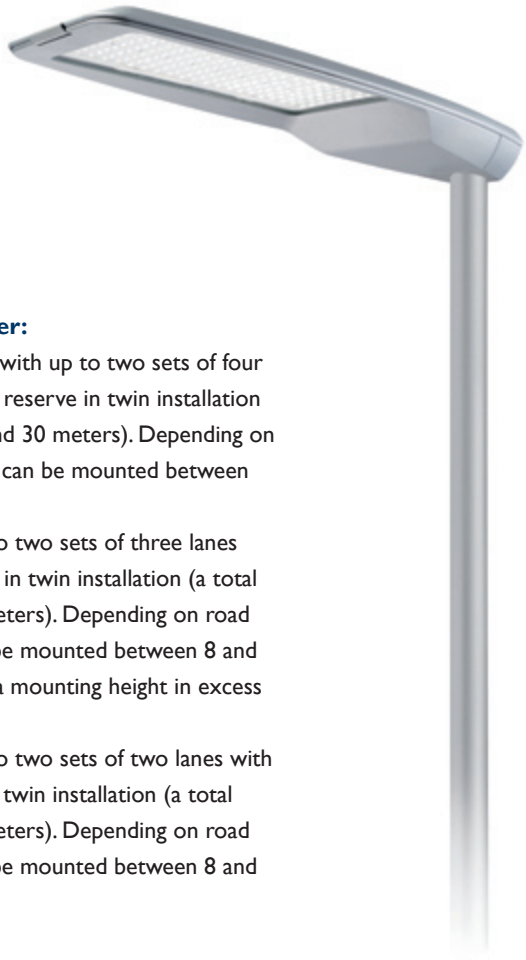


SpeedStar application for major roads (ME1/2/3)
SpeedStar LEDGINE - performance

SpeedStar in UK

SpeedStar twin installation

SpeedStar in Netherlands



SpeedStar LEDGINE cover:

- Most of ME3a lighting class with up to two sets of four lanes with a narrow central reserve in twin installation (a total road width of around 30 meters). Depending on road applications, the poles can be mounted between 8 and 18 m.
- ME2 lighting class with up to two sets of three lanes with a wide central reserve in twin installation (a total road width of around 24 meters). Depending on road applications, the poles can be mounted between 8 and 12 m. In exceptional cases, a mounting height in excess of 12 m is possible.
- ME1 lighting class with up to two sets of two lanes with a narrow central reserve in twin installation (a total road width of around 20 meters). Depending on road applications, the poles can be mounted between 8 and 12 m.

	ME1		ME2		ME3	
1 x 2 lanes						
1 x 3 lanes						
1 x 4 lanes						
Height	**12 m**	**18 m**	**12 m**	**18 m**	**12 m**	**18 m**
2 x 2 lanes Narrow central reserve						
2 x 2 lanes Large central reserve						
2 x 3 lanes Narrow central reserve						
2 x 3 lanes Larrow central reserve						
2 x 4 lanes Narrow central reserve						

SpeedStar

S/H < 2.5 or no solution

Table of major road applications covered by SpeedStar

SpeedStar - a green luminaire

The end of life of the luminaire has been taken into account in the design of SpeedStar, enabling it to be 100% recycled. No glue is used inside the luminaire, so every part can be dismantled and recycled. It is important to bear in mind that whenever necessary you can upgrade your luminaire and retain the complete luminaire housing. This greatly reduces the number of components to be recycled.

To go one step further, we have decided to neutralize the greenhouse gas impact of the manufacture of SpeedStar. To achieve this, we estimated the carbon footprint of the materials used in the manufacture and recycling of SpeedStar. This carbon footprint was then offset by the financing of verified and certified projects intended to reduce greenhouse gas emissions through our partner, the Climate Neutral Group.

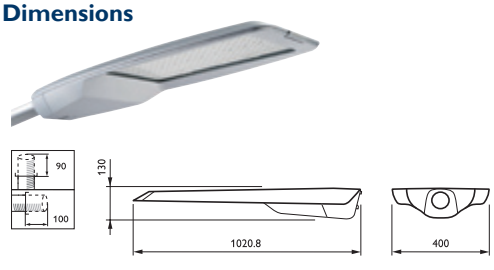
Choice sheet - SpeedStar

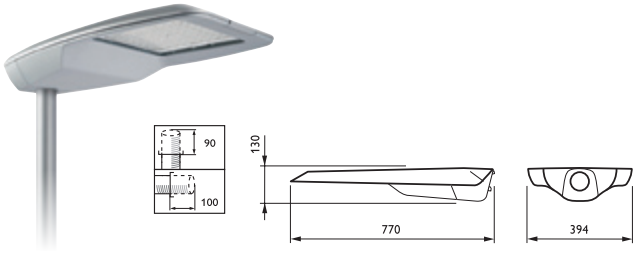
Main specification

BGP322	GRN	98	2S	740	I	DM	FG	AL	SI	P3-70

Designation	Product features	Variations
BGP322	**Type**	BGP322 (medium version) • BGP323 (large version)
GRN	**Power**	GreenLine (GRN): 13 - 153 W depending on LED configuration EconomyLine (ECO): 16 - 229 W depending on LED configuration
9800	**Luminous flux**	GreenLine: 1600 - 20,800 lm • EconomyLine: 1950 - 28,700 lm
2S	**Designation light source**	LEDGINE
740	**Correlated Color Temperature**	5700 K, cool white (651) • 4000 K, neutral white (740) • 3000 K, warm white (830)
I	**Lighting Class**	I and II
DM	**Optic**	Road-medium (DM) • road-comfort (DC) • road-wide (DW) • road-extra wide (DN) • road-wet (DK) • Asymmetrical (A) • Symmetrical (S) • Pedestrian crossing (DP)
FG	**Optical Cover**	Flat Glass (FG)
AL	**Color Painted**	Whole Luminaire Painted (AL)
SI	**Color**	Satin silver grey (close to RAL9006) (SI) • Ultra-dark grey (10714) (GR) • Other RAL (RAL) or AKZO (CLRCH) colors available on request
	Luminaire efficacy	Up to 111 lm/W
	Color Rendering Index	≥ 68, cool white • ≥ 76, neutral white • ≥ 84, warm white
	Lumen maintenance output	Green Line 100,000 hours • Economy Line 85,000 hours @ L80F10
	Driver failure rate	0,05% per 5000 hrs
	Operating temperature range	- 40 °C < Ta< 50 °C
	Driver	Built-in (self ballasted LED module) • Philips Xitanium Driver
	Mains voltage	210-240 V / 50-60 Hz
	Inrush current	108 A / 140 us
	Controls system input	1-10 V and DALI
	Options	Dimming:
		Photocell: Minicell, 35, 50, 70 lux (P3-35/50/70)
		Constant Light Output (CLO)
		Nema socket (PI)
	Optical cover	Glass, flat
	Material	Housing: high-pressure, die-cast aluminum, coated • Gasket: silicone rubber, heat resistant • Optics: plastic (PMMA) • Cover: glass, thermally hardened
	Connection	Multiblock connector (5 functions)
	Maintenance	From below by opening the housing with a single quick-release clip
	Installation	Side entry: 42-60 mm • Post top: 60/76 mm • Integrated spigot, Flexible fit with moon-shaped baffle, continuously variable • Recommended mounting height: 6-12 m • Standard tilt angle post top: 0-5° • Adjustable tilt angle: no • Adjustable light distribution: no • Max SCx: BGP322: 0.059 m² / BGP323: 0.070 m²
	Remarks	CO_2 neutral, 0 candela at 90°
	Lighting Control	Lumistep (LS) • Dynadimmer (DDF)
	Lighting Regulation	SDU (D4/D5) • StarSense (D6/D7/D8/D9) • RF • D13

Dimensions





Document order number: 3222 6356 9184
01/2012
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