PHILIPS

TubePoint GEN2

Public Lighting

Product guide

Versatility meets high performance **in long-lasting tunnel lighting**

TubePoint GEN2

Lighting the way from entrance to exit

With cities seeking to optimize traffic flow, improve infrastructure, enhance logistics and free up valuable space, tunnels are becoming essential. Tunnels, however, need excellent lighting that is safe, functional, and sustainable in the long-term. In addition, tunnel lighting needs to offer a favorable Return on Investment. Philips Lighting understands these needs and has created TubePoint GEN2, a versatile and high perfomance family of LED-based luminaires that is both flexible and long-lasting, and can be easily integrated into a complete tunnel lighting system.

“At last, **versatile yet high performance and longlasting tunnel lighting** from entrance to exit.

The versatile, modular solution

TubePoint GEN2 has been specially designed for tunnel lighting applications. This complete, modular solution comes in a universal design and with a wide range of optics. Delivering high quality light, TubePoint GEN2 ensures a comfortable driving experience. It also provides all the benefits of LED technology – energy savings, long lifetime, low maintenance and digital connectivity options – and is thus a future-proof investment for tunnels and underpasses.

Wide range of optics

TubePoint GEN2 comes with lumen packages varying from 3 kLm to 61 kLm. A complete range of optics is available to cover a broad spectrum of tunnel applications, ensuring outstanding quality of light.

High level of flexibility

The TubePoint GEN2 range offers different lumen packages for entrance, exit and interior point source lighting, and also meets the special needs of traffic underpasses. There are four sizes to choose from, giving maximum flexibility in each application.

Performance combined with efficiency

The affordability of LED, combined with TubePoint GEN2’s high lumen per watt at system level, leads to a favorable Return on Investment (ROI) and system energy savings of up to 80% compared to old, conventional lighting.

Easy to install

Thanks to its low weight, quick mounting brackets and plug and play connectivity, TubePoint GEN2 can be installed in a minimum of time. Installation time and effort is further reduced by optional through wiring. Flexible mounting options for cable tray, wall and ceiling mounting add to the overall customizable design that ensures your specific preferences are fully met.

Future-proof investment

TubePoint GEN2 is also offered as part of the TotalTunnel program, Philips’ holistic approach to tunnel lighting. This intelligent and integrated approach, which offers benefits for owners, operators and tunnel users, makes investments in tunnel lighting truly future-proof.

Wide range of optics

High level of flexibility

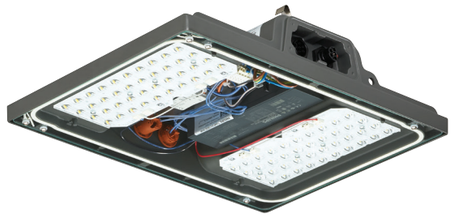
Performance combined with efficiency

Easy to install

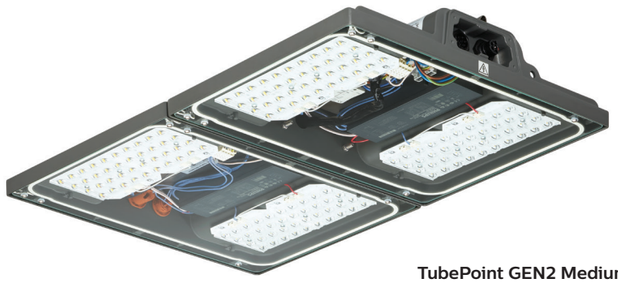
Future-proof investment

Family range

The complete family is available in two different builds: the Mini type and three Modular types: Small, Medium and Large.



TubePoint GEN2 Small
BGP235



TubePoint GEN2 Medium
BGP236

TubePoint GEN2 Large
BGP237

TubePoint GEN2 luminaires can also be ordered without integrated drivers. In this case they are powered by remote multi-driver units mounted outside the driving envelope.

Metis drivers, for example, are well suited as remote driver units for tunnel applications. Extension leads can be used to connect the LED units to the remote multi-driver unit.

Remote driver unit EGP400

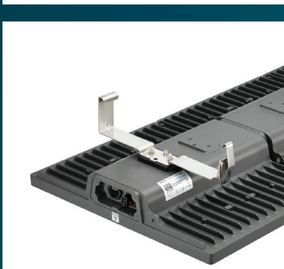
When TubePoint GEN2 is equipped with sockets, cable assemblies can be supplied to connect it to the tunnel lighting system.

TubePoint GEN2 mounting options

BA bracket
Baseplate

MB bracket
Ceiling bracket

MBQA bracket (S, M and L)
with option for angle adjustment



MBA bracket
Tilted bracket

Applications

Travel safely through the tunnel

The TubePoint GEN2 range is suitable for entrance, exit and interior point source lighting.

At the **tunnel entrance**, TubePoint GEN2 provides high lumen packages with optimized counterbeam and symmetrical distribution. High lumen packages can be used for entrance lighting to ensure a smooth transition from the bright outdoor conditions to those inside the tunnel.

Inside the tunnel, low lumen packages, in combination with a wide range of symmetrical light distributions ensure optimal lighting and a safe driving environment.

When drivers **leave the tunnel**, their eyes need to quickly adapt to the outside light conditions to avoid even the slightest hesitancy or indecision. TubePoint GEN2 provides this thanks to medium to high lumen packages, a counter beam and symmetrical lighting distribution.

And what's more, these features also make TubePoint GEN2 ideal for meeting the special needs of **traffic underpasses.**

- **Tunnels and underpasses**
  - Tunnel entrance
  - Tunnel interior
  - Tunnel exit

Lighting **performance**

TubePoint GEN2 offers outstanding flexibility in terms of lighting distributions and luminous flux making it suitable for many different applications.

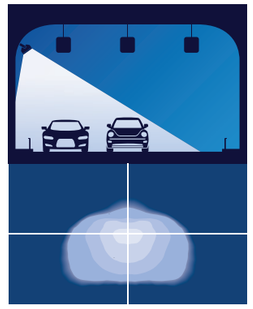
DN10
DTA-NB

Distribution Asymmetrical Narrow Entrance & Interior lighting
Typical 2 lane tunnel/cornice configuration

DM12
DTA-MB

Distribution Asymmetrical Narrow Entrance lighting
Typical 2 lane tunnel/cornice configuration

DW10
DTA-WB

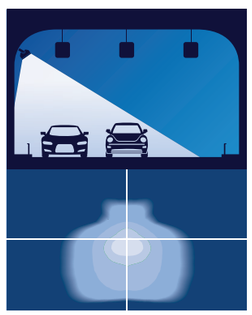


Distribution Asymmetrical Wide Entrance & Interior lighting
Typical 3 lane tunnel/cornice configuration

DM33
DTA-WBC

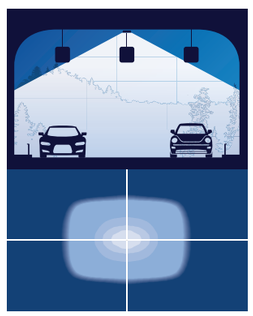
Distribution Symmetrical Wide Comfort Interior lighting
Typical 2 lane tunnel/cornice configuration

DX10
DTA-WB



Distribution Asymmetrical Extra Wide Entrance & Interior lighting
Typical 3 lane tunnel/cornice configuration

DSM35
DTS-WBC



Distribution Symmetrical Wide Comfort Interior lighting
Typical 2 lane tunnel/central configuration

DSM11
DTS

Distribution Symmetrical Medium Entrance & Interior lighting Typical 2 lane tunnel/central configuration

DSN11
DTS-NB

Distribution Symmetrical Narrow Entrance & Interior lighting
Typical 2 lane tunnel/central configuration

DSM12
DTS-MB

Distribution Symmetrical Medium Entrance lighting
Typical 2 lane tunnel/central configuration

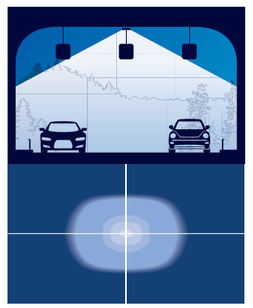
DSM30
DTS-C

Distribution Symmetrical Comfort Interior lighting
Typical 2 lane tunnel/central configuration

DSM31
DTS-WBC

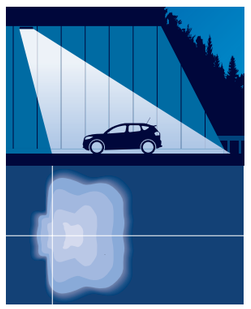
Distribution Symmetrical Wide Comfort Interior lighting
Typical 2 lane tunnel/central configuration

DSW10
DTS-WB



Distribution Symmetrical Wide Entrance & Interior lighting
Typical 3 lane tunnel/central configuration

DTCB

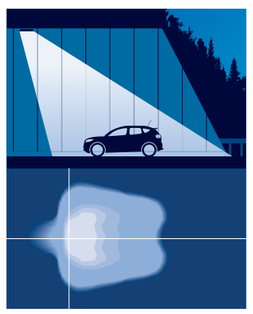


Distribution Couterbeam Wide without Louver Entrance lighting
Typical 3 lane tunnel/central configuration

DTX1
Counterbeam without louvre

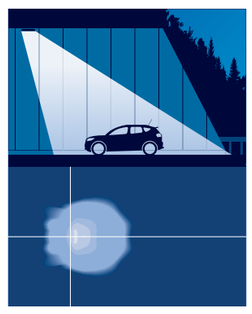
Distribution Couterbeam Medium without Louver Entrance lighting
Typical 2 lane tunnel/central configuration

DTX1 BTLB
Counterbeam with louvre



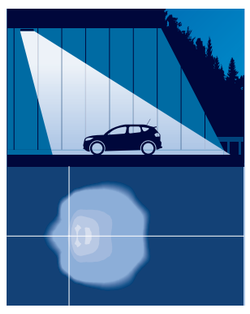
Distribution Couterbeam Medium with Louver
Entrance lighting
Typical 2 lane tunnel/central configuration

DTX2
Counterbeam without louvre



Distribution Couterbeam Wide without Louver
Entrance lighting
Typical 2/3 lane tunnel/central configuration

DTX2 BLTB
Counterbeam with louvre



Distribution Couterbeam Wide with Louver
Entrance lighting
Typical 2/3 lane tunnel/central configuration

*Please note that this is a non-exhaustive list of all available optics. For more information, please contact your local sales representative

Installation and **maintenance**

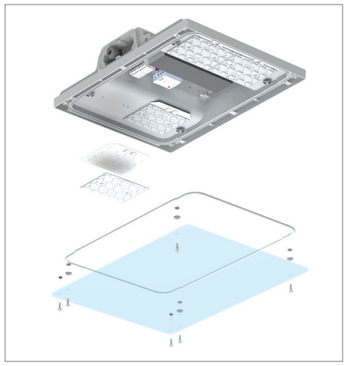
TubePoint GEN2 is quick and efficient to install thanks to its low weight, the use of quick mounting brackets, and plug and play connectivity (through wiring).

Mounting options include: cable tray mounting (with quick release brackets in different dimensions); adjustable wall mounting; and ceiling mounting. All mounting brackets are stainless steel.

Easy maintenance

Even though TubePoint GEN2 is built to last a lifetime, it is designed to make maintenance easy. In only a couple of minutes, service engineers can access the most critical components on site using only a screwdriver.

For other maintenance activities, TubePoint GEN2 can be completely disassembled, because no glue is used; everything is fixed with screws. The driver and LED unit are fully repairable off-site, and spare parts are readily available.



The modular solution

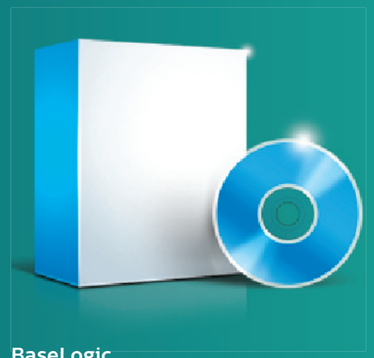
By releasing the cover, the LEDs are accessible for maintenance

TubePoint GEN2 **in control**

By adding controls to your tunnel lighting, you optimize the total installation and ensure that you get the greatest value from your TubePoint GEN2 investment.

One of the advantages offered by lighting controls is that they continuously adapt the lighting to the changing brightness outside the tunnel, so that the driver experiences a smooth transition when entering, passing through and exiting the tunnel. In addition, lighting controls provide valuable status and health information about the tunnel lighting installation.

TunneLogic
TubePoint GEN2 Performer can be connected to **TunneLogic**, Philips' advanced tunnel control and monitoring system designed specifically for LED technology. The control system, which is easy to install, commission, operate and maintain, provides the customer with safe lighting control and information on the health of the installed lighting system.



BaseLogic
Alternatively, TubePoint GEN2 can be connected to **BaseLogic**, a retrofit entry level adaptive control lighting system. BaseLogic communicates via the powerline and incorporates enterprise server software and a photometer, tunnel control unit, data transmitter and monitoring module.

TotalTunnel, the end-to-end solution

TubePoint GEN2 is also offered as part of the TotalTunnel program, Philips' holistic approach for tunnel lighting that combines a networked lighting system with a full set of services.

This intelligent and integrated tunnel lighting solution brings benefits for tunnel owners and operators, tunnel users, installation and maintenance companies by creating a safe, energy efficient, and compliant tunnel design.

TotalTunnel consists of five key building blocks: luminaires, guidance lighting, dynamic control systems, architectural lighting and services.

Luminaires

Our LED luminaires are designed to deliver functional tunnel lighting that ensures a safe journey and excellent efficiency, supporting all main tunnel lighting techniques.

Guidance lighting

Our state-of-the-art guidance lighting solution keeps traffic moving, bringing increased driver comfort and maximum safety.

Dynamic control systems

From basic controls to elaborate monitoring systems, our lighting control systems give you full control over the total lighting system.

Architectural lighting

To help reduce the feeling of monotony, improve spacial awareness and add to the driving experience.

Services

From concept design and commissioning to lifecycle services including maintenance and performance optimization, Philips can deliver you a turnkey project. It's the surest way to protect your investment.

Components

TubePoint GEN2 build

1 **Housing:** Integrated compartment (powder coated Aluminum LM6), both for gear and LEDs

2 **Glass cover:** thermally toughened and assembled with 4 screws

3 **Mounting brackets:** Stainless steel (304) Base bracket (BA), suitable for additional ceiling (MB), wall (MBA) or quick release (MBQ) brackets

4 **Connectivity:** plug connections at gear compartment or flying leads (LSOH)

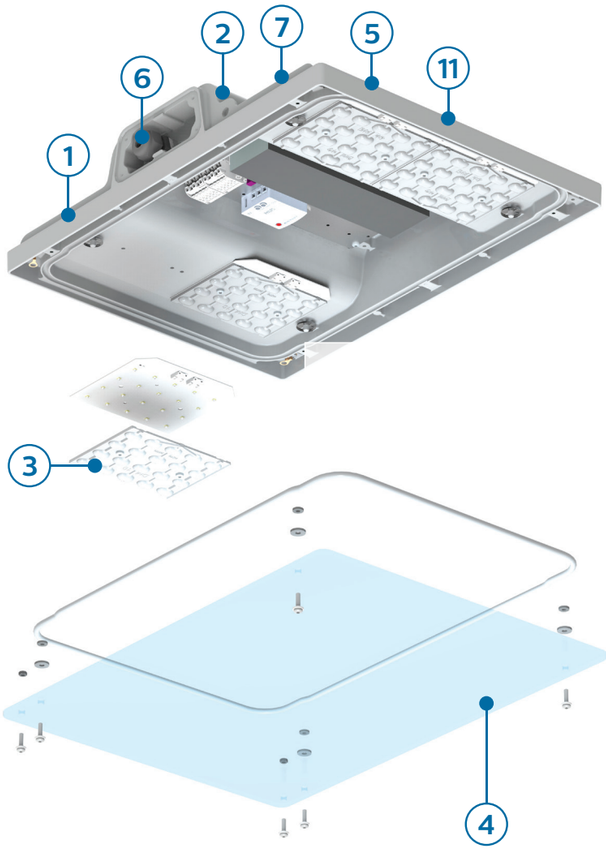
5 **Driver unit:** can be opened for servicing, using simple tools

6 **Gear:** equipped with one LED drive. The drivers are programmable and fully compliant with our TunneLogic control and monitoring system

7 **Remote gear:** optional, remote gear in combination with the EGP400 multi driver unit

8 **Wiring:** options for through wiring to ensure efficient cabling

9 **Galvanic separation:** brackets offer full galvanic separation from the Aluminum parts



Standard connections

Code	Description	Nr IO's	CFW (Flying lead) *	Gland **	Socket ***
					
MI	MAINS-IN	1	●	●	●
MIO	MAINS-IN & OUT	2	○	●	●
MCI	MAINS+DALI-IN	1	●	●	●
MCIO	MAINS+DALI-IN & OUT	2	○	●	●
MIO-CIO	MAINS-IN & OUT, DALI IN & OUT	4	○	●	●

● Included ○ Not included

Specifications

Name	Luminaire specifications
Product Family Code (PFC)	Small BGP235, Medium BGP236, Large BGP237
Range: LED lumens (±7%) / Total system watt (±11%) Max T amb 45C	Small BGP235 => Max. 24klm (155W)
	Medium BGP236 => Max. 48klm (310W)
	Large BGP237 => Max. 64klm (385W)
	Option Large BGP237 T amb 50C => Max 54kLm (320W)
	Option Large BGP237 T amb 40C => Max 74kLm (460W)
Luminaire/system efficacy	> 130Lm/W
CCT	4000 K (NW) or 5700 K (CW)
CRI	CRI > 70
Initial Tolerances on CCT	5 step MacAdam
Inrush current	See datasheet drivers (Xi-FP-40W, Xi-FP-75W, Xi-FP-150W)
Life time expectancy	Min L80B10 = 100.000 hours (See LPT for value per type)
	Driver: 100.000 hrs at failure rate of 10%
Light distributions / optics	Large range of tunnel lighting distributions: Counterbeam, symmetrical and asymmetrical
	Optic lenses behind glass cover. Optic material: plastic (PC)
Operating temperature range	-30 to +45ºC
Electrical insulation class	Class I or Class II
IK	IK08
Degree of protection	IP66
System surge protection	Standard 6kV with option for 10kV
Material / Finishing	Housing : Die-cast aluminum (LM6) with powder coat finish.
	Color: Grey (RAL 7035) or Philips Ultra Grey (RAL10714)
	Optic cover: Temperred flat glass 5mm thick
	Brackets of stainless steell (AlSI304).
	Bracket are separated from the alumunum housing by isolation pads
Size Luminaire (mm) excluding brackets (L x W x H)	Small BGP235: 363x485x89
	Medium BGP236: 727x485x89
	Large BGP237: 1090x485x89
Weight excl. brackets (kg)	Small BGP235: 7 Kg
	Medium BGP236: 14 Kg
	Large BGP237: 21 Kg
Electrical connection	Flying lead options: cable IN with or without plug (Wieland, Gewiss IEC309)
	Socket options: Power-IN/OUT&DALI IN/OUT or Power+Control-IN/OUT
	Gland options: Power-IN/OUT&DALI IN/OUT or Power+Control-IN/OUT
Control	DALI control (D9) or Coded mains control (D28)
Cable type:	LS0H, Fire resistant or Fire retardent
Options	Constant Light Output (CLO)
	Marine salt protected coating (MSP) in stead of single layer protection
	Metal cable gland instead of polyamide Gland (PA)
Luminaire mounting	Basic mounting points (M6) for other brackets (BA)
	Ceiling mounting bracket (MB)
	"Quick relase bracket (for cable tray 100, 200 or 300mm wide and 75mm high): MBQ-S, MBQ-M and MBQ-L»
	«Quick relase bracket adjustable (for cable tray 100, 200 or 300mm wide and 75mm high): MBQA-S, MBQA-M and MBQA-L»
	Adjustable Wall mounting bracket 0 to 90° (MBA)
Certification / Listing	CE, ENEC
	Corrosion resistance: Salt Spray test 500h (standard coating) or 1000h (Marine Salt Protection)
Packaging	Carton box or multipack

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November 2018