PANOS infinity / evolution
tunableWhite – perfect white light quality.
Nothing is as vivid as white, natural light.
tunableWhite follows its dynamic and makes use of its emotional quality. Changing luminances and light colours create divergent moods, so that a variety of room requirements can be fulfilled and people can be supported empathetically with all activities. Thus, tunableWhite brings light to life and fits into Zumtobel’s overall Active Light concept.
Nothing is as vivid as white, natural light.

tunableWhite follows its dynamics and makes use of its emotional quality. Varying luminances and light colours create divergent moods, so that a variety of room requirements can be fulfilled and people can be supported emotionally with all activities. Thus, tunableWhite brings light to life and fits into Zumtobel’s overall Active Light concept.

Outstanding quality of light
Ininitely variable colour temperature from 2,700 K to 6,500 K close to Planck’s curve, with consistently excellent colour rendering (CRI > 90).

Homogeneous appearance
Constant luminous flux in all colour temperatures as well as perfect colour consistency between systems and luminaires (MacAdam, SDCM 3 to 4) thanks to the calibration of the driver and LED module.

Convenient dimming
Ininitely variable from 1 to 100 %, without colour temperature fluctuations. Flicker and noise are suppressed by amplitude modulation.

Easy to use
Time-saving commissioning thanks to calibrated sets, control of both DALI channels with just one address (DT8) or via basicDIM Wireless.
PANOS infinity
Model: E100 HG with frame | 1:1 scale

PANOS infinity Adjustable
Model: R68 with frame | 1:1 scale
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<td>Range of products for all functional lighting applications</td>
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<td>PANOS Navigator</td>
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<td>References</td>
<td>Examples of application versatility</td>
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Leica Camera AG, Leitz-Park, Wetzlar | DE
Architecture: Gruber Kleine-Kraneburg Architects, Frankfurt am Main | DE
Lighting solution: PANOS infinity, CLARIS II, LINARIA, ONLITE ARTSIGN
“I don’t think light is just about a quantity of lumen. Sometimes light is about the complete sky falling into a room or space”.

Built almost 2000 years ago, the Pantheon remains a mystery up to this day. Light and architecture form a unity. The only source of light is the circular opening at the apex of the cupola. The sun defines time and space through light and colour. It is this balance which Chris Redfern wanted to express in the design of PANOS infinity and PANOS evolution: light approaching natural daylight. Light with pleasant colour temperatures and the option to adjust them to an individual’s preference. A luminaire that disappears in architecture. It is as small and simple as possible, yet at the same time very powerful and efficient. In other words: a luminaire for the future that will still be popular and still work perfectly in the future.
PANTHEON, Rome around 120 AD
PANOS infinity / evolution
Architectural lighting worldwide in a universal style
Museo del Novecento, Milan | IT

Architecture: Italo Rota, Fabio Fornasari, Milan | IT

Lighting solution: PANOS infinity LED downlights, LED spots / special solution, HEDERA LED luminaires, CIELOS modular lighting system, LINARIA light lines, SCUBA moisture-proof luminaires, PELLUCE louvre luminaires, LUXMATE LITENET lighting control system, ARTSIGN and COMSIGN escape sign luminaires
Lighting of horizontal surfaces

PANOS infinity and PANOS evolution: R100, Q100, R150, Q140, R200, Q190

Emphasis on horizontal features

PANOS infinity Accent Beam: R100, Q100 | PANOS infinity and PANOS evolution: R68, Q68 | PANOS infinity High Lumen R200
Lighting of horizontal surfaces
PANOS infinity and PANOS evolution: R100, Q100, Q140, R150, Q150, R200, Q190

Illuminating vertical surfaces
PANOS infinity
Wallwasher: R68, Q68, R100, Q100, R150, R200

Emphasis on horizontal features
PANOS infinity
Accent Beam: R100, Q100 | PANOS infinity and PANOS evolution: R68, Q68 | PANOS infinity High Lumen R200

Emphasis on flexible features
PANOS infinity Adjustable: R68 V, Q68 V, R100 V, Q100 V

With its wide range of models, the PANOS infinity product group meets the challenges of various applications with brilliance – from homogeneous illumination of vertical or horizontal surfaces to emphasising highlights. Thanks to the formal reserve with which both downlights and wallwashers blend into their architectural surroundings, PANOS infinity is the perfect lighting tool for designers and planners.

The range of potential applications is endless: reception areas or corridors, offices, conference rooms, shops or museums – the luminaire's create the right lighting effect in any environment, satisfying every standard and guaranteeing the highest level of system efficiency.
PANOS infinity / evolution
A modular system for all architectural lighting applications

Spot on highlighting
The combination of light distribution options with many variations and top-quality lens technology make PANOS infinity Accent Beam a master of pinpoint staging. One special feature is the model with a black reflector, ensuring the observer does not see light but a uniform, soothing ceiling. This ensures top marks for visual comfort.

PANOS infinity Adjustable
Flexible highlighting
Adjustable downlights are an innovative lighting tool for spot-on highlights whilst ensuring a soothing ceiling texture at the same time. Indoors infinity offers this option in two different systems: in the small models of size 68, the position of the light head can be easily adjusted by hand. The larger size 100, on the other hand, is a closed luminaire system that eliminates stray light within the ceiling. Without changing the outer appearance, the cone of light can be rotated and swivelled quickly and without tools, thanks to a specially developed lens system.

PANOS infinity Q100 V Adjustable
Model: with frame
PANOS infinity R100 V Adjustable
Model: with frame
PANOS infinity R68 V Adjustable
Model: with frame
PANOS infinity Q68 V Adjustable
Model: with frame

Adjusting wheel
The light cone can also be swivelled by up to 30° by simply turning the adjusting wheel. The intuitive adjustment is made easily on-site – in the installed condition with light switched on.

Twin Lens Control
The light cone can be adjusted for very precise accent lighting easily and quickly using the tapered lenses contained in the lens barrel. Turning the lens barrel rotates the tapered lens by 360°.

LED with lens
LED and lens define the beam angle: spot 15°, flood 25°.

PANOS infinity Adjustable | Lens concept
Adjusting wheel
The light cone can also be swivelled by up to 30° by simply turning the adjusting wheel. The intuitive adjustment is made easily on-site – in the installed condition with light switched on.

Twin Lens Control
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LED with lens
LED and lens define the beam angle: spot 15°, flood 25°.
Lighting of horizontal surfaces

The downlights with a diameter of 68 mm or 100 mm provide high-quality general and accent lighting. A large selection of modules with various beam angles, luminous flux, reflectors and colour temperatures provides maximum design freedom.
High luminous intensities

PANOS infinity High Lumen has been optimised for use in high rooms such as atriums or airport buildings. It achieves a luminous flux of up to 7400 lumens, the spot and flood light distributions options are defined by the reflector’s geometry. With a diameter of 200 mm, this powerful recessed luminaire fits perfectly into the product group. This means that architecturally attractive lighting can follow a formally consistent design language.

PANOS infinity R200
Model: High Lumen with frame

Diameter
Ø 200 mm

Colour temperatures
2700 K | 3000 K | 4000 K

Lumen packages
4700 – 7400 lm

Beam angle
Spot 13° | Flood 30°

Colour rendering
PANOS infinity Ra > 90

Reflector surface finishes
Smooth | Facetted

Mounting frame
with frame, white cover ring

Attachments and accessories
IP covers
PANOS infinity
surface-mounted and pendant luminaire
Excellent lighting technology in exquisite materials

The slim alternative

As a surface-mounted and pendant luminaire, PANOS infinity combines simple elegance with high-quality lighting. Featuring six colour options, the slim cylindrical aluminium luminaire housing blends perfectly with its surroundings to fulfil both architectural and functional lighting tasks. Excellent colour rendering, a wide range of reflectors and various lighting distributions offer the chance to create a cosy ambience in various different ways.

Dimensions
ø 70 mm | L 230 mm | suspended to 2500 mm
ø 100 mm | L 275 mm | suspended to 2500 mm

Beam angles
ø 70 mm: Spot | Flood | Very wide flood
ø 100 mm: Very wide flood

Colour temperatures
2700 Kelvin | 3000 Kelvin | 4000 Kelvin

Lumen packages
500 to 2000 lumens

Colour rendering
Ra > 90

Reflector surfaces
High gloss | Silver matt | White | Gold | Black

Housing colours
White | Silver matt | Grey | Black | Brass | Copper

Pendant adapter
White | Black

Textile cable (optional)
White | Black | Red
PANOS infinity surface-mounted and pendant luminaire

Excellent lighting technology in exquisite materials
Lighting of vertical surfaces

PANOS infinity wallwashers illuminate vertical surfaces with high homogeneity. Uniformity and high vertical luminous intensities are achieved using an optical system with specially designed asymmetric reflectors and modern lens technology. The wallwasher combines excellent lighting quality with colour rendering values over 90 and outstanding luminaire efficiency. A wide range of shapes and sizes enhance the PANOS infinity portfolio and offer the possibility to develop new applications using a consistent design language.

PANOS infinity Wallwasher
Impressive lighting quality with unique energy efficiency
Application

There is more than just one good reason to use PANOS infinity Wallwashers. They are the perfect solution for a variety of lighting tasks such as:

- **Room atmosphere**: vertical illuminance levels make a room appear larger, creating a brighter and more pleasant atmosphere.
- **Visual comfort**: Vertical illuminance makes the registering of room situations easier as the human eye has fewer adaptations to overcome.
- **Sense of security**: vertical illuminance levels facilitate orientation.
- **Balance**: mounted at some distance from the windows or on the opposite side, vertical illuminance levels provide a well-balanced atmosphere to compensate for the high luminance levels of daylight.
- **Saving energy**: general lighting can be focussed to, and create zones in, those areas where visual tasks have to be performed.
- **Directing attention**: vertical illuminance levels put the focus on vertical visual tasks such as those provided by shelves, retail or exhibition areas.

The recommended levels of vertical illuminance depend on the application area in question: levels of approx. 175 lx are suitable for offices, while in museums the level may vary between 50 and 200 lx, and 200 lx are ideal for shops.

Design tips

When designing a lighting solution, the following principles have to be kept in mind:

- In order to illuminate walls uniformly, the distance to the wall should be about one third of the room height or slightly less.
- A shorter distance to the wall also reduces the risk of glare and improves lighting efficiency, but also decreases uniformity.
- To achieve uniform light distribution across the entire surface of the wall, the ratio of minimum and maximum level of illuminance should be at least 1 : 2.5.
- If the spacing between luminaires more or less corresponds to the distance from the wall, horizontal uniformity is achieved.
- In case of high rooms, a reduction of spacing between luminaires is recommended.
- To achieve uniform illumination of a wall by overlapping several light distribution areas, at least three wallwashers are required.
PANOS infinity / evolution
A modular system for all architectural lighting applications

Downlights

PANOS infinity / evolution R68
Highly specular aluminium reflector, with frame

PANOS infinity / evolution Q68
Highly specular aluminium reflector, frameless

PANOS infinity / evolution R100
Highly specular aluminium reflector, frameless

PANOS infinity / evolution Q100
Highly specular aluminium reflector, with frame

PANOS infinity R100
Accent beam, white reflector, with frame

PANOS infinity Q100
Accent beam, black reflector, with frame

PANOS infinity R200
Highly specular aluminium reflector, with frame

PANOS infinity
Surface-mounted and pendant luminaire R70 und R100

Wallwashers

PANOS infinity Wallwasher R68
Highly specular aluminium reflector, with frame

PANOS infinity Wallwasher Q68
Highly specular aluminium reflector, with frame

PANOS infinity Wallwasher R100
Highly specular aluminium reflector, with frame

PANOS infinity Wallwasher Q100
Highly specular aluminium reflector, with frame

Directional downlights

PANOS infinity Adjustable R68
Highly specular aluminium reflector, with frame

PANOS infinity Adjustable Q68
Highly specular aluminium reflector, with frame

PANOS infinity Adjustable R100
Highly specular aluminium reflector, with frame

PANOS infinity Adjustable Q100
Highly specular aluminium reflector, with frame
### Distribution characteristics

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### Reflector surface finishes

- Facetted
- Highly specular
- Silver matt
- Gold
- White
- Black

*Only available for Q68 Spot, R68/70 Spot models.

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**PANOS infinity:** 2700 K, 3000 K, 4000 K / Ra > 90
**PANOS infinity tunableWhite:** 2700–6500 K / Ra > 90
**PANOS evolution:** 2700 K, 3000 K, 4000 K / Ra > 80
**PANOS infinity warmDimming:** 1800–2700 K for R/Q 100 Downlight

* only PANOS infinity
PANOS infinity / evolution

Quality and efficiency in functional harmony
Symantec Offices, Dubai | AE
Architecture: Se-Arch, Zurich | CH
Lighting solution: PANOS infinity LED downlights, MICROS LED downlights, ECOOS pendant luminaires
With a luminaire luminous flux of 800, 1000, 1800, 2400 or 5000 lumens, both the PANOS infinity product range and the PANOS evolution product range cover all typical downlight applications. Thus the two ranges are recommended as economically efficient alternatives in all application areas where single- or twin-lamp downlights fitted with 18 W, 26 W or 32 W compact fluorescent lamps used to be installed.

**PANOS infinity / evolution**

Second-to-none in efficiency

---

**Highest luminaire efficiency**

With luminaire efficiency of up to 135 lumen per watt, PANOS infinity and PANOS evolution set new standards on the market once again. This is successful due to the use of innovative LED technologies and other high quality components that join together in the visual lighting system.

**Powerful lumen packages**

With a luminaire luminous flux of 800, 1000, 1800, 2400 or 5000 lumens, both the PANOS infinity product range and the PANOS evolution product range cover all typical downlight applications. Thus the two ranges are recommended as economically efficient alternatives in all application areas where single- or twin-lamp downlights fitted with 18 W, 26 W or 32 W compact fluorescent lamps used to be installed.
The standard version of PANOS infinity is dimmable via DALI, which opens up great potential for further energy savings. Intelligently controlled lighting solutions reduce power consumption by 70 per cent. PANOS evolution offers a switchable 230 V converter as standard, but is also available with DALI control gear.

**Dimming or switching**

The standard version of PANOS infinity is dimmable via DALI, which opens up great potential for further energy savings. Intelligently controlled lighting solutions reduce power consumption by 70 per cent. PANOS evolution offers a switchable 230 V converter as standard, but is also available with DALI control gear.

Smart lighting control via Bluetooth

A large part of the luminaire range is offered with optional basicDIM radio technology for wireless control. Communication with the luminaires is achieved using an app for mobile devices. This means that even existing lighting solutions can be modernised quickly, as lighting control does not require any additional wiring.
Guarantor of lighting quality and efficiency

Highly efficient passive cooling system made of aluminium
The extruded sections allow a compact design and permanent LED cooling.

"BEST-IN-CLASS" LED
Multi-channel technologies such as that incorporating red/white boards for PANOS infinity stableWhite and warmDimming or Pi-LED for PANOS infinity tunableWhite are far superior to other LED models.

Highly efficient lighting chamber
Highly reflective surfaces in the mixing chamber are perfectly supplemented by a diffuser film featuring an extraordinary degree of emission. This unique concept provides for mixing chamber efficiency levels close to 100 per cent.

High-quality reflector technology
By providing precision formed reflectors made of high-quality polycarbonate, Zumtobel ensures optimum light distribution. Depending on the model, these are refined using various technologies – such as the sputtering of the reflectors in specular silver finish. This razor-thin aluminium surface applied using a vacuum process provides for extremely high efficiency levels.

Even the standard versions of PANOS infinity and PANOS evolution provide a high protection rating of IP44. If an additional cover is used, even a rating of IP54 is possible.

1 PANOS evolution
Single-channel phosphor technology
3000 K and 4000 K, Ra > 80

2 PANOS infinity
Red/white multi-channel technology for an optimised interplay of luminaire efficiency, colour temperature and colour rendering across the entire service life
3000 K and 4000 K, Ra > 90 with MacAdam2 (initial)
First-rate thermal management ensuring a long service life
The entire PANOS range features a highly efficient passive cooling system. Special cooling ribs use an extraordinarily large cooling surface, despite the compact luminaire diameter. As the LED board and heat sink are closely connected to each other, the perfect cooling system ensures an extremely long service life of the module. PANOS infinity boast a service life of 50,000 hours at L95.

Future-proof module system
The modular cartridge system ensures the future of the PANOS infinity and PANOS evolution downlights. Because a few easy steps are sufficient to replace the LED module with a new one. The LED mixing chamber and the cooling system were combined to form a unit, in order to guarantee a thermally ideal connection of the LEDs to the cooling attachment even after replacement. The control gear boasting a large wiring compartment and optional through wiring is connected to the module via a plug-in system.

Easy to install
Being optimised in some details, PANOS infinity and PANOS evolution still include the tried-and-tested installation functions of the PANOS range: The reflectors are simply attached to the LED module via a twist-and-lock fastener, while a mounting ring provides for safe fastening of the luminaire on the ceiling. In line with this fastening concept, planar rings are inserted and levelled into the ceiling for quick and easy installation of the frameless luminaires.
PANOS infinity / evolution

Outstanding lighting quality

PANOS infinity

With Ra levels exceeding 90 and MacAdam 2, PANOS infinity ranks first among LED downlights in terms of quality. The outstanding colour rendering index is based on a special multi-channel technology, where the intelligent interplay of highly efficient white and red LEDs ensures that virtually the entire light spectrum is rendered. The low reduction in luminous flux of only 5 % (L95) over the service life of 50,000 hours underscores the high quality of PANOS infinity.

PANOS evolution

PANOS evolution includes numerous product features of PANOS infinity, combining them with efficient and at the same time high-power, single-channel phosphor LED modules as well as a colour rendering index of Ra > 80. Tried and tested technologies and an efficient thermal management ensure excellent lighting quality with a rated service life of 50,000 hours L85, optionally with colour temperatures of 4000 K, 3000 K and 2700 K.
PANOS infinity tunableWhite 2-channel technology

The new generation of tunableWhite luminaires perfectly exploits the creative possibilities of natural white light. With excellent colour rendering of Ra > 90, the entire spectrum of colour temperatures from 2700 to 6500 Kelvin is available – without any colour shift when dimming from 100 to 1 per cent. The luminous flux remains just as constant when the colour temperature changes. This high precision is made possible by a calibrated system with cool-white and warm-white LEDs, which are controlled using DALI DT8 or Bluetooth® basicDIM Wireless.

tunableWhite by Zumtobel: zumtobel.com/tunablewhite

PANOS infinity warmDimming

warmDimming technology allows for LED downlights to produce pleasantly warm light at low illuminance levels – similar to that of a conventional incandescent lamp. PANOS infinity warmDimming provides a colour temperature of 2700 K at full illuminance and reduces it to 1800 K at the lowest dimming level. The colour sequence along the Planckian curve with levels of Ra 90 across the entire colour spectrum ensures maximum lighting quality.

Glare-free, highly efficient light for workstations

All PANOS infinity and PANOS evolution downlights meet the requirements specified in EN 12464 for lighting in offices and communication rooms. The glare control factor of UGR < 19 is achieved by the ‘High’ version through the high-quality HF or HG reflector. With the ‘Low’ version, good glare control is ensured by an inner anti-glare ring. Since this ring, which is available as an accessory, is attached inside the reflector, it can also be used for the frameless version.
Wherever structural conditions require for downlights to be surface-mounted or for luminaire units to be visible, PANOS infinity and PANOS evolution surface-mounted housings are the perfect solution: Featuring a traditional circular or square design, the luminaires are only 206 mm in height. In a stylish and unobtrusive manner, the white housings made of die-cast aluminium blend into any interior. The housings are available as accessories for the PANOS infinity and PANOS evolution standard versions.

Surface-mounted instead of recessed

Wherever structural conditions require for downlights to be surface-mounted or for luminaire units to be visible, PANOS infinity and PANOS evolution surface-mounted housings are the perfect solution: Featuring a traditional circular or square design, the luminaires are only 206 mm in height. In a stylish and unobtrusive manner, the white housings made of die-cast aluminium blend into any interior. The housings are available as accessories for the PANOS infinity and PANOS evolution standard versions.

PANOS infinity surface-mounted | model: E200 HL

PANOS infinity surface-mounted | model: E200 HL
Decorative attachments such as decorative rings or frames enhance the visual presence of PANOS infinity and PANOS evolution. In addition, the downlights are provided with even more unique features in terms of lighting technology. Cubes and cylinders made of acrylic glass as well as circular and square decorative panels can be used even for frameless models. All accessories are fully matched to the overall design of the range and are available for both recessed and surface-mounted models.
PANOS infinity / evolution
Range of products for all functional lighting applications

**Downlights**

- PANOS infinity / evolution R150
  Facetted aluminium reflector, frameless

- PANOS infinity / evolution Q150
  Facetted aluminium reflector, frameless

- PANOS infinity / evolution R200
  Facetted aluminium reflector, frameless

- PANOS infinity / evolution Q200
  Facetted aluminium reflector

**Wallwashers**

- PANOS infinity Wallwasher R150
  Highly specular aluminium reflector, with frame

- PANOS infinity Wallwasher R200
  Highly specular aluminium reflector, with frame
### Distribution characteristics

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<th>150 mm</th>
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### Accessories

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<td>Ceiling reinforcement surround</td>
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</table>

* only PANOS infinity

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**Reflector surface finishes**

- Facetted
- Smooth
- Matt silver
- Painted white
PANOS Navigator
The lighting solution for almost every application
Step by step to the matching luminaire

With around 2000 products for architectural and functional lighting, the PANOS infinity and evolution downlight families leave nothing to be desired. The PANOS Navigator guides planners step by step through the selection of the luminaire, from the area of application to its radiance and light distribution, right through to its design and special features. The PANOS Navigator progressively filters out products with the selection of each parameter. All the luminaires that can be used, including accessories, are listed at the end of the process, while individual settings can also be changed if necessary. The article number leads directly to the online catalogue, which features all the data from the product database. The final configuration can even be sent as an email with just one click.

panosnavigator.zumtobel.com
PANOS infinity / evolution

Examples of application versatility
Zumtobel, a company of the Zumtobel Group, is an internationally leading supplier of integral lighting solutions for professional indoor and outdoor building lighting applications.

Offices and Communication
Education and Science
Presentation and Retail
Hotel and Wellness
Art and Culture
Health and Care
Industry and Engineering
Outdoor and Architecture
Living

We provide unique customer benefits by integrating technology, design, emotion and energy efficiency. We combine the best possible ergonomic lighting quality for an individual’s well-being with the responsible use of energy resources. The company’s own sales organisations in twenty countries, as well as commercial agencies in fifty other countries, form an international network of experts and design partners providing professional lighting consulting, design assistance and comprehensive services.

Lighting and sustainability
In line with our corporate philosophy “We want to use light to create worlds of experience, make work easier and improve communications and safety while remaining fully aware of our responsibility to the environment”, Zumtobel offers energy-efficient high-quality products, while at the same time making sure that our production processes based on the considerate use of resources are environmentally compatible.

zumtobel.com/sustainability

Top quality – with a five-year guarantee.
As a globally leading luminaire manufacturer, Zumtobel provides a five year manufacturer’s guarantee on all Zumtobel branded products in accordance with the terms of guarantee at zumtobel.com/guarantee.