

VISION

TUNNEL LIGHTING

BUCK
www.buck.lighting



Modularity
Thermally optimized
Flexibility
Wide range of optics
Fast installation
Easy maintenance
Longevity

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TUNNEL LIGHTING

Illumination of tunnels is one of the most demanding branches in lighting industry. Tunnels are divided in different zones with their own requirements in terms of lighting design and features.

Various technical challenges are simultaneously present in this task to light up tunnels, such as harsh environment, required enhanced reliability, quality lighting, ease of mounting and commissioning.

VISION is a tunnel lighting luminaire, part of a BUCK smart tunnel illumination system. Numerous options in optics, power and controllability, widen its field of usability to various tunnel types.

It is a high-quality, cost-effective luminaire made of top-grade components dedicated for use in harsh environments. Its longevity, energy efficacy and overall stable performance ensures optimal utilization costs.



ENERGY EFFICIENCY

Energy efficient LED modules combined with appropriate optics to provide the maximum lighting level and uniformity fulfilling strong standard requirements for tunnel lighting.

LED LUMINAIRE DESIGN FOR THE FUTURE

Modular design approach, thermally optimized cases with option to combine different types of high quality optics for different lighting scenes, are guarantee of success for demanding tunnel lighting tasks.

Quality of material and protection covers are selected for exposure to harsh environment present in tunnels. Vision is designed with a special attention to the influence of traffic pollution and corrosion as well as wet conditions to enable proper electronics longevity.



VERIFIED TECHNOLOGY

All components are high-tech quality tested in our laboratory and approved by the technical staff.

LIGHTING MANAGEMENT

Smart LED lighting solutions for tunnels and subways include fully integrated control systems to monitor and manage various factors such as levels of light outside and inside the tunnel, time of day, speed and density of traffic, various tunnel zones, motion, presence and speed detection. The lighting management minimizes the adaptation problem caused by the difference in high daytime brightness outside and low luminance inside the tunnel.



OPTICS

The distribution of light is defined by lenses made of optical grade PMMA with high light transmission (95%), high UV and temperature resistance, as well as covered with tempered glass as protector.

These lenses allow better targeting of light rays so that the light scattering and light pollution are minimized.

PMMA lenses of vast range with different optics characteristics cater for wide application in all types of tunnel zone illumination.

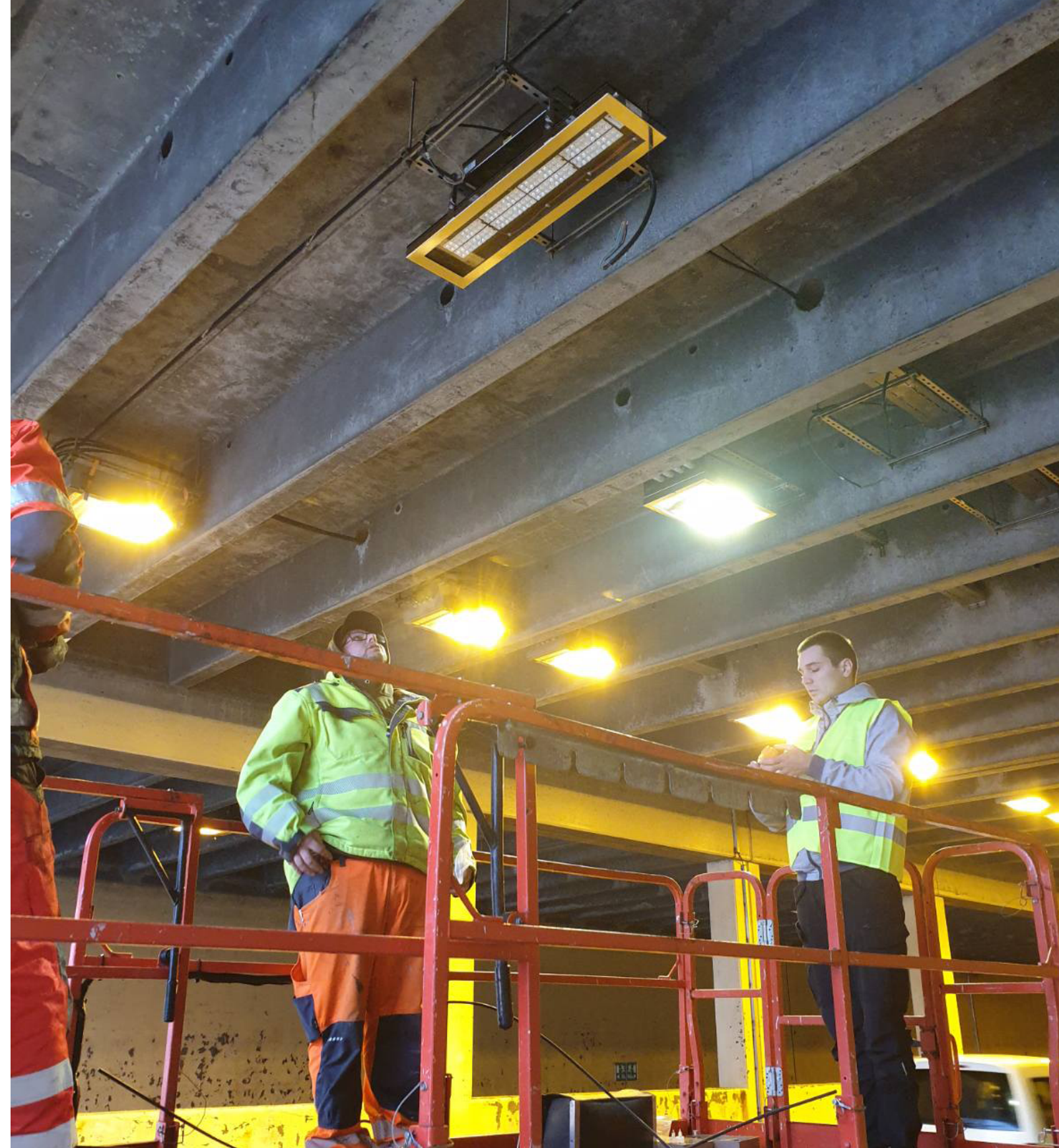


MOUNTING AND MAINTENANCE

Optimized for quick mounting and maintenance.

Considering longevity of all applied components (MTBF >100,000h), the need for maintenance is reduced, almost none, leading to additional savings and long periods of planned preventive servicing.

Our luminaires are suitable for tunnel washing with automated cleaning vehicles.



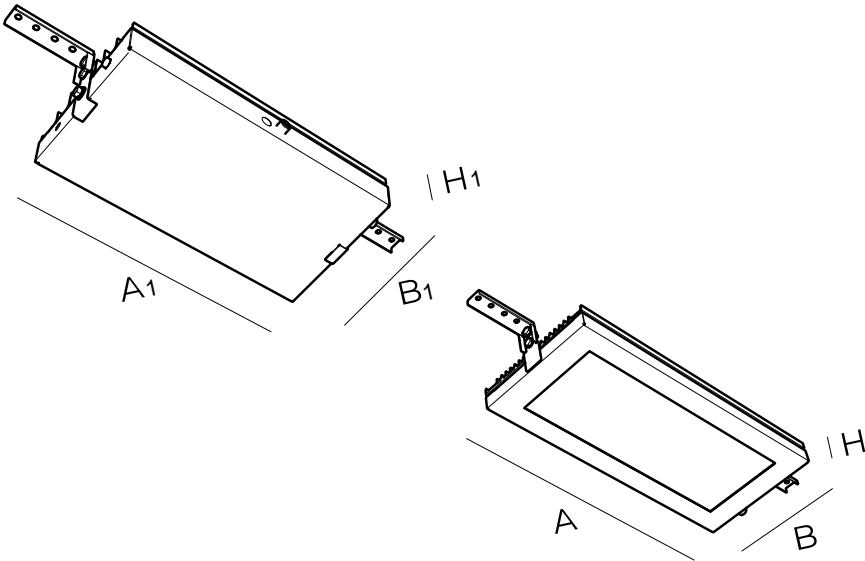
TECHNICAL DATA	
Dimensions A/B/H	440/296/60, 690/296/60
Ingressprotection rating	IP66
Finish	white or black painted, polished stainless steel
Ambient temperature range	-40°C - +40°C
LED service life	100000h (L90B10)
Luminaire luminous flux	17395 - 23194lm
Total power	136 - 181W
Luminaire efficiency	128lm/W
Light colour temperature	4000K
CRI (options available)	>70
Power supply	220-240V 50/60Hz, 220-240V dc
Control gear	ECG, DIMM 1-10, DSI, DALI, 4-20mA, Line Switch

Main body is made of stainless steel EN 1 4571 (AISI 316 Ti) with highest resistance to corrosion and chemicals. Heatsink body is made of extruded aluminum alloy treated with conversion protection and physically separated from stainless steel housing to avoid galvanic corrosion.

Finish: epoxy polyester powder coating of fine structured texture (white or black color) or polished stainless steel.

A wide range of PMMA lenses to provide different tunnel zones and lighting requirements. According to IEC/EN 60529 standard, luminaire achieved class of ingress protection against solid particles and liquid.

Sealed luminaire is protected against ingress of dust and moisture, as well as solution jets of tunnel washing machines to provide complete reliable usage. Corrosion proof, impact resistant, and optimal thermal management assured long-lasting function.



	DIMENSIONS A/B/H	LED LUMEN 4000K	TOTAL POWER (W)	WEIGHT
VISION DB 3 ASY	440/296/60	17395	136	6.70
VISION DB 4 ASY	690/296/60	23194	181	9
VISION DB 6 ASY	690/296/60	34791	272	9.50
VISION DB 8 ASY	690/296/60	56388	362	16
VISION DB 2 SYM	440/296/60	11597	91	6.50
VISION DB 4 SYM	690/296/60	23194	181	9

A wide-angle landscape photograph of a calm lake in St. Andra, Austria. On the left, a village with colorful houses is nestled at the foot of a steep, forested mountain. The lake's surface is still, reflecting the sky and the surrounding greenery. In the distance, more mountains are visible under a clear blue sky with a few wispy clouds.

TUNNEL LIGHTING

St. Andra, Austria

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