



PowerVision Series

PowerVision LED Highbay and Lowbay

Highly versatile, exceptional performance high/lowbay lighting system based on LIGMAN's scalable modular platform



The quality of life ...

Professional Lighting Solutions



Innovative, Performance and Sustainable, Flexible, Quality, Future Proof Highbay/Lowbay Lighting

Innovative Solutions

LIGMAN's PowerVision high/lowbay lighting product series employs a highly flexible light module that is designed to be an economic alternative to the conventional High Pressure Sodium and Metal Halide high/lowbay lighting systems.

Industry leading optical technology that minimizes light pollution and optimizes light distribution ensures that only the targeted areas are illuminated.

Performance and Sustainable

Engineered from the base up with environmental consciousness and energy efficiency in mind, LIGMAN's PowerVision series were developed specifically to fulfill the demanding conditions of industry, warehouse, manufacturing and production hall applications. Highly reliable power supply units and exceptionally performing LEDs manufactured by CREE are standard features in all products in this range. A high quality aluminum extrusion not only houses the control gear and the light modules but it also acts as the primary thermal management device, eliminating the need for additional and sometimes bulky heat sinks while improving the overall performance and extending the life span of the LEDs.

Flexible

The PowerVision series are highly flexible and can be easily retrofitted onto existing high/lowbay lighting infrastructure making it extremely simple to implement. It is a state-of-the-art technology that is practical and affordable. The scalable and modular feature of the PowerVision range gives the end users a significant amount of options and customizations to choose from that can be implemented without much hassle.

Quality

The housing of all PowerVision products are powder coated with a UV stabilized, high corrosion resistant polyester material that is applied after the product has undergone a rigorous cleaning and chemical chromating process. With excellence in quality being a key philosophy of the LIGMAN group, all PowerVision products come standard with highly durable silicone rubber gasket that are weather and ageing resistant. Complementing this is the high corrosion resistant aluminum extrusion housing and clear toughened glass that makes up the major components of the luminaire housing. Marine grade stainless steel screws ensure all components are in place while withstanding the harshest environmental conditions.

Future Proof

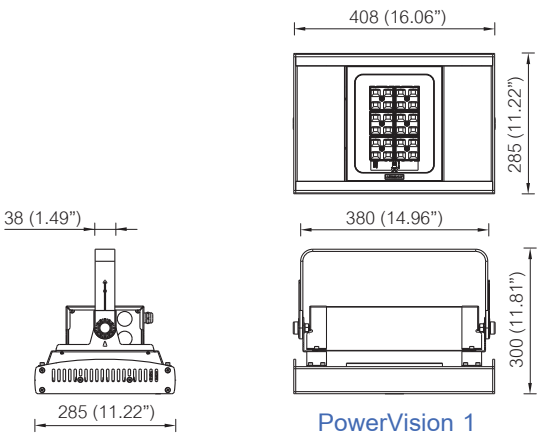
LIGMAN's PowerVision range of products' scalable, modular light modules and integrated thermal management system provides for a future proof product. The light modules and modular optical system eliminates the need for the whole luminaire to be changed when there is a need for a modification, upgrade or a change in the systems photometric or electrical properties such as a change in light distribution or CCT.

The integrated thermal management system has been designed to ensure the LEDs junction temperature always remains below the manufacturer's recommendation. The thermal management system for the PowerVision range is designed based on the maximum thermal resistance of currently available LEDs. Future generation light modules that come with newer LEDs that have improved thermal resistance and efficiency can directly be retrofitted onto the existing PowerVision fixtures without the need for any additional thermal management activity.

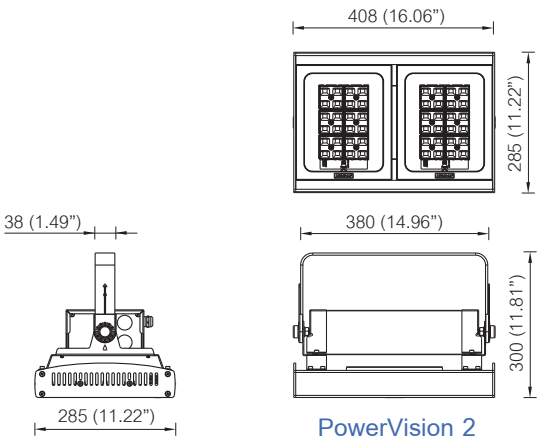
PowerVision LED Highbay and Lowbay

Dimensions & Weight

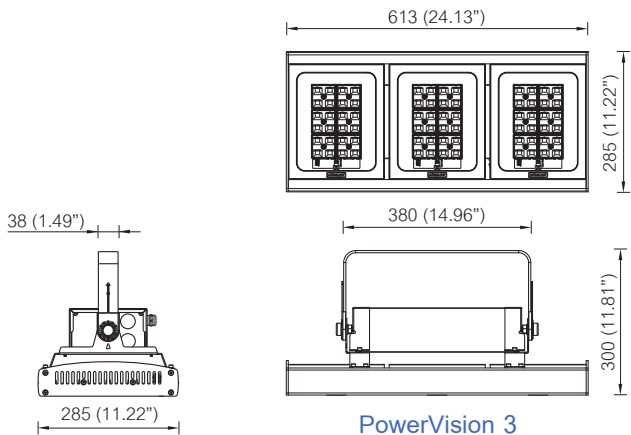
		LED no.	Size mm. in.	Weight kg. lb.
Highbay / Lowbay	PowerVision 1	24	408 x 285 16.06"x11.22"	9.0 19.84
	PowerVision 2	48	408 x 285 16.06"x11.22"	11.0 24.25
	PowerVision 3	72	613 x 285 24.13"x11.22"	14.5 31.96
	PowerVision 4	96	818 x 285 32.2"x11.22"	17.8 39.23
Recessed Ceiling	PowerVision 5	24	480 x 325 18.89"x12.79"	6.5 14.33
	PowerVision 6	48	408 x 325 18.89"x12.79"	9.0 19.84



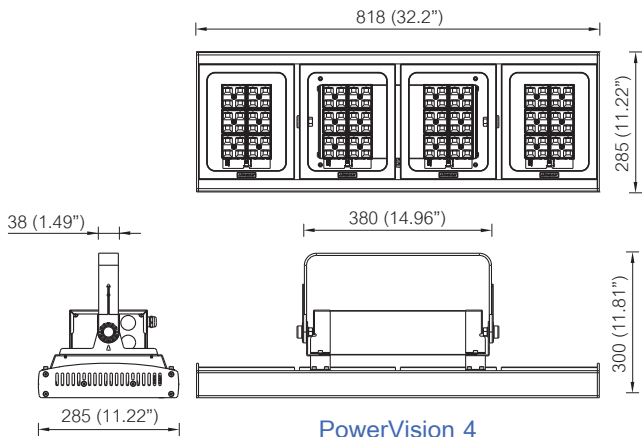
PowerVision 1



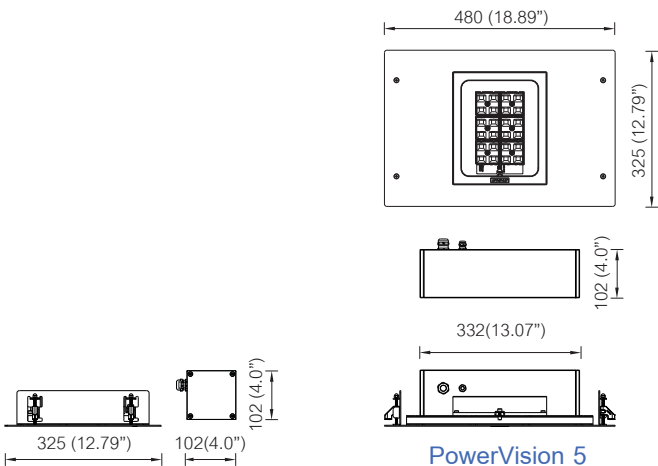
PowerVision 2



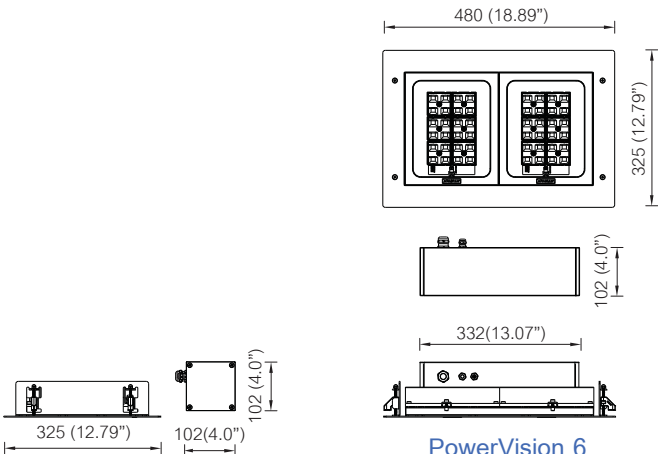
PowerVision 3



PowerVision 4



PowerVision 5



PowerVision 6

PowerVision LED Highbay and Lowbay



Engineered from the base up with environmental consciousness and energy efficiency in mind, LIGMAN's PowerVision series, developed specifically to fulfill the demanding conditions of industry, warehouse, manufacturing and production hall applications. The luminaire has flexibility to choose from three easy installation method whether by hook, pendant or bracket. With LED technology, downtime caused by power failure is drastically reduced as the PowerVision highbay / lowbay switches on instantly as compared to traditional HID lamps.



Industry leading optical technology that minimizes light pollution and optimizes light distribution ensures that only the targeted areas are illuminated.

A high quality aluminum extrusion not only houses the control gear and the light modules but it also acts as the primary thermal management device, eliminating the need for additional and sometimes bulky heat sinks while improving the overall performance and extending the life span of the LEDs.

Scalable LED light modules

LIGMAN's LED light module forms the core technological innovation of the PowerVision series. The unique features of the light modules facilitate greater product design and application flexibility in addition to superior performance and reliability.



24 LED

PowerVision 1 & 5



48 LED

PowerVision 2 & 6



+



+



72 LED

PowerVision 3



+



+



+



96 LED

PowerVision 4

Module features

- Compatible with all PowerVision products
- On board connectors make installation and maintenance activities quick and simple
- Modular design for effortless upgrades to future LED generations
- Flexibility to change over optical distribution or to customize distributions as per application requirements
- Unique overlapping optics ensures no 'dark spots' in the event of partial failure
- LEDs are designed to 'fail short' to prevent catastrophic failures of modules in the event of single or multiple LED chip failures

PowerVision LED Highbay and Lowbay

Specification

IP66 /EN 60598/CLASS I /V/CE/IK08



	PowerVision Highbay and Lowbay			
Model	PowerVision 1	PowerVision 2	PowerVision 3	PowerVision 4
Lamp Type	Integral LED module			
Power	28 - 56W	54 - 108W	84 - 164W	106 - 214W
Luminous flux (absolute)	2421 - 5152 lm*	4642 - 10304 lm*	7025 - 15456 lm*	9089 -20608 lm*
Luminaire efficacy	up to 124 lm/W	up to 129 lm/W	up to 124 lm/W	up to 131 lm/W
Correlated Color Temperature	3000K, 4000K, 5000K and 6000K			
Color Rendering Index	75+ Ra			
Maintenance of lumen output	>80,000 Hrs service life at 70% lumen maintenance @Ta max 40°C			
Operating temperature range	- 40°C to + 40°C			
Driver	Build-in			
Mains voltage	120 - 277V, 50 - 60Hz			
Controls system input	Optional	1 - 10 V and DALI		
Optical cover	Type II, III, IV and V (M, W, VW and EW)			
Optic cover	Flat glass			
Maintenance	Maintenance free			
Protection	Class I, IP66			
Weight	9.0 Kg	11.0 Kg	14.5 Kg	17.8 Kg

	PowerVision Recessed Downlight	
Model	PowerVision 5	PowerVision 6
Lamp Type	Integral LED module	
Power	28 - 56W	54 - 108W
Luminous flux (absolute)	2421 - 5152 lm*	4642 - 10304 lm*
Luminaire efficacy	up to 124 lm/W	up to 129 lm/W
Correlated Color Temperature	3000K, 4000K, 5000K and 6000K	
Color Rendering Index	75+ Ra	
Maintenance of lumen output	>80,000 Hrs service life at 70% lumen maintenance @Ta max 40°C	
Operating temperature range	- 40°C to + 40°C	
Driver	Build-in	
Mains voltage	120 - 277V, 50 - 60Hz	
Controls system input	1 - 10 V and DALI	
Optical cover	Type II, III, IV and V (M, W, VW and EW)	
Optic cover	Flat glass	
Maintenance	Maintenance free	
Protection	Class I, IP66	
Weight	6.5 Kg	9.0 Kg

Product features

- High performing luminaire for a competitive value
- Highly efficient optics provides excellent illumination uniformity
- Extreme flexibility in customizing product for specific needs
- Easy to install and maintain
- Adjustable $\pm 90^\circ$
- Innovative thermal management system provides longer LED lifetime
- Up to 100,000 hour rated life
- PowerVision 1, 2, 3, 4, 5 and 6 comes standard with DALI and 1-10V dimming controls ready
- Optimized to improve energy efficiency, light quality and reliability of street lighting systems
- Competitive high value performance luminaire
- Efficient optics improve illuminance uniformity
- Flexibility in choosing the right wattage for the application
- Maximized energy savings
- Designed for industrial lighting solution and huge area lighting applications

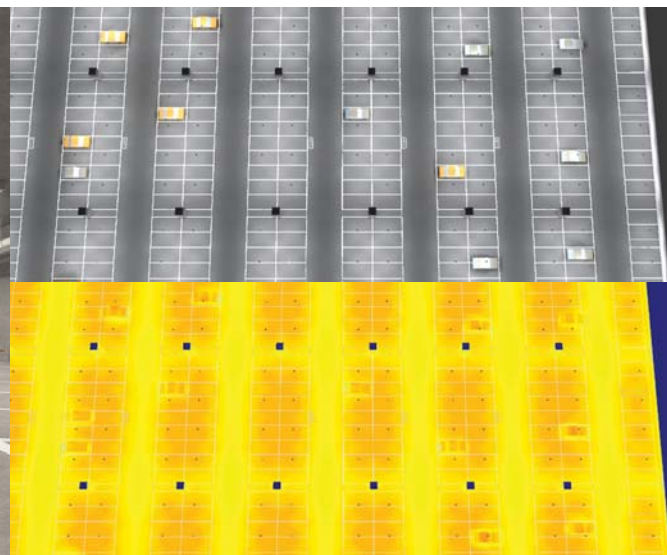
Optics



- Maximized light transmission efficiency
- Unique overlapping optical design eliminates the possibility of 'dark spots' in the event of partial failure or obstruction of the light modules
- Modular design to suit various applications and needs
- Excellent uniformity
- Available in distribution Types II, III, IV and V with choice of medium, wide, very wide and extra wide beam

Sample Applications

Building car park with PowerVision 1, 24 LED 28W Type V with extra wide beam lens provide board light distribution to coverage parking area.



Modern warehouse with PowerVision 2, 48 LED 54W light Engine with Type II to light up along space between shelves. General access area with PowerVision 3, 72 LED 164W with Type V wide beam lens.



Removable Modular Light Engine

Easy access to modular part and removable between various light distribution lens Type II, III, IV and V.



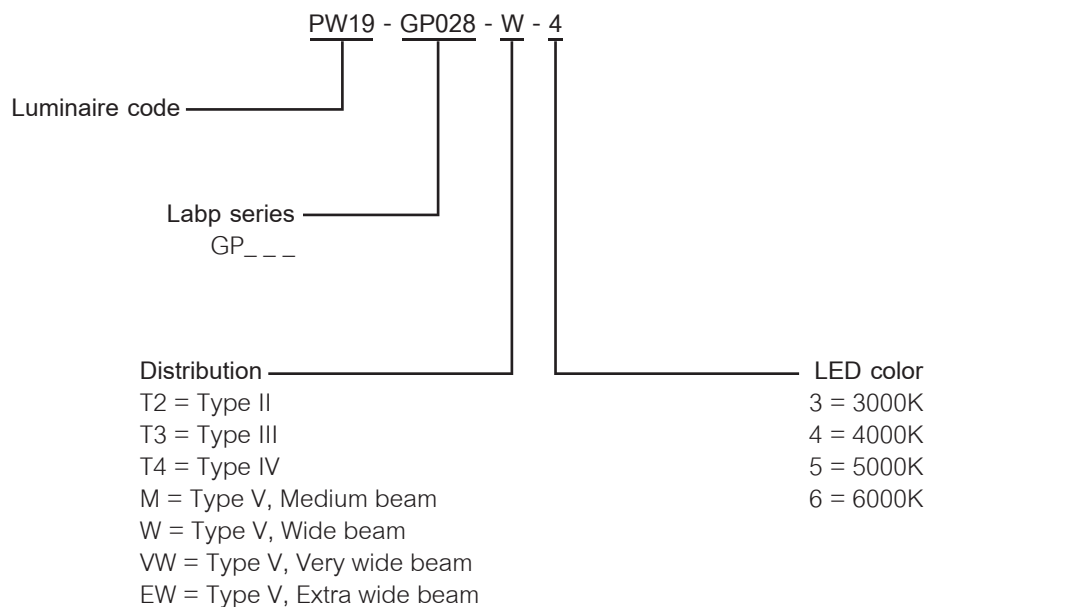
Thermal management

The control gear are placed in a separate control gear compartment that is isolated from the optical compartment and the heat fins to prevent any unnecessary heat buildup around the control gear.

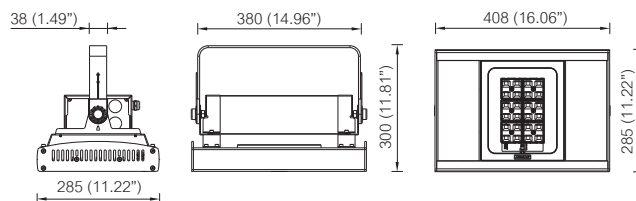
Aluminum extrusion luminaire housing with integral heat fins acts as the primary thermal management system, cooling the LED system effectively and efficiently.



Ordering Code:



PowerVision LED Highbay and Lowbay



PowerVision 1, 24 LED Type II, III, IV and V (M, W, VW and EW)

Model no.	Lamp Series	Power W	Lumen lm	Available CCT K	Drive Current mA	Weight Kg	Luminaire Class	Dimming
PW19	GP028	28	2421 - 3053	3000K, 4000K, 5000K and 6000K	350	9.0	I	DALI and 1-10V
	GP042	42	3425 - 3954		500	9.0	I	
	GP056	56	4449 - 5152		700	9.0	I	

Options available for this range

Lamp Series	Beam Distribution	CCT K	Dimming
GP028 = 28W	T2 = Type II	3 = 3000K	Available as a chargeable option
GP042 = 42W	T3 = Type III	4 = 4000K	
GP056 = 56W	T4 = Type IV	5 = 5000K	
		6 = 6000K	

Lamp Series	Beam Distribution (Type V)	CCT K	Dimming
GP028 = 28W	M = Medium beam	3 = 3000K	Available as a chargeable option
GP042 = 42W	W = Wide beam	4 = 4000K	
GP056 = 56W	VW = Very wide beam	5 = 5000K	
	EW = Extra wide beam	6 = 6000K	

System lumen and efficacy

Lamp Series	LED Color	T2		T3		T4	
		Lumen	Efficacy	Lumen	Efficacy	Lumen	Efficacy
GP028	3000K	2272 lm	82 lm/W	2282 lm	82 lm/W	2311 lm	83 lm/W
	4000K	2421 lm	87 lm/W	2431 lm	87 lm/W	2462 lm	89 lm/W
	5000K	2610 lm	94 lm/W	2622 lm	94 lm/W	2656 lm	96 lm/W
	6000K	2760 lm	99 lm/W	2772 lm	100 lm/W	2808 lm	101 lm/W
GP042	3000K	3215 lm	77 lm/W	3229 lm	77 lm/W	3238 lm	77 lm/W
	4000K	3425 lm	82 lm/W	3440 lm	82 lm/W	3450 lm	82 lm/W
	5000K	3707 lm	88 lm/W	3724 lm	89 lm/W	3734 lm	89 lm/W
	6000K	3906 lm	93 lm/W	3923 lm	93 lm/W	3934 lm	94 lm/W
GP056	3000K	4158 lm	74 lm/W	4176 lm	75 lm/W	4211 lm	75 lm/W
	4000K	4449 lm	79 lm/W	4449 lm	79 lm/W	4486 lm	80 lm/W
	5000K	4820 lm	86 lm/W	4841 lm	86 lm/W	4880 lm	87 lm/W
	6000K	5052 lm	90 lm/W	5074 lm	91 lm/W	5116 lm	91 lm/W

Lamp Series	LED Color	M		W		VW		EW	
		Lumen	Efficacy	Lumen	Efficacy	Lumen	Efficacy	Lumen	Efficacy
GP028	3000K	2826 lm	101 lm/W	2696 lm	96 lm/W	2761 lm	99 lm/W	2858 lm	102 lm/W
	4000K	2988 lm	107 lm/W	2858 lm	102 lm/W	2956 lm	106 lm/W	3053 lm	109 lm/W
	5000K	3216 lm	115 lm/W	3053 lm	109 lm/W	3151 lm	113 lm/W	3248 lm	116 lm/W
	6000K	3439 lm	123 lm/W	3264 lm	117 lm/W	3380 lm	121 lm/W	3473 lm	124 lm/W
GP042	3000K	3664 lm	87 lm/W	3488 lm	83 lm/W	3594 lm	86 lm/W	3712 lm	88 lm/W
	4000K	3904 lm	93 lm/W	3716 lm	88 lm/W	3828 lm	91 lm/W	3954 lm	94 lm/W
	5000K	4178 lm	99 lm/W	3978 lm	95 lm/W	4098 lm	98 lm/W	4232 lm	101 lm/W
	6000K	4467 lm	106 lm/W	3053 lm	101 lm/W	4382 lm	104 lm/W	4525 lm	108 lm/W
GP056	3000K	4776 lm	85 lm/W	4546 lm	81 lm/W	4684 lm	85 lm/W	4838 lm	86 lm/W
	4000K	5088 lm	91 lm/W	4842 lm	86 lm/W	4988 lm	89 lm/W	5152 lm	92 lm/W
	5000K	5444 lm	97 lm/W	5184 lm	93 lm/W	5340 lm	95 lm/W	5516 lm	99 lm/W
	6000K	5821 lm	104 lm/W	5543 lm	99 lm/W	5710 lm	102 lm/W	5898 lm	105 lm/W