

PERMiA SERIES

Series Name : PA1 、 PA2 、 PA3

LEDs : 20 、 40 、 60 、 80 、 80 、 100 、 120 、 140 、 160 、 180 、 200 、 220 、 240

CCT(K) : Warm White, Neutral White, Cool White

Product Features

- High lumen output.
- DALI, dimmable, compatible with all Major CMS systems.
- Wide range of Lumen packages with clever optical design.
- Adjustable lighting angle, universal mounting.
- Built in 10kV surge protection, IP66 and IK09 protection.
- Easy installation and maintenance, single engineer.
- High efficiency ensuring substantial acceleration of the payback period.
- Mounting surface for NEMA socket and mini cell.
- Future proof, easy replacement of light engine.

Type of Applications

- Roads and Highways
- Residential Streets
- Streets & Urban Roads
- Squares and Pedestrian Areas
- Bike Paths
- Parking Lots
- Shopping Precincts

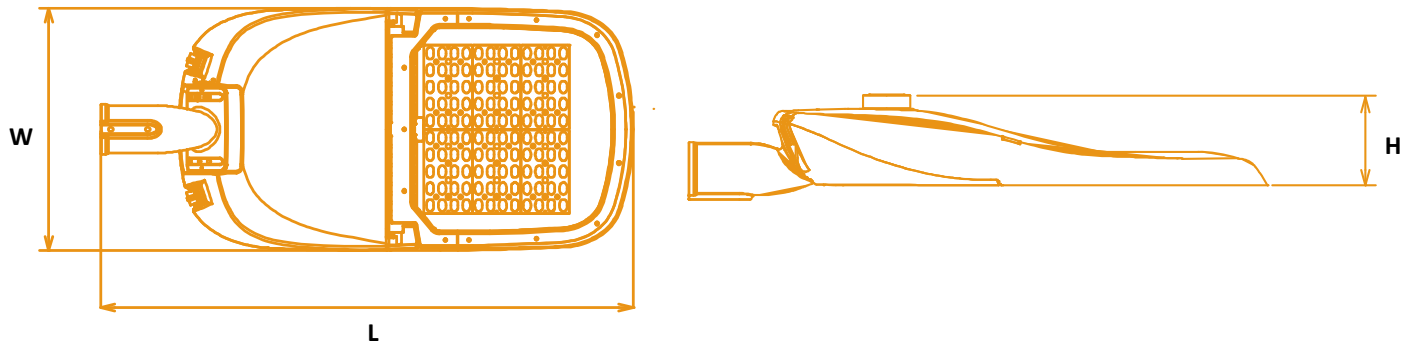
General Specifications

- Light Source : Hi-Flux/Hi power white LED
- CRI : >70
- Power Factor(@ 220VAC,Full Load) : >0.9
- Total Harmonic Distortion : <20%
- Dimming : 1-10 V and DALI
- Operating Temperature : -40~50°C
- Storage Temperature : -40~80°C
- Operating Humidity : RH95%
- Driver Efficiency : >90%

Ordering Information

Housing Number and Type of LEDs	Voltage	Nominal Color Temperature	Light Distrebution	Finish	*Driving Current
PA1 - 20H	MV: 120-270V	CW: 5700K	C1	GY: Grey	350: 350mA
PA1 - 40H	EV: 220-240V	NW: 4000K	N1	DB: Dark Brown	530: 530mA
PA2 - 40H		WW: 3000K	N2	WH: White	700: 700mA
PA2 - 60H			M1	BK: Black	
PA2 - 80H			M2	IG: Iron Grey	
PA2 -100H			W1		
PA2 -120H			W2		
PA3 - 80H					
PA3 -100H					
PA3 -120H					
PA3 -140H					
PA3 -160H					
PA3 -180H					
PA3 -200H					
PA3 -220H					
PA3 -240H					

Product Dimension / Material / Weight



	PA1	PA2	PA3
L	550mm/21.7in	675mm/26.6in	915mm/36.0in
W	300mm/11.8in	380mm/15.0in	380mm/15.0in
H	105mm/4.1in	105mm/4.1in	105mm/4.1in

	PA1	PA2	PA3
Body	Marine grade LM6 aluminium		
Protector	Tempered glass		
Weight	7kg/15lbs	10kg/22lbs	15kg/33lbs

Housing:

- Die cast aluminium housing with separable spigot design suitable for 32 to 76mm (O.D) SE/PT mast arm.
- All hardware is stainless steel.
- Capable of $\pm 15^\circ$ by 5° steps tilt on both SE/PT pole.
- Finless design with excellent heat dissipation can effectively prevent dirt accumulation and maintain LED junction temperature in high temperature (T_a 50°C), ensuring long LED life and efficiency.
- Quick release latches allow for tool-less access to electrical compartment.
- Easy removal of the LED light engine and driver is excellent for future upgrade.

Light Emitting Diodes:

- High-flux/Hi-power white LEDs are tested in accordance with IES LM-80 testing procedures.
- Produce a minimum 90% of initial intensity at 100,000 hours of life @350 mA at $T_a=25^\circ\text{C}$.
- LEDs are 100% mercury and lead free.

Finish:

- Housing receives a fade and abrasion resistant, epoxy polyester powder coated.

Optical System:

- Modular light engine design with micro-lens system provides appropriate light distribution to satisfy all road conditions and optimizes application efficiency.
- CRI>70 at WW, NW and CW.
- LM-79 tests and reports are performed in accordance with IESNA standards.
- ULR: 0%

Electrical:

- Power supply drive current is field adjustable at 350mA, 530mA, and 700mA.
- System power factor is >90% and <20% total harmonic distortion (THD) at full load.
- Integral 10kV surge protector is tested per IEC 61000-4-5 and ANSI/IEEE C62.41.2 (Optional).
- Photo electric sensors (PE) available for all voltages (Optional).

Listing/ Rating/ Warranty:

- All products are compliant with CE and ENEC standards.
- Luminaire maintain an IP66 rating.
- 10-year limited warranty is standard on luminaire.

PA 1 Series Specifications

No. of LEDs	CCT (K)	Drive Current (mA)	Watts (W)	Lumen Output (lm)	Efficacy @Ta=25°C (lm/W)
20	4300	350	24	3000	125
		530	35	4000	115
		700	46	5000	110
40	4300	350	44	5500	125
		530	66	7500	115

PA 2 Series Specifications

No. of LEDs	CCT (K)	Drive Current (mA)	Watts (W)	Lumen Output (lm)	Efficacy @Ta=25°C (lm/W)
40	4300	700	87	9500	110
60	4300	350	65	8100	125
		530	100	11500	115
		700	128	14000	110
80	4300	350	85	10600	125
		530	131	15000	115
100	4300	350	106	13200	125
120	4300	350	128	16000	125

PA 3 Series Specifications

No. of LEDs	CCT (K)	Drive Current (mA)	Watts (W)	Lumen Output (lm)	Efficacy @Ta=25°C (lm/W)
80	4300	700	175	19200	110
100	4300	530	155	17800	115
		700	219	24000	110
120	4300	530	199	22800	115
		700	255	28000	110
140	4300	350	146	18200	125
		530	230	26400	115
160	4300	350	172	21500	125
		530	260	29900	115
180	4300	350	192	24000	125
200	4300	350	210	26200	125
220	4300	350	232	29000	125
240	4300	350	255	31800	125