



CB CE



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# FRANKFURT

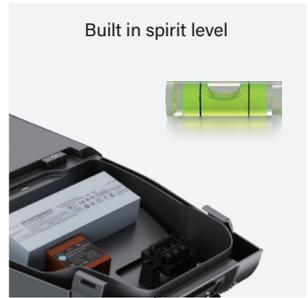
LED Street Light Series

POWER 20W-240W



**B3 ENGINEERING**  
THE MASTERS OF LIGHT

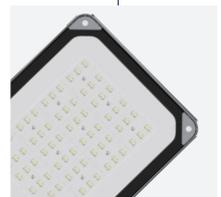
## Light Structure



Built in spirit level



Tool-free maintenance



IK09 tempered glass, suitable for Zhaga standard PCB board. Modular lens is available for various light types to meet the lighting requirements of different roads.



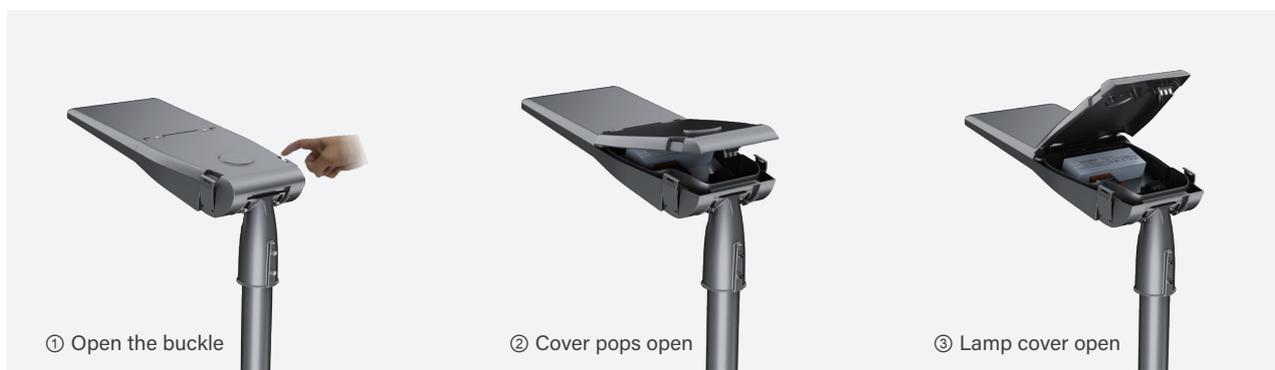
Horizontal entry



Vertical entry

## Buckle Type Switch Design

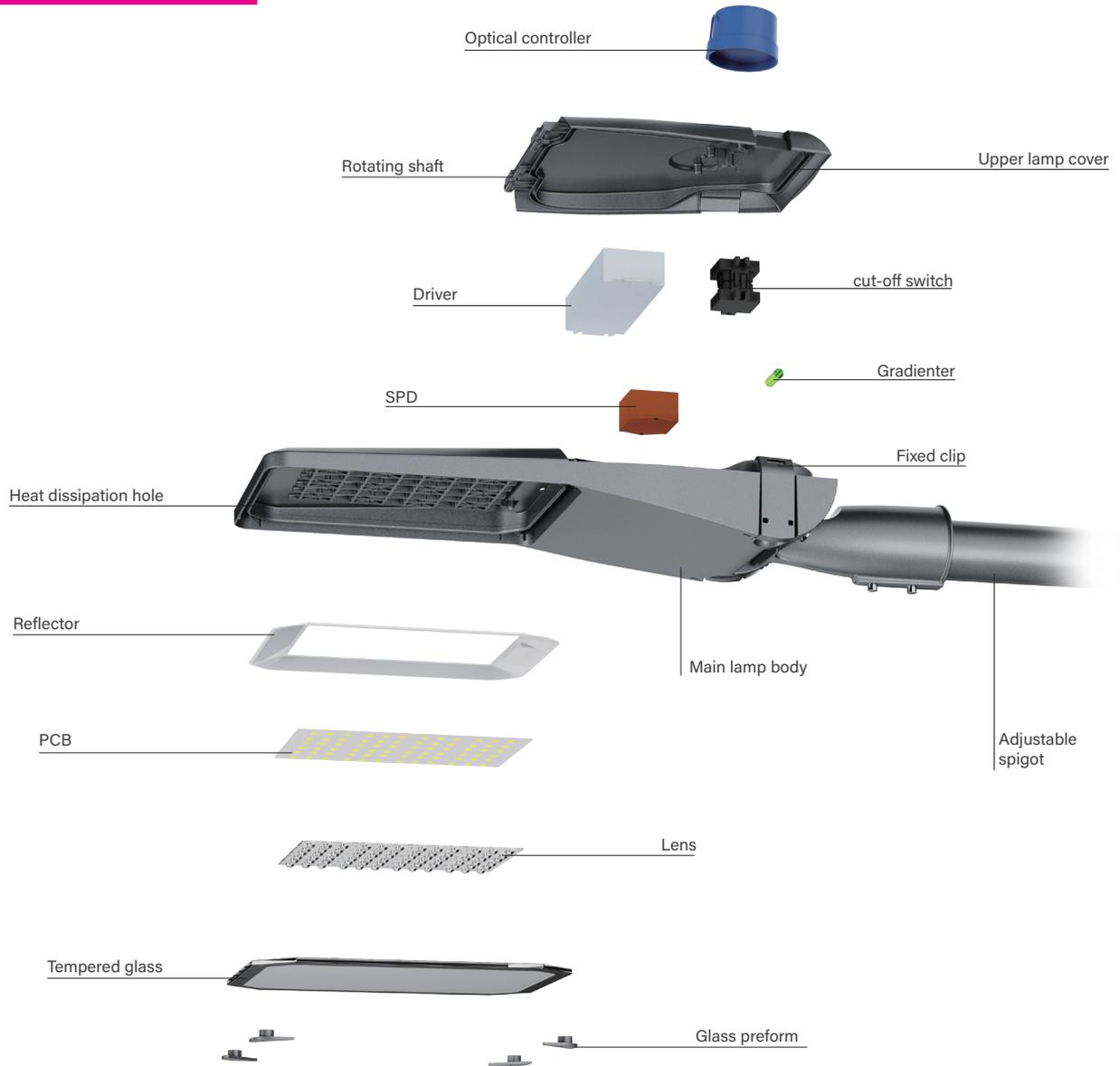
The switch adopts a clip shrapnel design, which can be operated with bare hands without tools, which is convenient for installation and equipment maintenance, and saves labor costs.



With NEMA/Zhaga socket could work with smart city control technology.



# Lighting Display



IP66  
( Dekra lab test )



IK08  
( Dekra lab test )

# TECHNICAL SPECIFICATIONS

THE SPECIFICATIONS BELOW ARE EXEMPLARY. OTHER CONFIGURATIONS AVAILABLE ON REQUEST - WE CUSTOMIZE OUR DESIGN TO MEET YOUR SPECIFIC PROJECT REQUIREMENTS. SPECIFICATIONS SUBJECT TO CHANGE AT ANY TIME.

Model	FRANKFURT XXL	FRANKFURT XL	FRANKFURT L	FRANKFURT M	FRANKFURT S	FRANKFURT XS
Power	200 W-240 W	180 W - 200 W	150 W - 180 W	100 W - 150 W	60 W - 100 W	20 W - 60 W
50x50 mm LENS QTY.(MAX)	20 PCS	16 PCS	12 PCS	9 PCS	6 PCS	4 PCS
LED Chip	3030 LED Chip: 12/14/16/24 in 1 lens / 5050 LED Chip: 4/6/8 in 1 lens					
Average lumens	approx. 130L lm/W for 3030 chip / approx. 160 lm/W for 5050 chip					
Chip brand	LUMILEDS / CREE / SAN'AN					
Driver	MW / PHILIPS / Inventronics / MOSO / SOSEN / DONE					
Power factor	> 0.95					
Voltage	90 - 305 VAC					
SPD	10K V / 20 KV					
Insulation class	Class I / II					

CCT	3000 - 6500 K
CRI	≥70
Optical lens	PC lens for Type I / II / III / IV /V
Working temperature	-35° C ~ + 50° C
Lifetime	> 50 000 hours
IP class	IP66
IK class	IK09

Body Material	Die-cast aluminium					
Installation spigot	60 mm	60 mm	60 mm	60/ 50 mm	60/ 50 mm	60/ 50 mm

## TWO FRAME DESIGN FOR OPTION

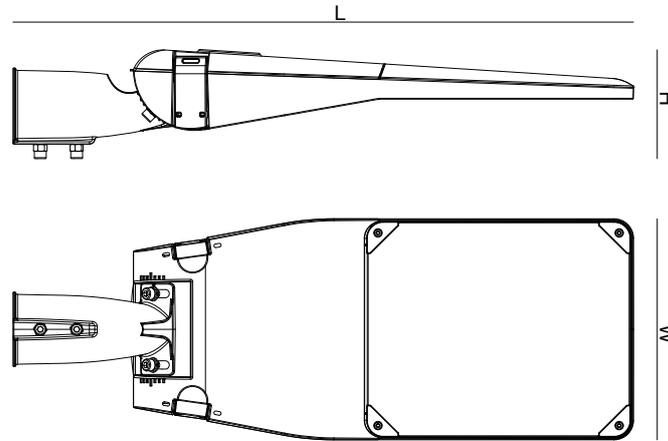


Glass frame design is economical choice, but this design can only pass IK08 test.

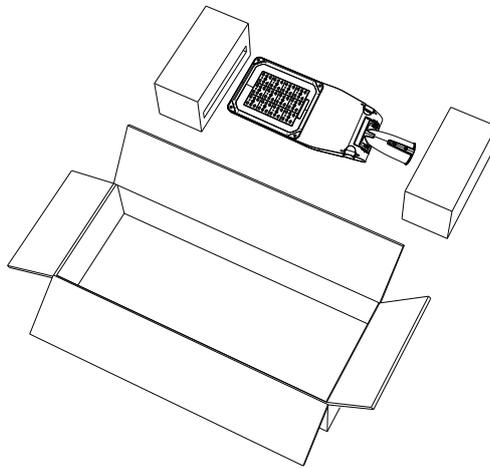


Diecasting alu. frame design is good design for IK09 test.

# PRODUCT SIZE



Model	FRANKFURT XXL	FRANKFURT XL	FRANKFURT L	FRANKFURT M	FRANKFURT S	FRANKFURT XS
L	732 mm	682 mm	682 mm	632 mm	576 mm	507 mm
W	299 mm	299 mm	245 mm	245 mm	209 mm	209 mm
H	120 mm	107 mm	120 mm	120 mm	119 mm	91 mm
EMPTY HOUSING N.W.	6.30 kg	5.60 kg	4.35 kg	3.80 kg	3.30 kg	2.55 kg
EMPTY HOUSING G.W.	7.3 kg	6.6 kg	5.3 kg	4.8 kg	4.0 kg	3.0 kg



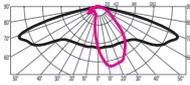
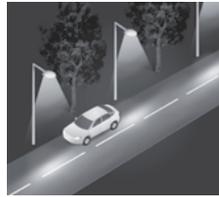
Packing information	FRANKFURT XXL	FRANKFURT XL	FRANKFURT L	FRANKFURT M	FRANKFURT S	FRANKFURT XS
L	743 mm	692 mm	692 mm	642 mm	586 mm	517 mm
W	310 mm	310 mm	255 mm	255 mm	220 mm	220 mm
H	142 mm	127 mm	140 mm	140 mm	140 mm	101 mm
N.W.	7.8 kg	6.8 kg	5.4 kg	4.8 kg	4.0 kg	3.0 kg
G.W.	8.8 kg	7.8k g	6.4 kg	5.8 kg	4.8 kg	3.6 kg
20GP / 40HQ quantity	850 PCS / 2060 PCS	1020 PCS / 2500 PCS	1100 PCS / 2700 PCS	1200 PCS / 2950 PCS	1550 PCS / 3750 PCS	2400 PCS / 5900 PCS

PC optical lenses with high visual comfort and uniform lighting distribution, multiple optical distribution options.

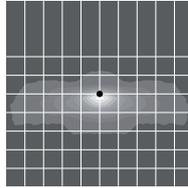
Destination

Distribution

Applications

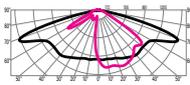
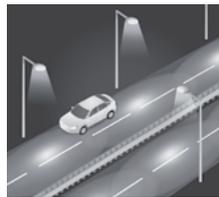


DE-LED-H1 (4000°K) -  $\alpha = 0^\circ$  — 0.0 - 180.0  
ULOR = 0% — 90.0 - 270.0

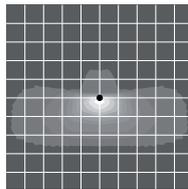


Asymmetric light distribution for roadways with wide distance between two poles.

Note: This optical distribution is not dedicated to this application only. It can also be used for other configurations.

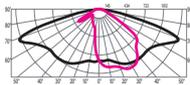


DE-LED-R1 (4000°K) -  $\alpha = 0^\circ$  — 0.0 - 180.0  
ULOR = 0% — 90.0 - 270.0

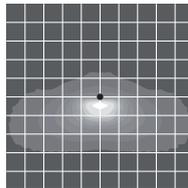


Roadway light distribution for wide streets.

Note: This optical distribution is not dedicated to this application only. It can also be used for other configurations.

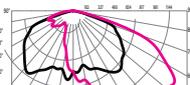


DE-LED-R2 (4000°K) -  $\alpha = 0^\circ$  — 0.0 - 180.0  
ULOR = 0% — 90.0 - 270.0

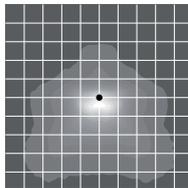


The lamps are installed in the asymmetric lighting of low height residential areas.

Note: This optical distribution is not dedicated to this application only. It can also be used for other configurations.

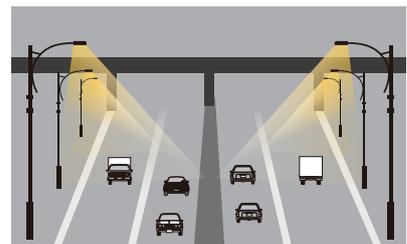


DE-LED-A2 (4000°K) -  $\alpha = 0^\circ$  — 0.0 - 180.0  
ULOR = 0% — 90.0 - 270.0



Wide asymmetric light distribution.

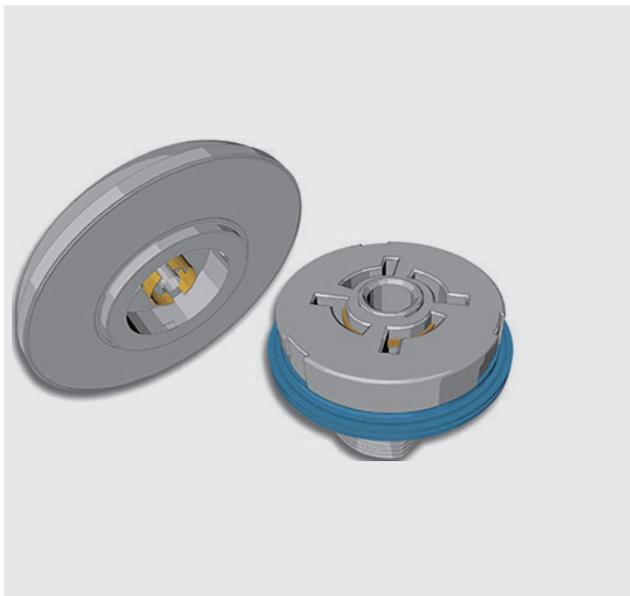
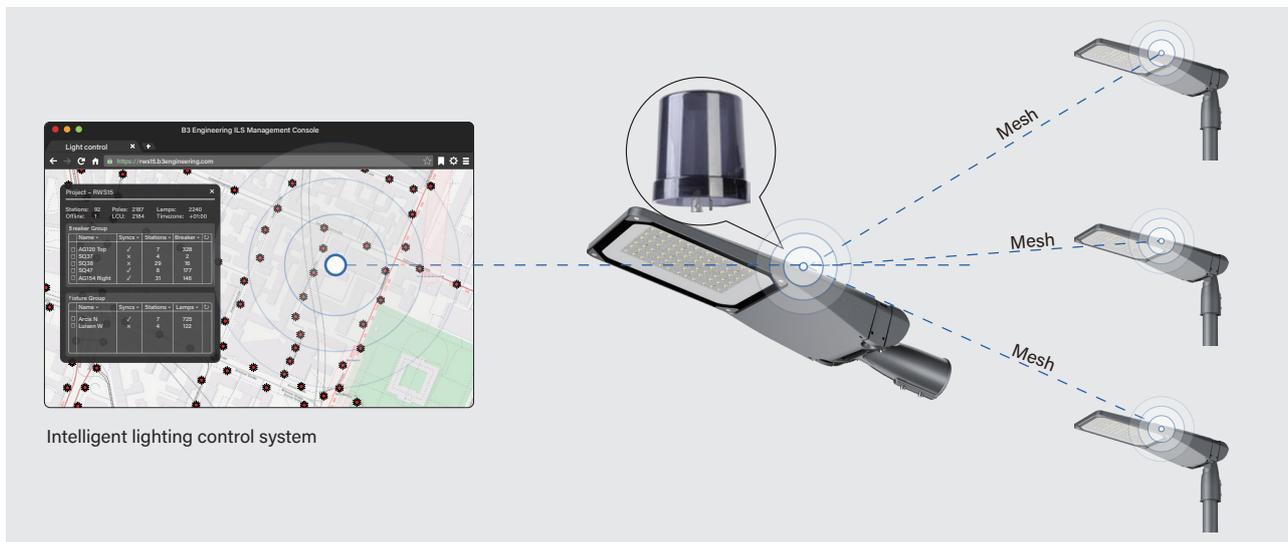
Note: This optical distribution is not dedicated to this application only. It can also be used for other configurations.



## Smart Control System

Our FRANKFURT family of street lights can be equipped with our intelligent control systems. In addition to realizing energy savings of up to 50 % through intelligent dimming, myriad other functions can improve the quality of light and life in cities large and small. Groups of street lights can be linked into mesh or tree topologies using a variety of communication technologies, including RF and LoRa. Data concentrators allow you to easily and comfortably manage all Smart City functions remotely from a central control room via RF or GSM / GPRS / NB-IoT.

The B3 ENGINEERING control platform stands out with its modular system design, embracing a "layered intelligence" concept that empowers users to tailor their experience. By selecting only the functionalities needed, customers benefit from a system that is both cost-effective and without compromise on desired features. This approach ensures that you pay for precisely what you require, eliminating unnecessary expenses while fully catering to your specific operational needs and objectives.



ZHAGA standard extension receptacle and cap



NEMA standard receptacle and cap

