



ECO-RAYS TP

MAIN CHARACTERISTICS

Applications	Street and urban lighting.
Optic	<p>STE-M/S: Asymmetrical optic for suburban street lighting. STU-M/S: Asymmetrical optic for street, urban and cycle-path lighting. STW: Asymmetrical optic for wide urban and suburban road lighting, specific for wet asphalts. SV/SV2: Asymmetrical optic for very narrow urban streets or highway entrance/exit turns. S05: Asymmetrical optic for street, urban and green areas lighting. S: Symmetrical optic for urban lighting and green areas. Colour temperature: 4000K (3000K optional) CRI ≥ 70 LOR= 100%, DLOR= 100%, ULOR= 0% Photobiological safety class: EXEMPT GROUP LED source efficiency: 168 lm/W @ 525mA, Tj=85°C, 4000K</p>
Insulation class	II, I
Protection degree	IP66 IK08 total
Dimensions	See the drawing
Weight	max. 8.5 kg
Exposed surface	Side: 0.07m ² – Top: 0.17m ²
Mounting	Post-top Ø60-Ø76mm
Tilt angle	0°
LED modules	Removable / Replaceable
Gear tray	Removable plate
Operating temp.	-40°C / +50°C
Storage temperature	-40°C / +80°C
Main reference standards	EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3



ELECTRICAL CHARACTERISTICS

Rated voltage	220÷240V 50/60Hz
Power factor	>0,9 (at full load)
Mains connection	Cable H07RN-F nx1.5mm ² Optional: connector M/F IP66/68 for cables max. 2.5mm ² , Ø max. 12mm
Surge protection	Up to 10kV With SPD (optional) 10kV / 10kV CM/DM
SPD (optional)	10kV-10kA, type 2+3, with LED signal and thermo fuse to disconnect load at the end of life.
Control system (options)	<p>F: Fixed power not dimmable. DA: Automatic dimming (virtual midnight) with default profile. DAC: Custom DA profile. FLC: Constant light flux. WL: Wireless single point communication system. DALI: Digital dimming interface DALI. NEMA: Socket 7 pin (ANSI C136.41). ZHAGA: Socket 4 pin (ZHAGA Book 18).</p>
Optical unit lifetime (Tq=25°C, 700mA)	>100.000hr L90B10 >100.000hr L90, TM-21

MATERIALS

Fixing	Die-cast aluminium UNI EN1706 powder painted.
Body	
Optic	99.85% aluminium with a surface finish in 99.95% with vacuum-sealed deposition. Aluminum grade class A+ (DIN EN 16268)
Screen	Flat tempered glass, 5mm thickness, high transparency.
Gable gland	Plastic M20x1.5 - IP68
Gasket	Polyurethane
Colour	Graphite - Cod. 01



LUMINAIRE	OPTIC	RATED LUMINAIRE FLUX* (Tq=25°C, 4000K, lm)	RATED LUMINAIRE POWER* (Tq=25°C, Vin=230Vac, F/DA/DAC, W)	LUMINAIRE EFFICACY (Tq=25°C, lm/W)	RATED LED FLUX* (Tj=85°C, 4000K, lm)	RATED LED POWER* (Tj=85°C, W)
ECO RAYS TP 0F2H1 S 4.5-2M	S	3580	30.5	117	4368	26
ECO RAYS TP 0F2H1 S 4.7-2M	S	4580	40	114	5530	36
ECO RAYS TP 0F2H1 S05 4.5-1M	S05	1830	16	114	2184	13
ECO RAYS TP 0F2H1 S05 4.5-2M		3580	30.5	117	4368	26
ECO RAYS TP 0F2H1 S05 4.7-1M	S05	2350	21.5	109	2765	18
ECO RAYS TP 0F2H1 S05 4.7-2M		4580	40	114	5530	36
ECO RAYS TP 0F2H1 STU-M 4.5-1M	STU-M	1790	16	111	2184	13
ECO RAYS TP 0F2H1 STU-M 4.5-2M		3510	30.5	115	4368	26
ECO RAYS TP 0F2H1 STU-M 4.7-1M	STU-M	2300	21.5	106	2765	18
ECO RAYS TP 0F2H1 STU-M 4.7-2M		4480	40	112	5530	36
ECO RAYS TP 0F2H1 STU-S 4.5-1M	STU-S	1790	16	111	2184	13
ECO RAYS TP 0F2H1 STU-S 4.5-2M		3510	30.5	115	4368	26
ECO RAYS TP 0F2H1 STU-S 4.7-1M	STU-S	2300	21.5	106	2765	18
ECO RAYS TP 0F2H1 STU-S 4.7-2M		4480	40	112	5530	36
ECO RAYS TP 0F2H1 SV 4.5-1M	SV	1850	16	115	2184	13
ECO RAYS TP 0F2H1 SV 4.5-2M		3470	30.5	113	4368	26
ECO RAYS TP 0F2H1 SV 4.7-1M	SV	2270	21.5	105	2765	18
ECO RAYS TP 0F2H1 SV 4.7-2M		4440	40	111	5530	36

LUMINAIRE	OPTIC	RATED LUMINAIRE FLUX* (Tq=25°C, 4000K, lm)	RATED LUMINAIRE POWER* (Tq=25°C, Vin=230Vac, F/DA/DAC, W)	LUMINAIRE EFFICACY (Tq=25°C, lm/W)	RATED LED FLUX* (Tj=85°C, 4000K, lm)	RATED LED POWER* (Tj=85°C, W)
ECO RAYS TP 0F2H1 SV2 4.5-1M	SV2	1890	16	118	2184	13
ECO RAYS TP 0F2H1 SV2 4.5-2M		3540	30.5	116	4368	26
ECO RAYS TP 0F2H1 SV2 4.7-1M	SV2	2310	21.5	107	2765	18
ECO RAYS TP 0F2H1 SV2 4.7-2M		4530	40	113	5530	36
ECO RAYS TP 0F3 STE-M 4.5-1M	STE-M	2560	21.5	119	2950	17
ECO RAYS TP 0F3 STE-M 4.5-2M		4850	39	124	5900	34
ECO RAYS TP 0F3 STE-M 4.7-1M	STE-M	3070	28	109	3735	24
ECO RAYS TP 0F3 STE-M 4.7-2M		6140	52	118	7470	48
ECO RAYS TP 0F3 STE-S 4.5-1M	STE-S	2560	21.5	119	2950	17
ECO RAYS TP 0F3 STE-S 4.5-2M		4850	39	124	5900	34
ECO RAYS TP 0F3 STE-S 4.7-1M	STE-S	3070	28	109	3735	24
ECO RAYS TP 0F3 STE-S 4.7-2M		6140	52	118	7470	48
ECO RAYS TP 0F3 STW 4.5-1M	STW	2560	21.5	119	2950	17
ECO RAYS TP 0F3 STW 4.5-2M		4850	39	124	5900	34
ECO RAYS TP 0F3 STW 4.7-1M	STW	3070	28	109	3735	24
ECO RAYS TP 0F3 STW 4.7-2M		6140	52	118	7470	48

*RATED LUMINAIRE FLUX / RATED LUMINAIRE POWER: Rated data obtained in laboratory.

*RATED LED FLUX / RATED LED POWER: Rated data extrapolated from LED manufacturer datasheet.

Values indicated in this technical sheet are to be considered rated values. Flux tolerance: $\pm 7\%$. Power tolerance: $\pm 5\%$.

Power tolerance with ZHAGA version or power supply D4i/SR: $\pm 10\%$.

The characteristics of the product listed above are subjected to change without notice.



LUMINAIRE	OPTIC	RATED LUMINAIRE FLUX* (Tq=25°C, 3000K, lm)	RATED LUMINAIRE POWER* (Tq=25°C, Vin=230Vac, F/DA/DAC, W)	LUMINAIRE EFFICACY (Tq=25°C, lm/W)	RATED LED FLUX* (Tj=85°C, 3000K, lm)	RATED LED POWER* (Tj=85°C, W)
ECO RAYS TP 0F2H1 S 3.5-2M	S	3330	30.5	109	3980	26
ECO RAYS TP 0F2H1 S 3.7-2M	S	4260	40	106	5040	36
ECO RAYS TP 0F2H1 S05 3.5-1M	S05	1700	16	106	1990	13
ECO RAYS TP 0F2H1 S05 3.5-2M		3330	30.5	109	3980	26
ECO RAYS TP 0F2H1 S05 3.7-1M	S05	2190	21.5	101	2520	18
ECO RAYS TP 0F2H1 S05 3.7-2M		4260	40	106	5040	36
ECO RAYS TP 0F2H1 STU-M 3.5-1M	STU-M	1660	16	103	1990	13
ECO RAYS TP 0F2H1 STU-M 3.5-2M		3260	30.5	106	3980	26
ECO RAYS TP 0F2H1 STU-M 3.7-1M	STU-M	2140	21.5	99	2520	18
ECO RAYS TP 0F2H1 STU-M 3.7-2M		4170	40	104	5040	36
ECO RAYS TP 0F2H1 STU-S 3.5-1M	STU-S	1660	16	103	1990	13
ECO RAYS TP 0F2H1 STU-S 3.5-2M		3260	30.5	106	3980	26
ECO RAYS TP 0F2H1 STU-S 3.7-1M	STU-S	2140	21.5	99	2520	18
ECO RAYS TP 0F2H1 STU-S 3.7-2M		4170	40	104	5040	36
ECO RAYS TP 0F2H1 SV 3.5-1M	SV	1720	16	107	1990	13
ECO RAYS TP 0F2H1 SV 3.5-2M		3230	30.5	105	3980	26
ECO RAYS TP 0F2H1 SV 3.7-1M	SV	2110	21.5	98	2520	18
ECO RAYS TP 0F2H1 SV 3.7-2M		4130	40	103	5040	36



LUMINAIRE	OPTIC	RATED LUMINAIRE FLUX* (Tq=25°C, 3000K, lm)	RATED LUMINAIRE POWER* (Tq=25°C, Vin=230Vac, F/DA/DAC, W)	LUMINAIRE EFFICACY (Tq=25°C, lm/W)	RATED LED FLUX* (Tj=85°C, 3000K, lm)	RATED LED POWER* (Tj=85°C, W)
ECO RAYS TP 0F2H1 SV2 3.5-1M	SV2	1760	16	110	1990	13
ECO RAYS TP 0F2H1 SV2 3.5-2M		3290	30.5	107	3980	26
ECO RAYS TP 0F2H1 SV2 3.7-1M	SV2	2150	21.5	100	2520	18
ECO RAYS TP 0F2H1 SV2 3.7-2M		4210	40	105	5040	36
ECO RAYS TP 0F3 STE-M 3.5-1M	STE-M	2380	21.5	110	2701	17
ECO RAYS TP 0F3 STE-M 3.5-2M		4510	39	115	5402	34
ECO RAYS TP 0F3 STE-M 3.7-1M	STE-M	2860	28	102	3420	24
ECO RAYS TP 0F3 STE-M 3.7-2M		5710	52	109	6840	48
ECO RAYS TP 0F3 STE-S 3.5-1M	STE-S	2380	21.5	110	2701	17
ECO RAYS TP 0F3 STE-S 3.5-2M		4510	39	115	5402	34
ECO RAYS TP 0F3 STE-S 3.7-1M	STE-S	2860	28	102	3420	24
ECO RAYS TP 0F3 STE-S 3.7-2M		5710	52	109	6840	48
ECO RAYS TP 0F3 STW 3.5-1M	STW	2380	21.5	110	2701	17
ECO RAYS TP 0F3 STW 3.5-2M		4510	39	115	5402	34
ECO RAYS TP 0F3 STW 3.7-1M	STW	2860	28	102	3420	24
ECO RAYS TP 0F3 STW 3.7-2M		5710	52	109	6840	48

*RATED LUMINAIRE FLUX / RATED LUMINAIRE POWER: Rated data obtained in laboratory.

*RATED LED FLUX / RATED LED POWER: Rated data extrapolated from LED manufacturer datasheet.

Values indicated in this technical sheet are to be considered rated values. Flux tolerance: ±7%. Power tolerance: ±5%.

Power tolerance with ZHAGA version or power supply D4i/SR: ±10%.

The characteristics of the product listed above are subjected to change without notice.