



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: Asymmetrical optic for very narrow urban streets or highway entrance/exit turns. S05/S07: Asymmetrical optic for street, urban and green areas lighting. STA: Asymmetrical optic for wide urban road and cycle-path lighting. S: Symmetrical optic for urban lighting and green areas. Colour temperature: 4000K, 3000K, 2700K, 2200K (others in option) CRI ≥ 70 LOR= 100%, DLOR= 100%, ULOR= 0% Photobiological safety class: EXEMPT GROUP LED source efficiency: 185 lm/W @ 140mA, 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
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 12kV With SPD: CL.II: 10kV / 10kV CM/DM CL.I: 12kV / 10kV CM/DM Without SPD: CL.II: 10kV / 6kV CM/DM CL.I: 10kV / 6kV CM/DM
SPD (optional)	12kV-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. 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)	>100.000hr L90B10 >100.000hr L90, TM-21

MATERIALS

Fixing Body	Die-cast aluminium UNI EN1706 powder painted.
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	LED CURRENT (mA)	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 5P5 7040.060-1M	STE-M STU-M STA SV	60	1610	11.9	135.2	1847	9.4	
ECO RAYS TP 5P5 7040.060-2M			3150	23	136.9	3694	18.8	
ECO RAYS TP 5P5 7040.100-1M		100	2640	19.1	138.2	3023	16	
ECO RAYS TP 5P5 7040.100-2M			5140	37.4	137.4	6046	31.9	
ECO RAYS TP 5P5 7040.140-1M			140	3650	26.8	136.1	4150	22.7
ECO RAYS TP 5P5 7040.140-2M				7050	52.3	134.7	8299	45.4
ECO RAYS TP 5P5 7040.060-1M	S05 S07 STE-S STU-S	60	1590	11.9	133.6	1847	9.4	
ECO RAYS TP 5P5 7040.060-2M			3080	23	133.9	3694	18.8	
ECO RAYS TP 5P5 7040.100-1M		100	2590	19.1	135.6	3023	16	
ECO RAYS TP 5P5 7040.100-2M			5020	37.4	134.2	6046	31.9	
ECO RAYS TP 5P5 7040.140-1M			140	3560	26.8	132.8	4150	22.7
ECO RAYS TP 5P5 7040.140-2M				6890	52.3	131.7	8299	45.4
ECO RAYS TP 5P5 7040.060-1M	STW	60	1660	11.9	139.4	1847	9.4	
ECO RAYS TP 5P5 7040.060-2M			3220	23	140	3694	18.8	
ECO RAYS TP 5P5 7040.100-1M		100	2710	19.1	141.8	3023	16	
ECO RAYS TP 5P5 7040.100-2M			5250	37.4	140.3	6046	31.9	
ECO RAYS TP 5P5 7040.140-1M			140	3730	26.8	139.1	4150	22.7
ECO RAYS TP 5P5 7040.140-2M				7200	52.3	137.6	8299	45.4
ECO RAYS TP 5P5 7040.060-2M	S	60	3160	23	137.3	3694	18.8	
ECO RAYS TP 5P5 7040.100-2M		100	5160	37.4	137.9	6046	31.9	
ECO RAYS TP 5P5 7040.140-2M		140	7080	52.3	135.3	8299	45.4	

*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: $\pm 7\%$.

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	LED CURRENT (mA)	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 5P5 7030.060-1M	STE-M STU-M STA SV	60	1510	11.9	126.8	1736	9.4	
ECO RAYS TP 5P5 7030.060-2M			2960	23	128.6	3472	18.8	
ECO RAYS TP 5P5 7030.100-1M		100	2480	19.1	129.8	2842	16	
ECO RAYS TP 5P5 7030.100-2M			4830	37.4	129.1	5683	31.9	
ECO RAYS TP 5P5 7030.140-1M			140	3430	26.8	127.9	3901	22.7
ECO RAYS TP 5P5 7030.140-2M				6630	52.3	126.7	7801	45.4
ECO RAYS TP 5P5 7030.060-1M	S05 S07 STE-S STU-S	60	1490	11.9	125.2	1736	9.4	
ECO RAYS TP 5P5 7030.060-2M			2890	23	125.6	3472	18.8	
ECO RAYS TP 5P5 7030.100-1M		100	2430	19.1	127.2	2842	16	
ECO RAYS TP 5P5 7030.100-2M			4720	37.4	126.2	5683	31.9	
ECO RAYS TP 5P5 7030.140-1M			140	3350	26.8	125	3901	22.7
ECO RAYS TP 5P5 7030.140-2M				6480	52.3	123.9	7801	45.4
ECO RAYS TP 5P5 7030.060-1M	STW	60	1560	11.9	131	1736	9.4	
ECO RAYS TP 5P5 7030.060-2M			3030	23	131.7	3472	18.8	
ECO RAYS TP 5P5 7030.100-1M		100	2550	19.1	133.5	2842	16	
ECO RAYS TP 5P5 7030.100-2M			4940	37.4	132	5683	31.9	
ECO RAYS TP 5P5 7030.140-1M			140	3510	26.8	130.9	3901	22.7
ECO RAYS TP 5P5 7030.140-2M				6770	52.3	129.4	7801	45.4
ECO RAYS TP 5P5 7030.060-2M	S	60	2970	23	129.1	3472	18.8	
ECO RAYS TP 5P5 7030.100-2M		100	4850	37.4	129.6	5683	31.9	
ECO RAYS TP 5P5 7030.140-2M		140	6660	52.3	127.3	7801	45.4	

*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: $\pm 7\%$.

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	LED CURRENT (mA)	RATED LUMINAIRE FLUX* (Tq=25°C, 2700K, 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, 2700K, lm)	RATED LED POWER* (Tj=85°C, W)	
ECO RAYS TP 5P5 7027.060-1M	STE-M STU-M STA SV	60	1450	11.9	121.8	1662	9.4	
ECO RAYS TP 5P5 7027.060-2M			2840	23	123.4	3324	18.8	
ECO RAYS TP 5P5 7027.100-1M		100	2380	19.1	124.6	2721	16	
ECO RAYS TP 5P5 7027.100-2M			4630	37.4	123.7	5441	31.9	
ECO RAYS TP 5P5 7027.140-1M			140	3290	26.8	122.7	3735	22.7
ECO RAYS TP 5P5 7027.140-2M				6350	52.3	121.4	7469	45.4
ECO RAYS TP 5P5 7027.060-1M	S05 S07 STE-S STU-S	60	1430	11.9	120.1	1662	9.4	
ECO RAYS TP 5P5 7027.060-2M			2770	23	120.4	3324	18.8	
ECO RAYS TP 5P5 7027.100-1M		100	2330	19.1	121.9	2721	16	
ECO RAYS TP 5P5 7027.100-2M			4520	37.4	120.8	5441	31.9	
ECO RAYS TP 5P5 7027.140-1M			140	3200	26.8	119.4	3735	22.7
ECO RAYS TP 5P5 7027.140-2M				6200	52.3	118.5	7469	45.4
ECO RAYS TP 5P5 7027.060-1M	STW	60	1490	11.9	125.2	1662	9.4	
ECO RAYS TP 5P5 7027.060-2M			2900	23	126	3324	18.8	
ECO RAYS TP 5P5 7027.100-1M		100	2440	19.1	127.7	2721	16	
ECO RAYS TP 5P5 7027.100-2M			4730	37.4	126.4	5441	31.9	
ECO RAYS TP 5P5 7027.140-1M			140	3360	26.8	125.3	3735	22.7
ECO RAYS TP 5P5 7027.140-2M				6480	52.3	123.9	7469	45.4
ECO RAYS TP 5P5 7027.060-2M	S	60	2850	23	123.9	3324	18.8	
ECO RAYS TP 5P5 7027.100-2M		100	4640	37.4	124	5441	31.9	
ECO RAYS TP 5P5 7027.140-2M		140	6370	52.3	121.7	7469	45.4	

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

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

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

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

LUMINAIRE	OPTIC	LED CURRENT (mA)	RATED LUMINAIRE FLUX* (Tq=25°C, 2200K, 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, 2200K, lm)	RATED LED POWER* (Tj=85°C, W)	
ECO RAYS TP 5P5 7022.060-1M	STE-M STU-M STA SV	60	1300	11.9	109.2	1496	9.4	
ECO RAYS TP 5P5 7022.060-2M			2550	23	110.8	2992	18.8	
ECO RAYS TP 5P5 7022.100-1M		100	2140	19.1	112	2449	16	
ECO RAYS TP 5P5 7022.100-2M			4160	37.4	111.2	4897	31.9	
ECO RAYS TP 5P5 7022.140-1M			140	2960	26.8	110.4	3361	22.7
ECO RAYS TP 5P5 7022.140-2M				5710	52.3	109.1	6722	45.4
ECO RAYS TP 5P5 7022.060-1M	S05 S07 STE-S STU-S	60	1290	11.9	108.4	1496	9.4	
ECO RAYS TP 5P5 7022.060-2M			2490	23	108.2	2992	18.8	
ECO RAYS TP 5P5 7022.100-1M		100	2100	19.1	109.9	2449	16	
ECO RAYS TP 5P5 7022.100-2M			4070	37.4	108.8	4897	31.9	
ECO RAYS TP 5P5 7022.140-1M			140	2880	26.8	107.4	3361	22.7
ECO RAYS TP 5P5 7022.140-2M				5580	52.3	106.6	6722	45.4
ECO RAYS TP 5P5 7022.060-1M	STW	60	1340	11.9	112.6	1496	9.4	
ECO RAYS TP 5P5 7022.060-2M			2610	23	113.4	2992	18.8	
ECO RAYS TP 5P5 7022.100-1M		100	2200	19.1	115.1	2449	16	
ECO RAYS TP 5P5 7022.100-2M			4250	37.4	113.6	4897	31.9	
ECO RAYS TP 5P5 7022.140-1M			140	3020	26.8	112.6	3361	22.7
ECO RAYS TP 5P5 7022.140-2M				5830	52.3	111.4	6722	45.4
ECO RAYS TP 5P5 7022.060-2M	S	60	2560	23	111.3	2992	18.8	
ECO RAYS TP 5P5 7022.100-2M		100	4180	37.4	111.7	4897	31.9	
ECO RAYS TP 5P5 7022.140-2M		140	5730	52.3	109.5	6722	45.4	

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

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

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