



# I-TRON MICRO

## I-TRON MICRO

### MAIN CHARACTERISTICS

|                                 |  |
|---------------------------------|--|
| <b>Applications</b>             | Street lighting.   |
| <b>Optic</b>                    | <p>STE-M/S: Asymmetrical optic for suburban street lighting.<br/>                 STU-M/S: Asymmetrical optic for street, urban and cycle-path lighting.<br/>                 STW: Asymmetrical optic for wide urban and suburban road lighting, specific for wet asphalts.<br/>                 SV: Asymmetrical optic for very narrow urban streets or highway entrance/exit turns.<br/>                 S05/S07: Asymmetrical optic for street, urban and green areas lighting.<br/>                 STA: Asymmetrical optic for wide urban road and cycle-path lighting.<br/>                 Colour temperature: 4000K, 3000K, 2700K, 2200K (others in option)   CRI ≥ 70<br/>                 LOR= 100%, DLOR= 100%, ULOR= 0%<br/>                 Photobiological safety class: EXEMPT GROUP<br/>                 LED source efficiency: 185 lm/W @ 140mA, Tj=85°C, 4000K</p> |
| <b>Insulation class</b>         | II, I  |
| <b>Protection degree</b>        | IP66/IP67   IK09 total   |
| <b>Dimensions</b>               | See the drawing  |
| <b>Weight</b>                   | max 4.3 kg   |
| <b>Exposed surface</b>          | Side: 0.024m <sup>2</sup> – Top: 0.09 m <sup>2</sup>   SCx: 0.033m <sup>2</sup>  |
| <b>Mounting</b>                 | Bracket / Post-top: Ø33mm ÷ Ø60mm   Ø60mm ÷ Ø76mm(optional)  |
| <b>Tilt Angle</b>               | Post-top: -5°/+25° (step 5°)   Bracket: -25°/+10° (step 5°)  |
| <b>LED Modules</b>              | Removable / Replaceable.   |
| <b>Gear tray</b>                | Tool-free opening of wiring compartment, integrated in the luminaire, separate from the optic unit. Removable wiring   |
| <b>Operating temp.</b>          | -40°C / +55°C  |
| <b>Storage temp</b>             | -40°C / +80°C  |
| <b>Main reference standards</b> | EN 60598-1, EN 60598-2-3, EN 62471, PD EPRS 003 / EN 62722-2-1 2016, EN 55015, EN 61547, EN 61000-3-2, EN-61000-3-3  |



### ELECTRICAL CHARACTERISTICS

|  |  |
|--|--|
| <b>Rated voltage</b>                   | 220+240V 50/60Hz (Standard tolerance +/-10%, other voltages and tolerances upon request)   |
| <b>Power factor</b>                    | >0,95 (at full load - F, DA, DAC)  |
| <b>Mains connection</b>                | terminal block for cables max section 4mm <sup>2</sup>   |
| <b>Surge protection</b>                | Up to 12kV<br>With SPD: CL.II: 10kV / 10kV CM/DM   CL.I: 12kV / 10kV CM/DM<br>Without SPD: CL.II: 10kV / 6kV CM/DM   CL.I: 10kV / 6kV CM/DM  |
| <b>SPD (optional)</b>                  | 12kV-10kA, type 2+3, with LED signal and thermo fuse to disconnect load at the end of life.  |
| <b>Control system (options)</b>        | <p>F: Fixed power not dimmable.<br/>                 DA: Automatic dimming (virtual midnight) with default profile.<br/>                 DAC: Custom DA profile.<br/>                 FLC: Constant light flux.<br/>                 DALI: Digital dimming interface DALI.<br/>                 NEMA: Socket 7 pin (ANSI C136.41).<br/>                 ZHAGA: Socket 4 pin (ZHAGA Book 18).</p> |
| <b>Optical unit lifetime (Tq=25°C)</b> | >100.000hr L90B10<br>>100.000hr L90, TM-21   |

### MATERIALS

|                     |   |
|---------------------|---|
| <b>Fixing</b>       | Die-cast aluminum UNI EN1706 powder painted.  |
| <b>Lower frame</b>  |   |
| <b>Upper canopy</b> |   |
| <b>Closure hook</b> | AISI 301 stainless steel springs.   |
| <b>Optic</b>        | 99.85% aluminum with a surface finish in 99.95% with vacuum-sealed deposition. Aluminum grade class A+ (DIN EN 16268) |
| <b>Screen</b>       | Flat tempered glass, 4mm thickness high transparency.   |
| <b>Cable gland</b>  | Plastic M20x1.5 - IP68  |
| <b>Gasket</b>       | Polyurethane without joints.  |
| <b>Colour</b>       | 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) |
|------------------------------|-------------------------------------|------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|
| I-TRON MICRO 5P5 7040.060-1M | STE-M<br>STU-M<br>STW<br>SV         | 60               | 1760                                       | 11.9  | 147.8                              | 1847                                 | 9.4                           |
| I-TRON MICRO 5P5 7040.060-2M |                                     |                  | 3550                                       | 23  | 154.3                              | 3694                                 | 18.8                          |
| I-TRON MICRO 5P5 7040.100-1M |                                     | 100              | 2890                                       | 19.1  | 151.3                              | 3023                                 | 16                            |
| I-TRON MICRO 5P5 7040.100-2M |                                     |                  | 5790                                       | 37.4  | 154.8                              | 6046                                 | 31.9                          |
| I-TRON MICRO 5P5 7040.140-1M |                                     | 140              | 4000                                       | 26.8  | 149.2                              | 4150                                 | 22.7                          |
| I-TRON MICRO 5P5 7040.140-2M |                                     |                  | 7930                                       | 52.3  | 151.6                              | 8299                                 | 45.4                          |
| I-TRON MICRO 5P5 7040.180-1M |                                     | 180              | 5000                                       | 34.8  | 143.6                              | 5227                                 | 29.6                          |
| I-TRON MICRO 5P5 7040.180-2M |                                     |                  | 9870                                       | 67.7  | 145.7                              | 10453                                | 59.1                          |
| I-TRON MICRO 5P5 7040.060-1M | S05<br>S07<br>STA<br>STE-S<br>STU-S | 60               | 1730                                       | 11.9  | 145.3                              | 1847                                 | 9.4                           |
| I-TRON MICRO 5P5 7040.060-2M |                                     |                  | 3460                                       | 23  | 150.4                              | 3694                                 | 18.8                          |
| I-TRON MICRO 5P5 7040.100-1M |                                     | 100              | 2830                                       | 19.1  | 148.1                              | 3023                                 | 16                            |
| I-TRON MICRO 5P5 7040.100-2M |                                     |                  | 5650                                       | 37.4  | 151                                | 6046                                 | 31.9                          |
| I-TRON MICRO 5P5 7040.140-1M |                                     | 140              | 3900                                       | 26.8  | 145.5                              | 4150                                 | 22.7                          |
| I-TRON MICRO 5P5 7040.140-2M |                                     |                  | 7760                                       | 52.3  | 148.3                              | 8299                                 | 45.4                          |
| I-TRON MICRO 5P5 7040.180-1M |                                     | 180              | 4870                                       | 34.8  | 139.9                              | 5227                                 | 29.6                          |
| I-TRON MICRO 5P5 7040.180-2M |                                     |                  | 9670                                       | 67.7  | 142.8                              | 10453                                | 59.1                          |

\*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: ±7%.

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

Meets Dark Sky requirements when equipped with LEDs with a colour temperature of 3000K or less.

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) |
|------------------------------|-------------------------------------|------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|
| I-TRON MICRO 5P5 7030.060-1M | STE-M<br>STU-M<br>STW<br>SV         | 60               | 1660                                       | 11.9  | 139.4                              | 1736                                 | 9.4                           |
| I-TRON MICRO 5P5 7030.060-2M |                                     |                  | 3340                                       | 23  | 145.2                              | 3472                                 | 18.8                          |
| I-TRON MICRO 5P5 7030.100-1M |                                     | 100              | 2720                                       | 19.1  | 142.4                              | 2842                                 | 16                            |
| I-TRON MICRO 5P5 7030.100-2M |                                     |                  | 5440                                       | 37.4  | 145.4                              | 5683                                 | 31.9                          |
| I-TRON MICRO 5P5 7030.140-1M |                                     | 140              | 3760                                       | 26.8  | 140.2                              | 3901                                 | 22.7                          |
| I-TRON MICRO 5P5 7030.140-2M |                                     |                  | 7450                                       | 52.3  | 142.4                              | 7801                                 | 45.4                          |
| I-TRON MICRO 5P5 7030.180-1M |                                     | 180              | 4700                                       | 34.8  | 135                                | 4913                                 | 29.6                          |
| I-TRON MICRO 5P5 7030.180-2M |                                     |                  | 9280                                       | 67.7  | 137                                | 9826                                 | 59.1                          |
| I-TRON MICRO 5P5 7030.060-1M | S05<br>S07<br>STA<br>STE-S<br>STU-S | 60               | 1630                                       | 11.9  | 136.9                              | 1736                                 | 9.4                           |
| I-TRON MICRO 5P5 7030.060-2M |                                     |                  | 3260                                       | 23  | 141.7                              | 3472                                 | 18.8                          |
| I-TRON MICRO 5P5 7030.100-1M |                                     | 100              | 2660                                       | 19.1  | 139.2                              | 2842                                 | 16                            |
| I-TRON MICRO 5P5 7030.100-2M |                                     |                  | 5310                                       | 37.4  | 141.9                              | 5683                                 | 31.9                          |
| I-TRON MICRO 5P5 7030.140-1M |                                     | 140              | 3670                                       | 26.8  | 136.9                              | 3901                                 | 22.7                          |
| I-TRON MICRO 5P5 7030.140-2M |                                     |                  | 7290                                       | 52.3  | 139.3                              | 7801                                 | 45.4                          |
| I-TRON MICRO 5P5 7030.180-1M |                                     | 180              | 4580                                       | 34.8  | 131.6                              | 4913                                 | 29.6                          |
| I-TRON MICRO 5P5 7030.180-2M |                                     |                  | 9090                                       | 67.7  | 134.2                              | 9826                                 | 59.1                          |

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

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Meets Dark Sky requirements when equipped with LEDs with a colour temperature of 3000K or less.

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) |
|------------------------------|-------------------------------------|------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|
| I-TRON MICRO 5P5 7027.060-1M | STE-M<br>STU-M<br>STW<br>SV         | 60               | 1590                                       | 11.9  | 133.6                              | 1662                                 | 9.4                           |
| I-TRON MICRO 5P5 7027.060-2M |                                     |                  | 3200                                       | 23  | 139.1                              | 3324                                 | 18.8                          |
| I-TRON MICRO 5P5 7027.100-1M |                                     | 100              | 2600                                       | 19.1  | 136.1                              | 2721                                 | 16                            |
| I-TRON MICRO 5P5 7027.100-2M |                                     |                  | 5210                                       | 37.4  | 139.3                              | 5441                                 | 31.9                          |
| I-TRON MICRO 5P5 7027.140-1M |                                     | 140              | 3600                                       | 26.8  | 134.3                              | 3735                                 | 22.7                          |
| I-TRON MICRO 5P5 7027.140-2M |                                     |                  | 7140                                       | 52.3  | 136.5                              | 7469                                 | 45.4                          |
| I-TRON MICRO 5P5 7027.180-1M |                                     | 180              | 4500                                       | 34.8  | 129.3                              | 4704                                 | 29.6                          |
| I-TRON MICRO 5P5 7027.180-2M |                                     |                  | 8890                                       | 67.7  | 131.3                              | 9408                                 | 59.1                          |
| I-TRON MICRO 5P5 7027.060-1M | S05<br>S07<br>STA<br>STE-S<br>STU-S | 60               | 1560                                       | 11.9  | 131                                | 1662                                 | 9.4                           |
| I-TRON MICRO 5P5 7027.060-2M |                                     |                  | 3120                                       | 23  | 135.6                              | 3324                                 | 18.8                          |
| I-TRON MICRO 5P5 7027.100-1M |                                     | 100              | 2550                                       | 19.1  | 133.5                              | 2721                                 | 16                            |
| I-TRON MICRO 5P5 7027.100-2M |                                     |                  | 5090                                       | 37.4  | 136                                | 5441                                 | 31.9                          |
| I-TRON MICRO 5P5 7027.140-1M |                                     | 140              | 3510                                       | 26.8  | 130.9                              | 3735                                 | 22.7                          |
| I-TRON MICRO 5P5 7027.140-2M |                                     |                  | 6980                                       | 52.3  | 133.4                              | 7469                                 | 45.4                          |
| I-TRON MICRO 5P5 7027.180-1M |                                     | 180              | 4380                                       | 34.8  | 125.8                              | 4704                                 | 29.6                          |
| I-TRON MICRO 5P5 7027.180-2M |                                     |                  | 8700                                       | 67.7  | 128.5                              | 9408                                 | 59.1                          |

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\*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%.

Meets Dark Sky requirements when equipped with LEDs with a colour temperature of 3000K or less.

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| 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) |
|------------------------------|-------------------------------------|------------------|--|---|------------------------------------|--------------------------------------|-------------------------------|
| I-TRON MICRO 5P5 7022.060-1M | STE-M<br>STU-M<br>STW<br>SV         | 60               | 1430                                       | 11.9  | 120.1                              | 1496                                 | 9.4                           |
| I-TRON MICRO 5P5 7022.060-2M |                                     |                  | 2880                                       | 23  | 125.2                              | 2992                                 | 18.8                          |
| I-TRON MICRO 5P5 7022.100-1M |                                     | 100              | 2340                                       | 19.1  | 122.5                              | 2449                                 | 16                            |
| I-TRON MICRO 5P5 7022.100-2M |                                     |                  | 4690                                       | 37.4  | 125.4                              | 4897                                 | 31.9                          |
| I-TRON MICRO 5P5 7022.140-1M |                                     | 140              | 3240                                       | 26.8  | 120.8                              | 3361                                 | 22.7                          |
| I-TRON MICRO 5P5 7022.140-2M |                                     |                  | 6420                                       | 52.3  | 122.7                              | 6722                                 | 45.4                          |
| I-TRON MICRO 5P5 7022.180-1M |                                     | 180              | 4050                                       | 34.8  | 116.3                              | 4233                                 | 29.6                          |
| I-TRON MICRO 5P5 7022.180-2M |                                     |                  | 8000                                       | 67.7  | 118.1                              | 8467                                 | 59.1                          |
| I-TRON MICRO 5P5 7022.060-1M | S05<br>S07<br>STA<br>STE-S<br>STU-S | 60               | 1400                                       | 11.9  | 117.6                              | 1496                                 | 9.4                           |
| I-TRON MICRO 5P5 7022.060-2M |                                     |                  | 2810                                       | 23  | 122.1                              | 2992                                 | 18.8                          |
| I-TRON MICRO 5P5 7022.100-1M |                                     | 100              | 2290                                       | 19.1  | 119.8                              | 2449                                 | 16                            |
| I-TRON MICRO 5P5 7022.100-2M |                                     |                  | 4580                                       | 37.4  | 122.4                              | 4897                                 | 31.9                          |
| I-TRON MICRO 5P5 7022.140-1M |                                     | 140              | 3160                                       | 26.8  | 117.9                              | 3361                                 | 22.7                          |
| I-TRON MICRO 5P5 7022.140-2M |                                     |                  | 6290                                       | 52.3  | 120.2                              | 6722                                 | 45.4                          |
| I-TRON MICRO 5P5 7022.180-1M |                                     | 180              | 3940                                       | 34.8  | 113.2                              | 4233                                 | 29.6                          |
| I-TRON MICRO 5P5 7022.180-2M |                                     |                  | 7830                                       | 67.7  | 115.6                              | 8467                                 | 59.1                          |

\*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%.

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