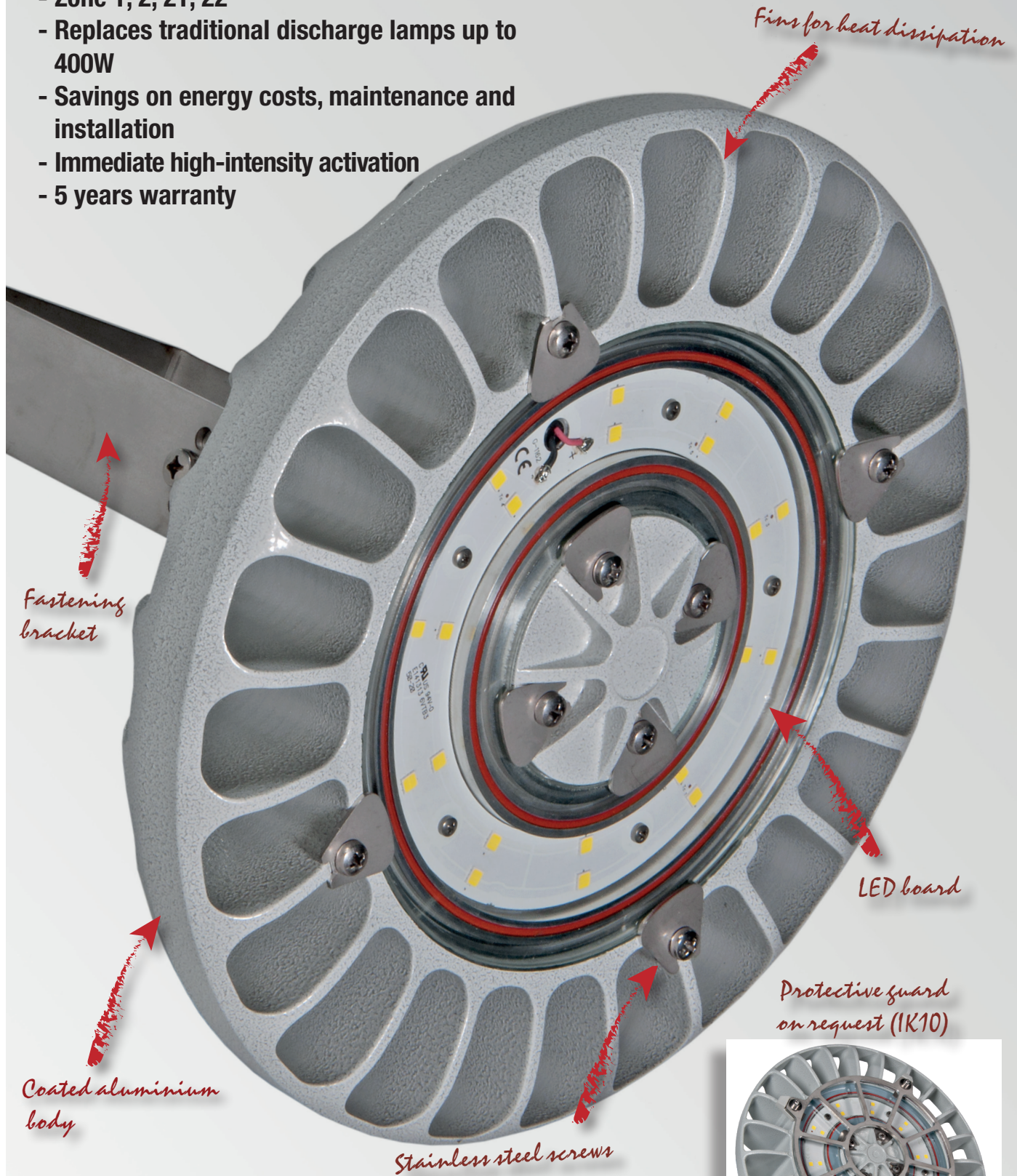


- Zone 1, 2, 21, 22
- Replaces traditional discharge lamps up to 400W
- Savings on energy costs, maintenance and installation
- Immediate high-intensity activation
- 5 years warranty



FLOWEX series High Bay LED lighting fixtures

FlowEx series lighting fixtures represent the most recent evolution of low-bay and high-bay LED lighting for environments with potentially explosive atmospheres.

The FlowEx series is made up of three lamp body sizes and is the LED alternative for all those areas where it was customary for low and medium power discharge lighting fixtures up to 400W to be installed.

The design of the finned body, made of aluminium alloy, acts as an excellent heat sink for the LED board, allowing fast and effective dissipation of the heat generated during normal operation of the LEDs themselves. Furthermore, the geometric structure of the cooling fins is designed to minimise the deposits of combustible dust and allow air or water present in the surrounding area to self-clean the lighting fixture.

Based on the principles of Lean manufacturing, the design resulted in a lighting fixture that is light and easy to install, yet robust and durable at the same time.

They feature a high-quality die-cast aluminium body and a glass diffuser which is resistant to impact and high temperatures.

Available in different sizes and with a wide range of voltage and power features, the FlowEx series is optimally designed and certified for the area of installation.

The use of LED dual-die technology and high-power LED boards provides a lumen output from 4.800 lm to 28.000 lm, making the range highly efficient and long lasting in terms of its electronics and lighting technology.

Sectors of application:



CERTIFICATE DATA

| | | | |
|----------------------------------|---|---|---|
| Classification: | Group II | Category 2GD/3G | |
| Installation: EN 60079.14 | zone 1, 2, 21, 22 FLOWEX-ME | zone 2, 21, 22 FLOWEX-MN | |
| Marking: | CE 0722 Ex II 2GD - Ex db eb mb IIC T.. Gb - Ex tb IIIC T..°C Db - IP66 | | FLOWEX-ME |
| | CE Ex II 3G - Ex nR IIC T.. Gc CE 0722 Ex II 2D - Ex tb IIIC T..°C Db - IP66 | | FLOWEX-MN |
| Certificate: | ATEX | CML 21 ATEX 3606X | FLOWEX-ME |
| | ATEX ATEX | CML 21 ATEX 4607X CML 21 ATEX 3610X | FLOWEX-MN |
| | IEC Ex | CML 21.0070X | For all IEC Ex, UKEX certification data, download the certificate from www.cortemgroup.com |
| | UKEX | AVAILABLE | |
| | UL | PENDING | |
| Standards: | CENELEC EN60079-0: 2018, EN60079-1:2014, EN60079-7: 2015+A1:2018, EN60079-15: 2015/2019, EN60079-18: 2015+A1:2017, EN60079-31: 2014 and EUROPEAN DIRECTIVE 2014/34/EU. IEC60079-0: 2017, IEC60079-7: 2017, IEC60079-15: 2017, IEC 60079-18: 2017, IEC60079-31: 2013 | | |
| Temperature class: | For all permitted ambient temperature classes, please see the "Selection tables" | | |
| Ambient temperature: | -40°C +60°C Esempio cod. FLOWEX-ME-080070 | For all permitted ambient temperature ranges, please see the "Selection tables" | |
| | -60°C +60°C Example cod. FLOWEX-ME-080070/C | | |
| Degree of protection: | IP66 | | |

FLOWEX series High Bay LED lighting fixtures



ORIGINAL PRODUCT



For more information on electrical connectors

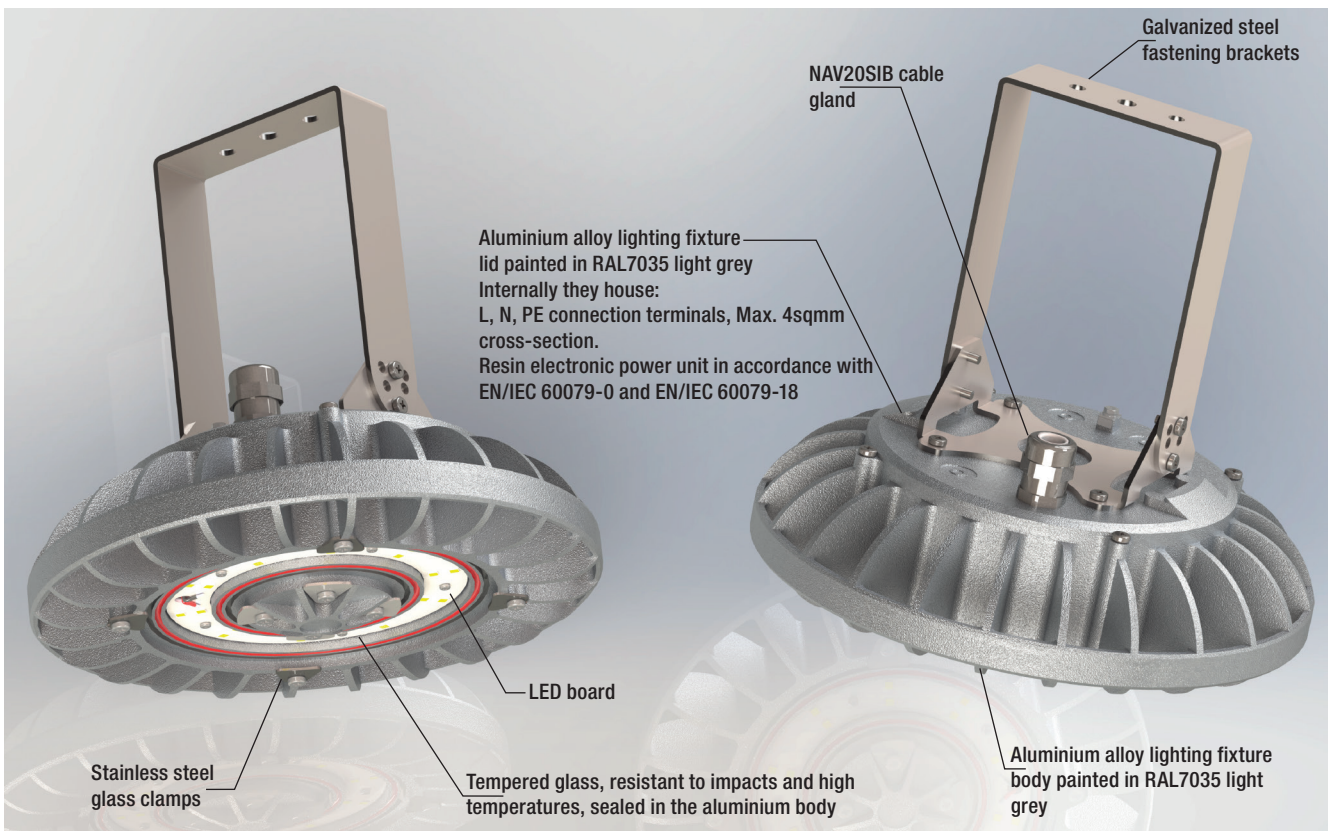


NO PHOTOBIOLOGICAL RISK
(IEC / EN 62471 STANDARD)

MECHANICAL FEATURES

| | |
|------------------------------|---|
| Body: | Aluminium alloy with low copper content. With cooling fins for high levels of heat dissipation |
| Front glass: | Tempered glass, resistant to high temperatures and knocks |
| Seals: | Silicone resistant to acids, hydrocarbons and high temperatures |
| Fastening bracket: | Galvanized steel |
| Screws: | Stainless steel |
| Entry points: | Standard version with 1 hole Ø20 complete with 1 NAV20SIB. For the other versions, cable glands are on request |
| Coating: | Polyester RAL 7035 (Light grey) |
| Corrosion Resistance: | The STANDARD of the aluminium alloy used by Cortem has passed the tests required by the Standard EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test) |

FLOWEX-080 LIGHTING FIXTURE IN DETAIL

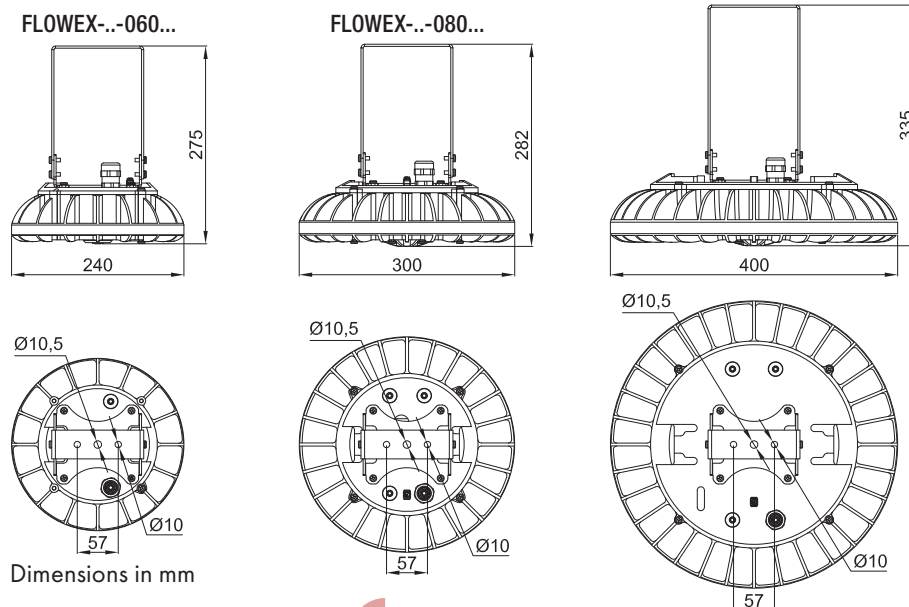


FLOWEX series High Bay LED lighting fixtures

FLOWEX series selection table

| Code | Real power Watt | Rated power Watt | Temperature class / Maximum surface temperature | | | | Lumen lm | Light intensity cd | Overall efficiency Lm/W | Weight kg |  mm | |
|-------------------|------------------|------------------|---|-----------|------------|------------|------------|--------------------|-------------------------|-----------|---|-------------|
| | | | TA=+40°C | TA=+50°C | TA=+55°C | TA=+60°C | | | | | | |
| Zone 1, 2, 21, 22 | FLOWEX-ME-060030 | 32,8 | 30 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 4785 | 1700 | 146 | 3,2 | 285x245x135 |
| | FLOWEX-ME-060040 | 38,8 | 40 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 5531 | 1966 | 143 | 3,2 | 285x245x135 |
| | FLOWEX-ME-060050 | 46,7 | 50 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 6389 | 2273 | 137 | 3,2 | 285x245x135 |
| | FLOWEX-ME-060060 | 55,6 | 60 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 7285 | 2592 | 131 | 3,2 | 285x245x135 |
| | FLOWEX-ME-080070 | 69,1 | 70 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 9547 | 3438 | 138 | 4,2 | 305x305x140 |
| | FLOWEX-ME-080080 | 79,4 | 80 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 10646 | 3834 | 134 | 4,2 | 305x305x140 |
| | FLOWEX-ME-080090 | 89,2 | 90 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 11641 | 4197 | 129 | 4,2 | 305x305x140 |
| | FLOWEX-ME-080100 | 101,7 | 100 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 12708 | 4582 | 125 | 4,2 | 305x305x140 |
| | FLOWEX-ME-100120 | 117,0 | 120 | T6 / 74°C | T5 / 84°C | T5 / 89°C | T5 / 94°C | 17687 | 6221 | 151 | 7,8 | 405x405x145 |
| | FLOWEX-ME-100140 | 136,5 | 140 | T6 / 74°C | T5 / 84°C | T5 / 89°C | T5 / 94°C | 20154 | 7086 | 148 | 7,8 | 405x405x145 |
| | FLOWEX-ME-100160 | 156,6 | 160 | T6 / 74°C | T5 / 84°C | T5 / 89°C | T5 / 94°C | 22422 | 7882 | 143 | 7,8 | 405x405x145 |
| | FLOWEX-ME-100180 | 173,6 | 180 | T5 / 85°C | T5 / 95°C | T4 / 100°C | T4 / 105°C | 24218 | 8513 | 140 | 7,8 | 405x405x145 |
| FLOWEX-ME-100200 | 190,1 | 200 | T5 / 85°C | T5 / 95°C | T4 / 100°C | T4 / 105°C | 25709 | 9040 | 135 | 7,8 | 405x405x145 | |
| FLOWEX-ME-100220 | 214,2 | 220 | T5 / 85°C | T5 / 95°C | T4 / 100°C | T4 / 105°C | 27961 | 9837 | 131 | 7,8 | 405x405x145 | |
| Zone 2, 21, 22 | FLOWEX-MN-060030 | 32,8 | 30 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 4784 | 1700 | 146 | 3,2 | 285x245x135 |
| | FLOWEX-MN-060040 | 38,8 | 40 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 5531 | 1966 | 143 | 3,2 | 285x245x135 |
| | FLOWEX-MN-060050 | 46,7 | 50 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 6389 | 2273 | 137 | 3,2 | 285x245x135 |
| | FLOWEX-MN-060060 | 55,6 | 60 | T6 / 73°C | T5 / 83°C | T5 / 88°C | T5 / 93°C | 7285 | 2592 | 131 | 3,2 | 285x245x135 |
| | FLOWEX-MN-080070 | 69,1 | 70 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 9547 | 3438 | 138 | 4,2 | 305x305x140 |
| | FLOWEX-MN-080080 | 79,4 | 80 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 10646 | 3834 | 134 | 4,2 | 305x305x140 |
| | FLOWEX-MN-080090 | 89,2 | 90 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 11641 | 4197 | 129 | 4,2 | 305x305x140 |
| | FLOWEX-MN-080100 | 101,7 | 100 | T5 / 86°C | T4 / 96°C | T4 / 101°C | T4 / 106°C | 12708 | 4582 | 125 | 4,2 | 305x305x140 |
| | FLOWEX-MN-100120 | 117,0 | 120 | T6 / 74°C | T5 / 84°C | T5 / 89°C | T5 / 94°C | 17687 | 6221 | 151 | 7,8 | 405x405x145 |
| | FLOWEX-MN-100140 | 136,5 | 140 | T6 / 74°C | T5 / 84°C | T5 / 89°C | T5 / 94°C | 20154 | 7086 | 148 | 7,8 | 405x405x145 |
| | FLOWEX-MN-100160 | 156,6 | 160 | T6 / 74°C | T5 / 84°C | T5 / 89°C | T5 / 94°C | 22422 | 7882 | 143 | 7,8 | 405x405x145 |
| | FLOWEX-MN-100180 | 173,6 | 180 | T5 / 85°C | T5 / 95°C | T4 / 100°C | T4 / 105°C | 24218 | 8513 | 140 | 7,8 | 405x405x145 |
| FLOWEX-MN-100200 | 190,1 | 200 | T5 / 85°C | T5 / 95°C | T4 / 100°C | T4 / 105°C | 25709 | 9040 | 135 | 7,8 | 405x405x145 | |
| FLOWEX-MN-100220 | 214,2 | 220 | T5 / 85°C | T5 / 95°C | T4 / 100°C | T4 / 105°C | 27961 | 9837 | 131 | 7,8 | 405x405x145 | |

Dimensional drawings

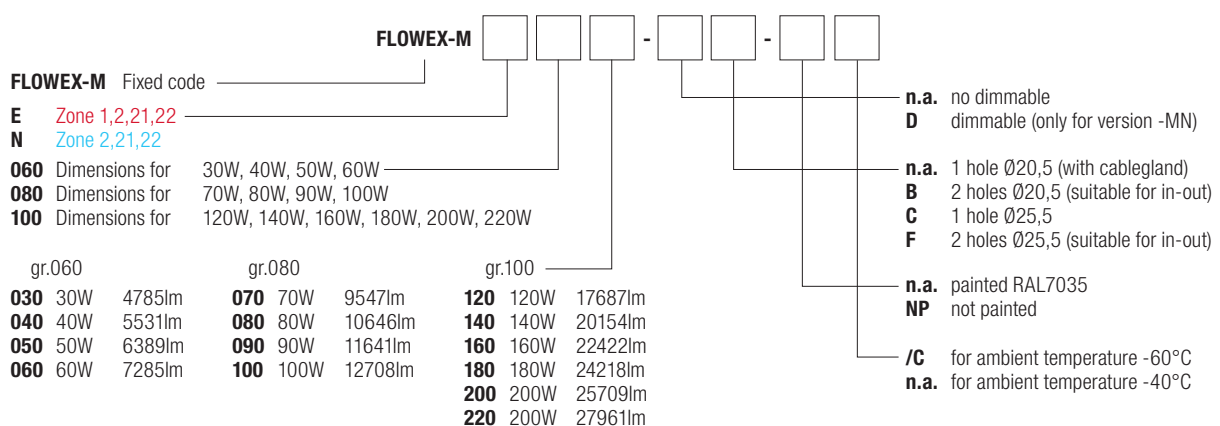


FLOWEX series High Bay LED lighting fixtures

| Electrical features | FLOWEX-..060.. | FLOWEX-..080.. | FLOWEX-..100.. |
|--|---|-----------------------------|-----------------------------|
| Supply voltage: | 100-277 Vac | 100-277 Vac | 100-277 Vac |
| Rated frequency: | 50-60 Hz ±5% | 50-60 Hz ±5% | 50-60 Hz ±5% |
| Rated power consumption* : | ..030 30 W | ..070 70 W | ..120 120 W |
| | ..040 40 W | ..080 80 W | ..140 140 W |
| | ..050 50 W | ..090 90 W | ..160 160 W |
| | ..060 60 W | ..100 100 W | ..180 180 W |
| | - | - | ..200 200 W |
| | - | - | ..220 220 W |
| Connection: | Cable entry directly to the terminal board L, N, PE. Max. 4 sq mm cross-section | | |
| Power factor: | >0.95 | >0.95 | >0.95 |
| Rated current: | ..030 150 mA | ..070 310 mA | ..120 540 mA |
| | ..040 180 mA | ..080 360 mA | ..140 620 mA |
| | ..050 210 mA | ..090 400 mA | ..160 700 mA |
| | ..060 250 mA | ..100 450 mA | ..180 770 mA |
| | - | - | ..200 840 mA |
| | - | - | ..220 950 mA |
| EMC (Electromagnetic Compatibility): | EN 55015, EN 61547, IEC 61000-3-2, IEC 61000-3-3 | | |
| THD (Total Harmonic Distortion): | <8% (230 Vac) | | |
| Over-voltage protection: | 4 kV | 4 kV | 4 kV |
| Driver performance levels: | Over-Voltage Protection, Over-Current Protection, Short-Circuit Protection | | |
| Dimming (on request only in the ..- MN version): | (0-10 V) or PWM or resistor | (0-10 V) or PWM or resistor | (0-10 V) or PWM or resistor |
| Photometric features | | | |
| Multichip LED: | High power LED | High power LED | High power LED |
| Viewing angle: | 120° | 120° | 120° |
| Colour temperature: | 5000 K | 5000 K | 5000 K |
| CRI: | >70 | >70 | >70 |
| Instant Restrike: | YES | YES | YES |
| L90: | > 60000 h | > 60000 h | > 60000 h |

* Test performed at 230 Vac

ORDER CODE LOGIC



ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

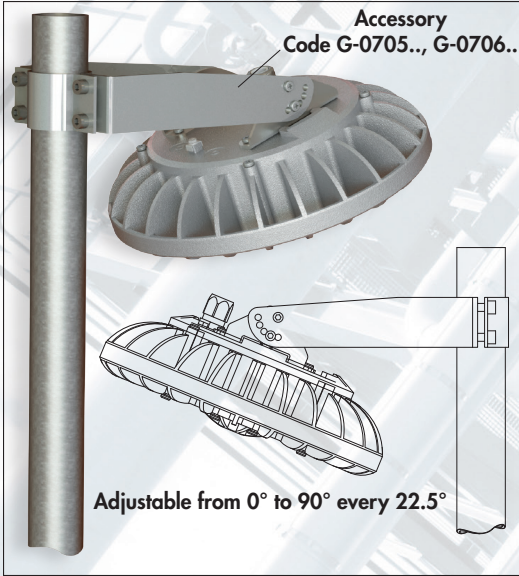
- Different rated voltages
- Additional U-bolts for assembly to a pole
- Eye bolt
- Special lid for direct installation on pole (code example FLOWEX-ME-080080-T)
- Threaded pole attachment with fixed 25° orientation
- Fastening brackets in stainless steel AISI 304 or AISI 3016L
- Protective guard in stainless steel AISI 304 for impact resistance IK10 (only for FLOWEX-ME..)

FLOWEX series High Bay LED lighting fixtures

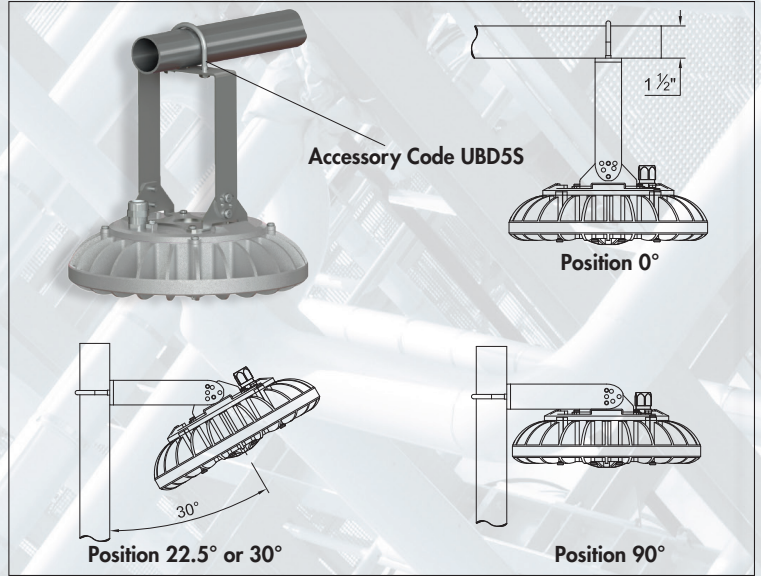
| ILLUSTRATION | DESCRIPTION | MODEL | FEATURES | CODE | KEY | |
|---|--|------------------------------------|---|-----------------------------|---|-----------------------|
|  | Electronic power unit | FLOWEX-ME-060030 | 100-277 Vac | EBM-50C/850 |  | |
| | | FLOWEX-ME-060040 | | EBM-50C/1000 | | |
| | | FLOWEX-ME-060050 | | EBM-50C/1200 | | |
| | | FLOWEX-ME-060060 | | EBM-50C/1400 | | |
| | | FLOWEX-ME-080070 | | EBM-100C/560 | | |
| | | FLOWEX-ME-080080 | | EBM-100C/640 | | |
| | | FLOWEX-ME-080090 | | EBM-100C/700 | | |
| | | FLOWEX-ME-080100 | | EBM-100C/800 | | |
| | | FLOWEX-ME-100120 | | EBM-240C/790 | | |
| | | FLOWEX-ME-100140 | | EBM-240C/920 | | |
| | | FLOWEX-ME-100160 | | EBM-240C/1050 | | |
| | | FLOWEX-ME-100180 | | EBM-240C/1150 | | |
| | | FLOWEX-ME-100200 | | EBM-240C/1250 | | |
| | | FLOWEX-ME-100220 | | EBM-240C/1400 | | |
|  | Electronic power unit | FLOWEX-MN-060030 | 100-277 Vac | LEDDEVL060/2/1 |  | |
| | | FLOWEX-MN-060040 | | LEDDEVL060/2 | | |
| | | FLOWEX-MN-060050 | | LEDDEVL060/2/3 | | |
| | | FLOWEX-MN-060060 | | LEDDEVL060/2/4 | | |
| | | FLOWEX-MN-080070 | | LEDDEVL080/4/5 | | |
| | | FLOWEX-MN-080080 | | LEDDEVL080/4/6 | | |
| | | FLOWEX-MN-080090 | | LEDDEVL080/4 | | |
| | | FLOWEX-MN-080100 | | LEDDEVL080/4/7 | | |
| | | FLOWEX-MN-100120 | | LEDDEVL100/1/6 | | |
| | | FLOWEX-MN-100140 | | LEDDEVL100/1/7 | | |
| | | FLOWEX-MN-100160 | | LEDDEVL100/1/8 | | |
| | | FLOWEX-MN-100180 | | LEDDEVL100/1/9 | | |
| | | FLOWEX-MN-100200 | | LEDDEVL100/1/1 | | |
| | | FLOWEX-MN-100220 | | LEDDEVL100/1 | | |
|  | U-bolt for assembly on a pole | For poles Ø1 1/2" | Material: stainless steel AISI 316L | UBD5S |   | |
|  | Adjustable pole fixing bracket for Ø1 1/2" poles and Ø2 1/2" | FLOWEX-...060.. FLOWEX-...080.. | Galvanized steel | Ø1 1/2" G-0705 |   | |
| | | FLOWEX-...100.. | | Ø2 1/2" G-0723 | | |
| | | FLOWEX-...060.. FLOWEX-...080.. | | Stainless steel AISI 304 | | Ø1 1/2" G-0706 |
| | | FLOWEX-...100.. | | | | Ø2 1/2" G-0722 |
| | | FLOWEX-...060.. FLOWEX-...080.. | Stainless steel AISI 316L | Ø1 1/2" G-0705IN | | |
| | | FLOWEX-...100.. | | Ø2 1/2" G-0723IN | | |
| | | FLOWEX-...060.. FLOWEX-...080.. | Stainless steel AISI 316L | Ø1 1/2" G-0706IN | | |
| | | FLOWEX-...100.. | | Ø2 1/2" G-0722IN | | |
| | | FLOWEX-...060.. FLOWEX-...080.. | Stainless steel AISI 316L | Ø1 1/2" G-0705A4 | | |
| | | FLOWEX-...100.. | | Ø2 1/2" G-0723A4 | | |
| | | FLOWEX-...060.. FLOWEX-...080.. | Stainless steel AISI 316L | Ø1 1/2" G-0706A4 | | |
| | | FLOWEX-...100.. | | Ø2 1/2" G-0722A4 | | |
|  | Fastening bracket | FLOWEX-...060.. FLOWEX-...080.. | Stainless steel AISI 304 | G-1262IN |   | |
| | | FLOWEX-...060.. FLOWEX-...080.. | Stainless steel AISI 316L | G-1262A4 | | |
| | | FLOWEX-...100.. | Stainless steel AISI 304 | G-1263IN | | |
| | | FLOWEX-...100.. | Stainless steel AISI 316L | G-1263A4 | | |
|  | Protective guard | FLOWEX-...060.. | Stainless steel AISI 304 | G-0728 |   | |
| | | FLOWEX-...080.. | | G-0729 | | |
| | | FLOWEX-...100.. | | G-0730 | | |

FLOWEX series High Bay LED lighting fixtures

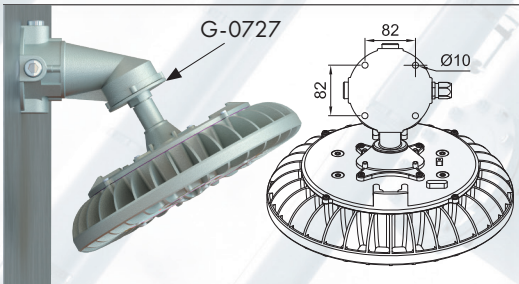
Typical assemblies with installation accessories



Pole mount mechanism with adjustable bracket



Assembly on 1 1/2" conduit pipe with UBD



Use example of accessories with ISO M80x2 thread with adapter **G-0727** (example of use with fixed bracket inclined at 30°)



Ceiling mount, tall model TYPE "U"

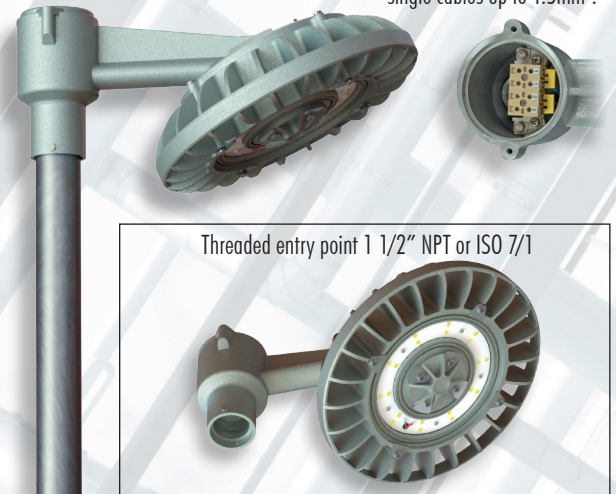
DIRECT POLE ATTACHMENT SYSTEM

Lighting fixture prearranged for direct installation on pole



STANCHION MOUNTING WITH FIXED ORIENTATION AT 25°

Direct connection to terminal board L, N, Pe. Possible section 1.5mm² for loop-in/loop-out. Input of 3 single cables up to 4mm², input-output with 6 single cables up to 1.5mm².

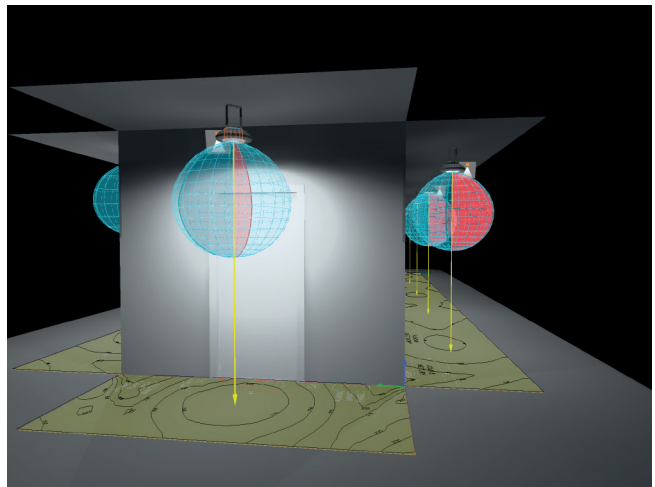
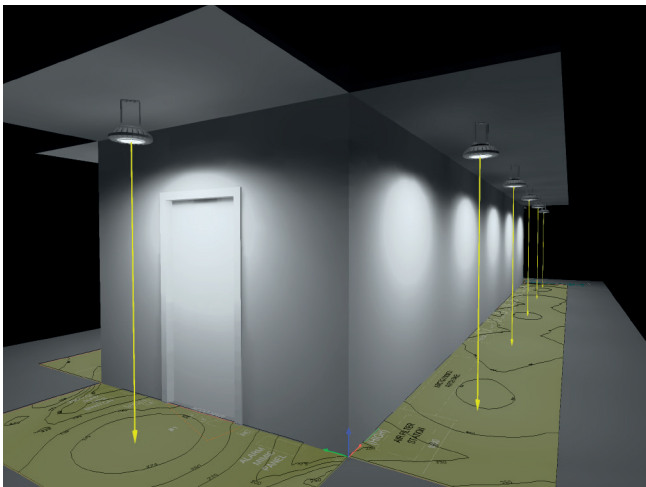


| Code | X | Y | Weight kg | mm |
|------------------|-----|-----|-----------|-------------|
| FLOWEX-060...-IX | 372 | 215 | 4,5 | 372x170x215 |
| FLOWEX-080...-IX | 419 | 242 | 8,2 | 351x351x242 |
| FLOWEX-100...-IX | 478 | 280 | 12,0 | 412x412x280 |

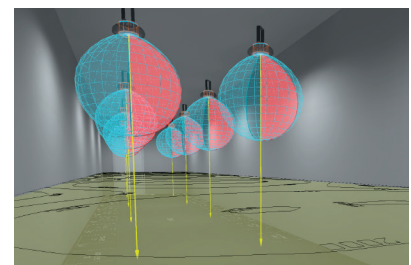
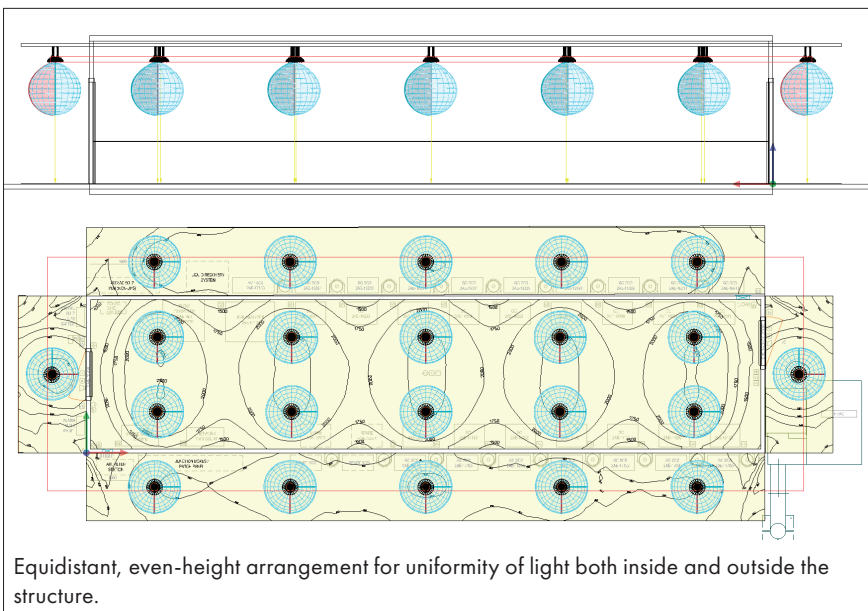
FLOWEX series High Bay LED lighting fixtures

Photometric study example

FLOWEX series ceiling-mounted lighting fixtures



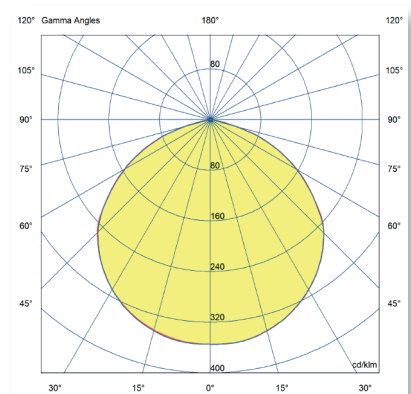
Representation of an outdoor installation - perimeter lighting on 13m and 3m lengths



Representation of an indoor installation - room height 2.7m, worktop height 0.8m

List of lighting fixture power used

| Φ_{total} | P_{total} | Efficiency | | | |
|----------------|-------------|-----------------|--------|------------|------------|
| 114222 lm | 793.6 W | 143.9 lm/W | | | |
| Pc. | Item | P | Φ | Efficiency | |
| Internal area | 10 | FLOWEX...060030 | 32.8 W | 4785 lm | 145.9 lm/W |
| External area | 12 | FLOWEX...060040 | 38.8 W | 5531 lm | 142.5 lm/W |



The lighting solution files for the design, planning and simulation of lighting levels in 2D-3D, rendering and ray-tracing are available from www.cortemgroup.com.

— = level 90270
— = level 0180