

# Flat Dome Light

Red light, 500 × 500 mm

## LFDR501

Part Number



- Easy and flexible installation
- High homogeneity
- High performance: high intensity even in continuous mode
- No external control required

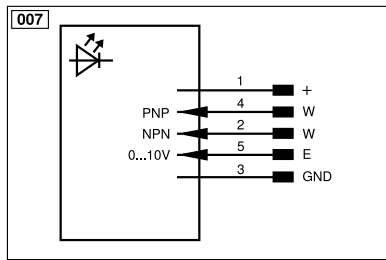
The LFD series flat dome lights are high-diffuse lights with a camera connection. Due to their intense luminous flux and high homogeneity, they are perfectly suited for large-area applications such as robot-assisted pick-and-place. They can be used in continuous mode or synchronized with the machine vision camera in strobe mode via PNP or NPN inputs. The light is characterized by its narrow edges (4 mm) and easy mounting thanks to the T-slot fastener and the anchor point around the housing. Cameras can be connected easily on the rear of the light.

### Technical Data

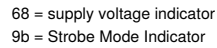
| Optical Data  |                         |
|---|-------------------------|
| Light Source  | Red Light               |
| Wavelength  | 630 nm                  |
| Red light output  | 144 W/m <sup>2</sup>    |
| Electrical Data   |                         |
| Supply Voltage  | 21,6...26,4 V DC        |
| Power   | 141,12 W                |
| Current Consumption Continuous Mode (U <sub>b</sub> = 24 V) | 5,88 A                  |
| Rise time   | 15 µs                   |
| Fall time   | 10 µs                   |
| Input signal  | PNP/NPN                 |
| Temperature Range   | -10...40 °C             |
| Storage temperature   | -20...60 °C             |
| Short Circuit Protection                                    | yes                     |
| Reverse Polarity Protection                                 | yes                     |
| Overload Protection   | yes                     |
| Protection Class  | III                     |
| Dimming   | 0...10 V ± 100...30%    |
| Overdrive   | no                      |
| Mechanical Data   |                         |
| Luminous Field Length (L)                                   | 500 mm                  |
| Luminous Field Width (W)                                    | 500 mm                  |
| Luminous Field  | 500 × 500 mm            |
| Housing Material  | Aluminum, anodised      |
| Housing Material  | Plastic, ABS/GF         |
| Degree of Protection  | IP40                    |
| Optic Cover   | Plastic, PMMA (diffuse) |
| Connection  | M12 × 1; 5-pin          |
| Max. cable length   | 5 m                     |
| Camera aperture inner diameter                              | 65 mm                   |
| Function  |                         |
| Operating modes   | Continuous, Strobe      |
| Connection Diagram No.                                      | 007                     |
| Control Panel No.   | T16                     |
| Suitable Mounting Technology No.                            | 926                     |


### Complementary Products

|                          |
|--------------------------|
| ZC4G003 connection cable |
| ZDCG004 connection cable |
| ZDCG005 connection cable |



## T16



| Legend  |  |          |                                |  |                     |
|---|--|----------|--------------------------------|--|---------------------|
| +   | Supply Voltage +                           | nc       | Not connected                  | ENBR5422                               | Encoder B/B̄ (TTL)  |
| -   | Supply Voltage 0 V                         | U        | Test Input                     | ENa                                    | Encoder A           |
| ~   | Supply Voltage (AC Voltage)                | Ů        | Test Input inverted            | ENb                                    | Encoder B           |
| A   | Switching Output (NO)                      | W        | Trigger Input                  | AMIN                                   | Digital output MIN  |
| Ā   | Switching Output (NC)                      | W-       | Ground for the Trigger Input   | AMAX                                   | Digital output MAX  |
| V   | Contamination/Error Output (NO)            | O        | Analog Output                  | AOK                                    | Digital output OK   |
| Ṽ   | Contamination/Error Output (NC)            | O-       | Ground for the Analog Output   | SY In                                  | Synchronization In  |
| E   | Input (analog or digital)                  | BZ       | Block Discharge                | SY OUT                                 | Synchronization OUT |
| T   | Teach Input                                | AMv      | Valve Output                   | OLT                                    | Brightness output   |
| Z   | Time Delay (activation)                    | a        | Valve Control Output +         | M                                      | Maintenance         |
| S   | Shielding                                  | b        | Valve Control Output 0 V       | rsv                                    | Reserved            |
| RxD   | Interface Receive Path                     | SY       | Synchronization                | Wire Colors according to DIN IEC 60757 |                     |
| TxD   | Interface Send Path                        | SY-      | Ground for the Synchronization |  |                     |
| RDY   | Ready                                      | E+       | Receiver-Line                  | BK                                     | Black               |
| GND   | Ground                                     | S+       | Emitter-Line                   | BN                                     | Brown               |
| CL  | Clock                                      | ⊕        | Grounding                      | RD                                     | Red                 |
| E/A   | Output/Input programmable                  | SnR      | Switching Distance Reduction   | OG                                     | Orange              |
|  | IO-Link                                    | Rx+/-    | Ethernet Receive Path          | YE                                     | Yellow              |
| PoE   | Power over Ethernet                        | Tx+/-    | Ethernet Send Path             | GN                                     | Green               |
| IN  | Safety Input                               | Bus      | Interfaces-Bus A(+)/B(-)       | BU                                     | Blue                |
| QSSD  | Safety Output                              | La       | Emitted Light disengageable    | VT                                     | Violet              |
| Signal  | Signal Output                              | Mag      | Magnet activation              | GY                                     | Grey                |
| BL_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES      | Input confirmation             | WH                                     | White               |
| ENo RS422   | Encoder 0-pulse 0/Ů (TTL)                  | EDM      | Contact or Monitoring          | PK                                     | Pink                |
| PT  | Platinum measuring resistor                | ENAR5422 | Encoder A/Ā (TTL)              | GNYE                                   | Green/Yellow        |