Datasheet: ELM-35-6.4-11-C 8 mm C-mount lens with EL-3-10 integrated Update: 24.04.24

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ELM-35-6.4-11-C



Lens module specifications

| Lens module specifications | | | | |
|--|--------------------|---|--------|---|
| Effective focal length | | 35 | mm | |
| F/# | | 6.4 | fixed | |
| Maximum sensor format | | 2/3" | inch | |
| Maximum image circle (Φ) | | 11 | mm | |
| Lifecycles (10-90% sinusoidal) | | >1'000'000'000 | cycles | |
| FOV | Diagonal (11mm) | 17.9 | 0 | |
| | Horizontal (8.8mm) | 14.3 | 0 | |
| | Vertical (6.6mm) | 10.8 | 0 | |
| Back Focal Length | | 15.5 | mm | In air |
| Optical Distortion | | <0.4 | % | |
| Pixel size recommended | | 3.45 | μm | |
| Wavelength range | | 435 to 656 | nm | Different coatings available upon request |
| Relative illumination | | >75 | % | |
| Max chief ray angle | | <5 | 0 | |
| Working distance range | | 150 to infinity | mm | |
| Mount | | C-mount | | |
| Total Track Length | | 55.8 | mm | In air |
| Dimension (L × W × H) | | 38.28 × 29.00 × 44.80 | mm | |
| | | | | |
| Focus tunable lens specifications | | EL-3-10-VIS-26D | | |
| Focal power range (@20°C) | | -13 to +13 | dpt | |
| Wavefront error @525nm (vertical/horizontal optical axis) | | <0.2/<0.2 | λrms | |
| Operating temperature | | -20 to +65 | °C | |
| Storage temperature | | -40 to +85 | °C | |
| Temperature compensation | | No | | |
| | | | | |
| Electrical specifications | | | | |
| Control current (typical) | | -120 to +120 | mA | |
| Operating voltage | | -11 | V | |
| Power consumption (full tuning range) | | 0 to 100 | mW | $P = R_{Coil} \times i^2$ |
| Power consumption (+/- 5 dpt tuning range) | | 0 to 15 | mW | |
| Settling time | | 2 to 4 | ms | Low pass filtered / normal step signal |
| | | | | |
| Hirose connector (HR10G-7R-6P) | | Function | | 4 3 |
| Pin 1 | | Control current + Control current - Not connected | | 5 2 |
| Pin 2 | | | | |
| Pin 3 | | | | 6 |
| Pin 4 | | Not connected | | |
| Pin 5 | | Not connected | | |
| Pin 6 | | Not connected | | |

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Controller

The liquid lens is controlled with electrical current and must be operated by a suitable lens controller. Hirose cables and liquid lens controllers are sold separately. The following controllers are considered fully compatible:

- Optotune lens driver EL-E-4i
- Optotune industrial controller ICC-4C-500
- OPT-LLC0524E-4



Additional selection of controllers is available at <u>www.optotune.com/controllers</u>

Mechanical drawings

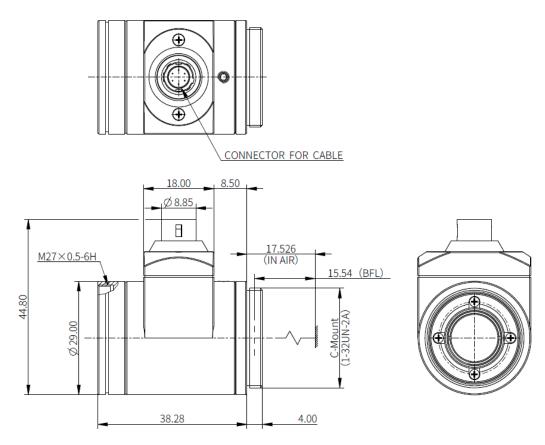


Figure 1: Mechanical drawing of the ELM-35-6.4-11-C

For more information on optical, mechanical and electrical parameters, please contact <u>sales@optotune.com</u>.