



## IR Source

## Technical Specifications

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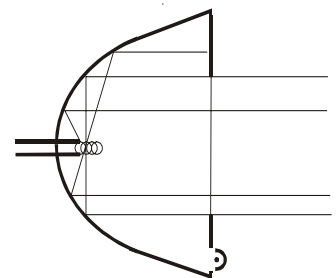
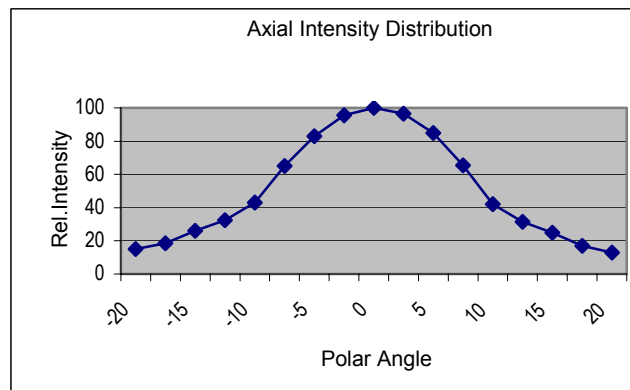
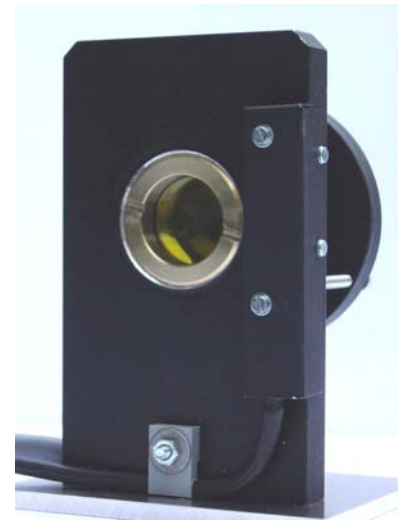
Highly efficient and continuously operated broad band source.

A quasi-parallel light beam (divergence of the exiting beam +/- 15 ° half angle) is obtained from the high dimension ratio of (parabolic reflector)/(filament).

The IR source finds important application in feeding a pyro-electric array.

### Details:

- Kanthal DSD filament (emissivity appr. 95 %) of 1 mm diameter and a length of 7 mm operated at  $I_{\text{eff}} = 1.4 \text{ A}$ ,  $U_{\text{eff}} = 2.85 \text{ V}$ ,  $P = 4.0 \text{ W}$  @  $T = 1030^\circ \text{ C}$ ,
- Primary parabolic mirror with a focal length  $p/2 = 5 \text{ mm}$  and a diameter of 50 mm together with a plain counter reflector with a central aperture of 20 mm,
- Sealed filament housing filled with protecting gas,
- AR/AR-coated window for the ranges:  $\text{CaF}_2$ : 5 - 9  $\mu\text{m}$ ,  $\text{ZnSe}$ : 8 - 12  $\mu\text{m}$ ,
- Photodiode with maximum response at 850 nm and equipped with a integrated preamplifier,
- Mounting of the source on a ground plate by 2 x M4 screws at 40 mm distance,
- Dimension of the device in mm: (W x H x D) 60 x 100 x 60,
- Weight: 400 g.



### Electronics

The control unit is supposed to pulse width control a thermal IR source at 20 kHz.

The IR source finds important application in feeding a pyro-electric array,

### Details:

- Power supply board for 85 – 264 VAD and 120 – 370 VDC operation,
- 2 electronic board for controlling the IR source and a chopper,
- Safety plugs for attaching the power cable and the control cable of the IR source and bypass circuit to ensure minimum current required by the power supply board,
- Safety circuit to protect the IR source when the control cable is not plugged in correctly,
- BNC plug for chopper control and plugs for the 9 V source,
- Grounding of the unit via the power line,
- In order to prevent ground loops, the grounding of the boards controlling the IR source and the chopper can be separated from the power line grounding ( if the pyro-array has its own ground),
- Dimensions of the unit (B x H x D) in mm: 120 x 100 x 200,
- Weight: 2.5 kg.

