

# LS600-4

## High Power AO Deflector



1106

### APPLICATIONS

- IR Imaging
- Raster/Random Access Deflection
- Frequency Shifting
- Laser Radar (Ranging, Tracking, etc.)
- Industrial (Machining, Hole Punching, etc.)

### FEATURES

- High Speed
- High Resolution
- All Solid-State
- High Optical Power Capability
- Minimal Intensity Variation

The LS600 has been designed to maintain the Bragg relationship over the specified FM bandwidth. This provides minimal variation of the 80% diffraction intensity across the full scan angle.

### SPECIFICATIONS (TYPICAL)

Operating Wavelength:	10.6 $\mu$ m (standard)
Interaction Material:	Germanium
Centre Frequency (fc):	70MHz
FM Bandwidth:	40MHz
Diffraction Efficiency:	80%
D/E Variation vs. Freq.:	<10%
RF Power for Max. D/E	<200 Watts
Static Insertion Loss:	<5%
Optical Power (max):	up to 600Watts (CW full aperture)
Bragg Angle:	67.45 mrad.
Separation Angle:	134.9 mrad. (@ fc)
Scan Angle:	77.1 mrad.
Active Aperture**:	4mmH x 75mmW
Access Time:	13.6 $\mu$ sec
Resolution:	545
Laser Polarization:	Linear, Horizontal
Water Cooling (Minimum):	1Liter/Min. @ 20°C
Drive Electronics***:	iDDS-2SE, RFA-1160/4

\* Optional designs are available for other wavelengths in the 2.5 $\mu$ m - 11.2 $\mu$ m range.

\*\* Custom aperture sizes are available.

\*\*\* The RFA1160/4 exhibits progressive phase shifting across four RF output channels. Used with iDDS-2 programmable frequency source, it is possible to compensate for the variation in efficiency across the scan. Their use with the LS-600 is recommended for optimum system performance.

#### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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#### Quality Assured.

In-house: Crystal Growth,  
Optical Polishing,  
A/R coating, Vacuum Bonding



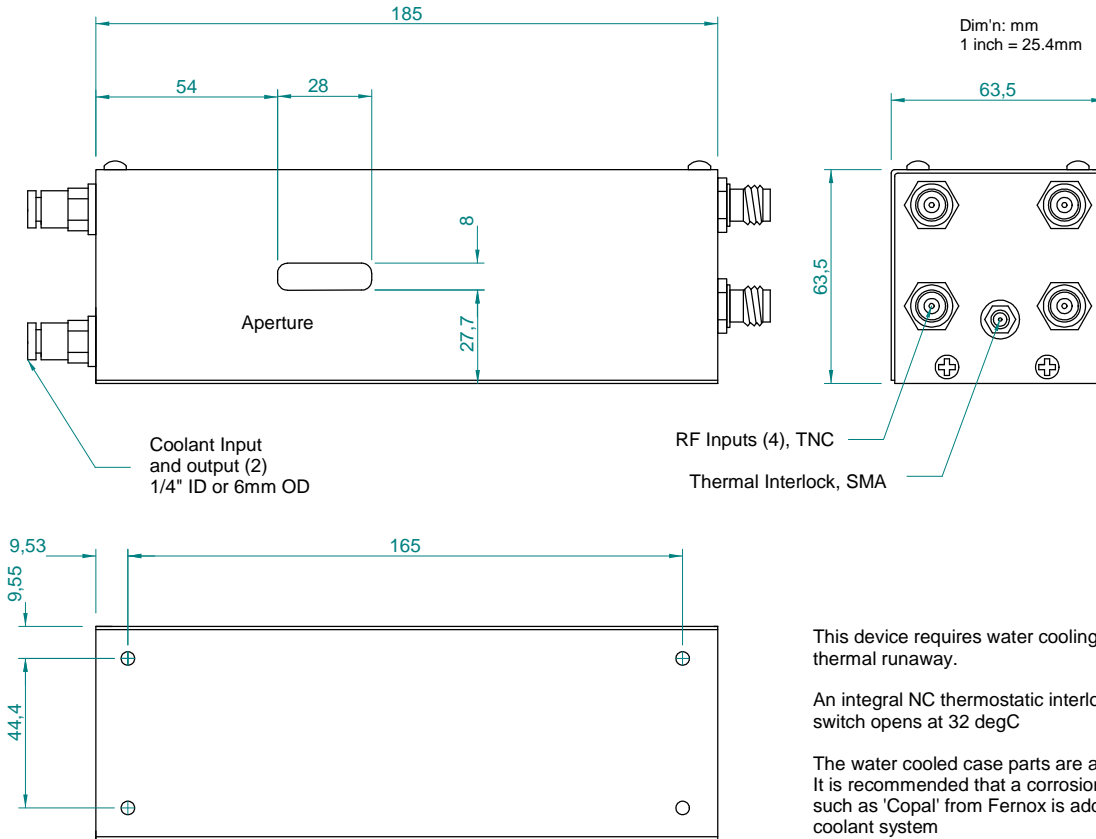
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### OUTLINE DRAWING



This device requires water cooling to prevent thermal runaway.

An integral NC thermostatic interlock switch opens at 32 degC

The water cooled case parts are aluminium. It is recommended that a corrosion inhibitor such as 'Copal' from Fernox is added to the coolant system

**The LS600 has established a proven record for reliability and performance in high power industrial and scientific applications since its introduction 1981**

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