



# Travelling Wave Tube

## Type LY73



### Description

The LY73 is rated at 10kW minimum peak power output. Other performance parameters are 46dB gain, 2.6% duty ratio at pulse lengths up to 60µs, and the tubes are characterised by a flat gain response across the operating bandwidth. The compact, rugged tube is of a metal ceramic construction and weighs 8.5kg (approx).

### Features

The LY73 is a medium power E-F Band TWT intended for radar applications. The tube incorporates:

- Low Voltage Beam Switching Grid
- Ring Bar Circuits
- PPM Focusing
- Depressed Collector Operation
- Liquid Cooling

### Specification

#### Electrical

|  |                                  |
|--|----------------------------------|
| Frequency Range                        | 3.2-3.7GHz                       |
| Output Power                           | 10kW Peak (min)                  |
| Duty Ratio                             | 2.6% (max)                       |
| Gain                                   | 46dB                             |
| Load VSWR                              | 1.5:1                            |
| Source VSWR                            | 1.5:1                            |
| Gain Flatness Over the Frequency Range | 1dB                              |
| Harmonic output                        | 2nd: -30dBc<br>3rd & 4th: -40dBc |
| Noise Figure                           | 35dB                             |
| Heater Voltage                         | 6.3V                             |
| Heater Power                           | 35W                              |

## Phase Sensitivity

|         |        |
|---------|--------|
| Cathode | 0.5°/V |
| Grid    | 5°/V   |
| AM/PM   | 8°/dB  |

## Electrode Voltages WRT Cathode (Typical)

|                     |       |
|---------------------|-------|
| Grid Bias           | -300V |
| Grid Pulse          | 300V  |
| Slow Wave Structure | 16kV  |
| Collector           | 12kV  |

## Electrode Pulse Currents (Typical)

|                     |      |
|---------------------|------|
| Grid                | 40mA |
| Slow Wave Structure | 0.9A |
| Cathode             | 3.2A |

## Physical

|                               |   |
|-------------------------------|---|
| Temperature Range (Operating) | -10°C to +70°C  |
| Coolant                       | Water or Water/Glycol                                   |
| Flow                          | 3.5 Litres/Minute (min)                                 |
| Pressure Drop                 | 0.45b   |
| Input Connector               | SMA   |
| Output Connector              | 7/16 Suhner or Other Co-Axial<br>Connectors as Required |
| Overall Dimensions (approx)   | 630mm x 123mm x 85mm                                    |
| Weight (approx)               | 8.5kg   |

**Albacom Limited reserve the right to alter any product specifications without prior notice.**