

## **Lanthanum bromide detector with PMT and voltage divider**

### **Specifications:**

The LaBr<sub>3</sub>(Ce) crystal should be coupled to fast PMT and sealed in aluminium housing with aluminium entrance window for spectroscopy and timing application.

- **Detector Material:** LaBr<sub>3</sub>(Ce)
- **Crystal Size:** 50.8 mm (diameter) X 50.8 mm (thickness)
- **Energy resolution (@ 662 keV):** Less than 4%
- **Aluminum entrance window :** Thickness: 0.5 mm
- **No shock, vibration**
- **Operation under normal environment excluding vacuum**
- **Operating Temperature:** 5°C to 50°C
- **Storage Temperature:** -20°C to 50°C
- **End-on CRT (Coincidence resolving Time) @ 511keV :** < 1 ns

### **Fast PMT**

- Size: 2 inch
- Anode pulse rise time: < 0.7 ns
- Electron transit time: 16 ns
- High voltage input: Negative

### **Voltage divider**

- Passive voltage divider designed for negative high voltage
- SHV connector for HV
- BNC connectors for anode output and the last dynode output

### **ACCEPTANCE CRITERIA:**

1. The following parameters to be tested at user's place for acceptance of the item
  - Energy resolution at 662 keV
  - End-on CRT @ 511 keV
2. The remaining parameters of the item should be tested by the manufacturer and included in the performance test report to be submitted alongwith the item.