

1. Overview

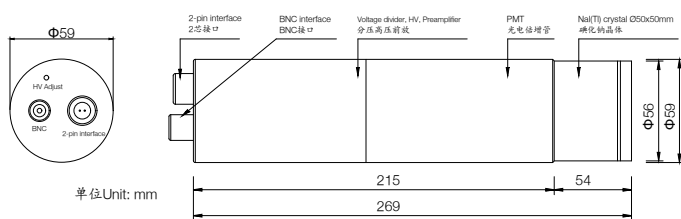


The detector consists of an Nal crystal, a photomultiplier tube, a voltage divider circuit, amplifier circuit, and various other components. The Nal detector, known for its excellent energy resolution, low radiation background, and compact structure, is widely used in various fields such as nuclear physics experiments, industrial measurement and control, and environmental monitoring, it has extremely high reliability.

2. Main technical parameters

- ▶ Power input + 12V
- ▶ Dimensions of the scintillator $\Phi 50 \times 50$ mm
- ▶ Maximum input current 50 mA
- ▶ Output signal polarity positive polarity
- ▶ Output signal amplitude Typically less than +5V
- ▶ Energy resolution $\leq 7.5\%$ @ 662keV (^{137}Cs)
- ▶ Operating temperature $+5^\circ\text{C} \sim +40^\circ\text{C}$
- ▶ Storage temperature $-20^\circ\text{C} \sim +50^\circ\text{C}$
- ▶ Storage humidity 10% - 85%RH (Non-condensation)

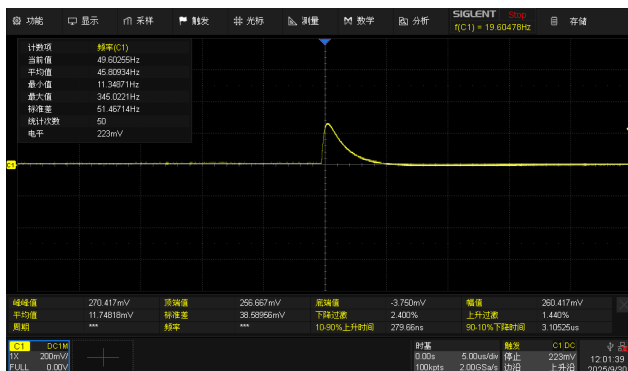
3. Outline Dimensional Drawing



Interface Definition		
serial number	Interface	Definition
1	2-core aviation connector	+12V power input
2	BNC	Positive polarity signal output
3	Potentiometer	Adjust the internal high voltage, increase the high voltage clockwise and decrease the high voltage counterclockwise

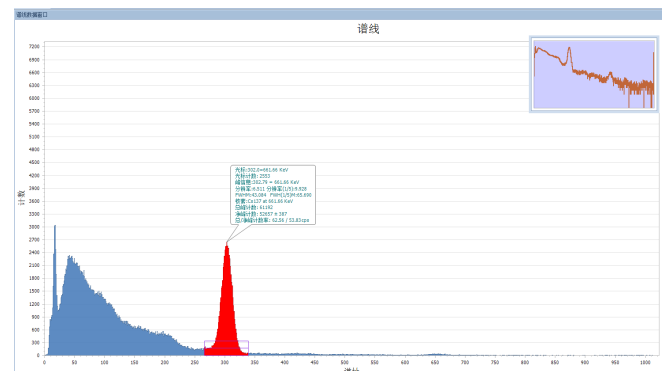
4. Waveform Test/ Energy Resolution Test

• Waveform test



Oscilloscope input impedance 1M Ω (560V)

• Spectral test



Power input: 560V Radioactive source: Cs137@661.66keV
Energy resolution: 6.511%