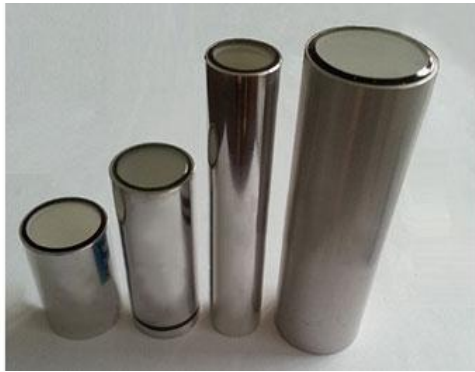


SC1110G;SC1111G;SC1112G;SC1113G

- **Vibration resistance**
- **High temperature resistance**
- **Shock resistance**

SC1110G、SC1111G、SC1112G NaI(Tl) scintillators have the features of high temperature resistant.They are widely used in oil well logging、coalfield well logging application. Respectively, their operating temperature are: $-20^{\circ}\text{C}\sim 100^{\circ}\text{C}$ 、 $-20^{\circ}\text{C}\sim 150^{\circ}\text{C}$ 、 $-20^{\circ}\text{C}\sim 200^{\circ}\text{C}$.

SC1113G NaI(Tl) scintillators have the features of high temperature resistance, vibration resistance and shock resistance, they are suitable for Measurement While Drilling(MWD), the operating temperature is $-20^{\circ}\text{C}\sim 175^{\circ}\text{C}$.



Basic Properties

Basic Properties	
Density(g/cm ²)	3.67
Melting Point (K)	924
Cleavage plane	<100>
Hardness(Mohs)	2
Hygroscopic	yes
Refractive index at emission peak	1.85
Emission Peak wavelength (nm)	415
Decay time (ns)	250
Light yield (photons/KeV)	38

Features

- High temperature resistance
- vibration resistance
- shock resistance

Application Notes

1. Environmental Monitoring of nuclear radiation

Nuclear radiation exist universally in our daily life environment, when the radiation intensity higher than security standard, it would be harmful or even lethal to human beings. For its excellent scintillating properties, NaI(Tl) crystals are widely used to make the detectors to monitor nuclear radiation in the industrial and daily life environment, wide field and space.

2. Nuclear medicine

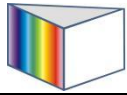
NaI(Tl) crystals are widely used in the nuclear imaging technology, such as the isotope therapeutic apparatus, Gamma ray cameras ect.. Nuclear imaging is high in sensitivity and accurate in testing results, the method is easy and secure.

3. Industrial CT and security inspection

The NaI(Tl) are used in the metallurgy industrial to test the speed of metal liquid, to test the thickness of the steel plates, they are also used in the level sensors or switches for solid or liquids. Some security inspection instruments use the NaI(Tl) crystals to test the explosive materials.

4. Well logging

The NaI(Tl) crystals detect the Gamma ray in the well, by the analysis of the spectrum of the detected scintillating light, the concentration and distribution of the uranium (U), potassium (K) and thorium (Th) in the stratum can be calculated, and the well can be evaluated. NaI(Tl) crystals has high light output and insensitive to temperature change, it has been the first choice for the well logging applications.



Modules or types

Introduction

Model	Type	Category	Package	Remark
SC1110G	High temperature standard type	A(rimless)	Aluminum shell, Aluminum entrance window, end optical window	high temperature resistance (100℃)
SC1111G				high temperature resistance (150℃)
SC1112G				high temperature resistance(200℃)
SC1113G			Stainless steel shell, stainless steel entrance window, end optical window	high temperature resistance(175℃), shock resistance and vibration resistance, suitable for Measurement While Drilling(MWD)

Size of SC1110G; SC1111G; SC1112G

Unit: mm

No.	Crystal size	D	L
	φ×H		
1	13×10	17-0.12	20+1/-2
2	15×20	20-0.1	30+1/-2
3	20×50	26-0.1	60+1/-2
4	20×80	26-0.1	90+1/-2
	20×120	26-0.1	136+1/-2
5	23×50	28-0.1	60+1/-2
6	23×80	28-0.1	90+1/-2
	23×120	28-0.1	90+1/-2
7	30×50	35-0.1	60+1/-2
8	30×80	35-0.1	90+1/-2
9	35×55	40-0.1	60+1/-2
10	37×50	43-0.1	60+1/-2
11	37×80	43-0.1	90+1/-2
12	37×150	43-0.2	166+1/-2
	37×120	43-0.2	136+1/-2
13	40×50	46-0.1	60+1/-2
14	40×80	46-0.1	90+1/-2
15	50×100	56.3-0.12	110+1/-2

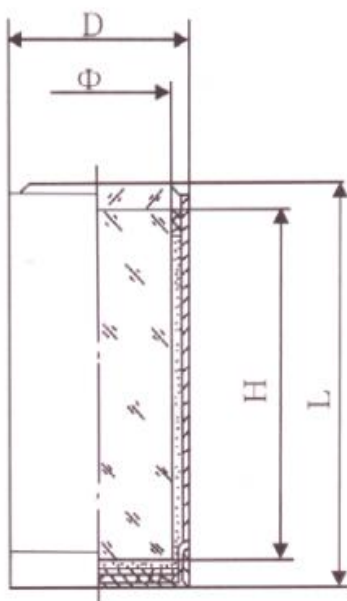
Note: The size can be adjusted according to customer requirements.

Size of SC1113G

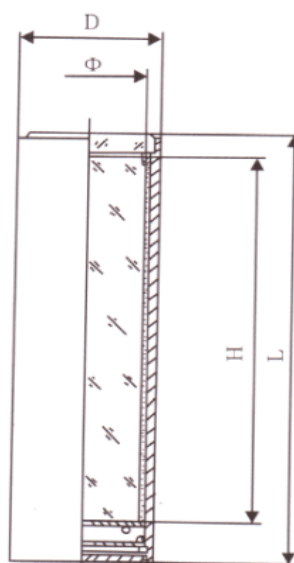
Unit: mm

No.	Crystal size	D	L	Energy resolution(Cs-137)	
	$\phi \times H$			F	P
1	50×300	56.6±0.3	308±2	<10%	12-15%
2	50×200	56.6±0.3	208±2	<10%	12-15%

Note: The size can be adjusted according to customer requirements.



SC1110G; SC1111G NaI(Tl) drawing



SC1112G; SC1113G NaI(Tl) drawing