

# Product Data Sheet

## SemeaAlert-Gamma Personal X、 $\gamma$ Radiation Alarm (SM-1001)



### Description

SemeaAlert-Gamma is designed to alert those who are concerned about accidental exposure to ionizing radiation hazards in the environment. This product features high sensitivity and

an instant response time ( of about a second ) to a very minor change of X and  $\gamma$  ( 0.01  $\mu$ Sv/h ). Unlike other



professional X and  $\gamma$  detectors, SemeaAlert -Gamma is not built with a digital display. Instead it has a large LED and buzzer that change the color and number of beeps to indicate Normal, Low-Alarm, Mid-Alarm and High-Alarm representing radiation levels. This design not only helps the users who lack knowledge of radiation easily understand how strong the radiation is, but also tremendously lowers the product cost so that it becomes an affordable personal radiological protection device.

The sensing technology of the product is based on a CsI crystal that has an excellent sensitivity and quick response to X、 $\gamma$  radiation. The optimized sensor design makes the module capable of responding to the X、 $\gamma$  radiation energy as low as 30keV to ensure this product detects the possible ionizing radiation leakage from either radioactive materials or radiologic equipment.

The product has a built-in Li-ion battery. The low power consumption design enables the battery to operate for several days after it is fully charged.

The Semea-Alert application is designed for use on Android mobile phones. Once they are connected, the factory preset parameters can be changed through the app, which displays the measurement of radiation response and records geographic location of radiation hazards via the map in the mobile phone.

Since the detection module has an audible and visible alarm, it can be used without being connected to a mobile phone.

### Application

- For the general public (especially pregnant women) to use daily for the prevention of radiation exposure;
- Doctors in the hospital to detect the strength of

radioactive drugs and the patients using such drugs to protect themselves against excess ionizing radiation;

- Customs officers to quickly detect the transit of people and goods that may unlawfully carry or contain special materials (such as special nuclear materials, rare-earth minerals, etc.);
- Security personnel in public areas to detect any potential radiation hazards that may create danger to the public;
- Non-professionals to use at locations containing radioactive materials such as radioactive material production and storage;
- And checking building materials (such as marble, granite, ceramic sanitary ware, etc.) for excess radiation.

### Technical Data

SemeaAlert-Gamma	
Detector	CsI crystal
Detection Type	X、 $\gamma$ ray
Measurement	0.01 $\mu$ Sv/h - 20 $\mu$ Sv/h
Sensitivity	0.01 $\mu$ Sv/h
Energy Limit	30keV
Response Time	Typical 1 second
LED Display	Green, Yellow, Purple, Red (difference radiation levels)
Buzzer Alarm	No. of beeps representing different radiation levels. On and Off via app
Battery	Built-in 140mAh Li-ion
Battery Charger	5V mobile phone charger
Battery Charge Time	2 hours
Battery Run Time	3 days if fully charged
Dimensions	75 x 55 x 25mm
Weight	50g
Mobile App	
OS	Android 4.0+
Hardware	OTG required
Display	Four-color dial
Position	GPS and/or WiFi
Alarm Sound	7 options
Map	Google
Nearby Alarm	On and Off option