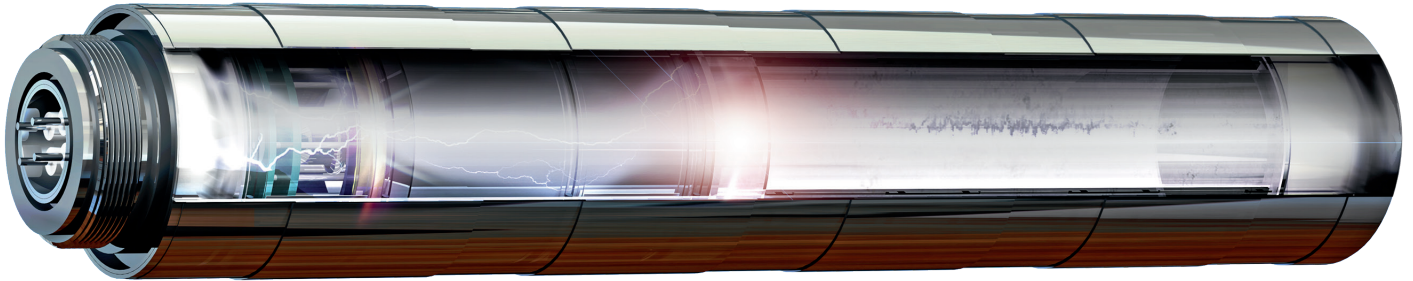


## Highly Integrated Detector

Titan Division | Instruments



### Features

- Patented shock and vibration mounting technology†
- PMT coupled directly to crystal with exclusive coupler†
- Qualified for up to 200°C (392°F)
- Customized packaging and interface options to customer specifications available.

### Benefits

- Extreme shock and vibration resistance
- HID packaging improves pulse height resolution by up to 25%
- Patented compound coupler reduces interface light loss to improve output pulse height.

**Log data obtained from nuclear logging tools provide some of the fundamental information required to characterize and assess a reservoir's performance. These include formation identification and correlation, porosity measurements, gas detection, fluid contact migration and clay typing.**

It is, therefore, vital to obtain the most accurate data possible. Hunting's Highly Integrated Detectors (HID) provide high resolution and accuracy along with the outstanding reliability required to perform these tasks.

†US patents: 7,115,873 7,381,957 7,485,865 7,485,851

### About Hunting's Titan Division

For successful cased hole logging and perforating services, tool reliability, availability, and time line of delivery are essential. Hunting supplies customers worldwide with the right tools to get the job done. Our product lines include state of the art, high quality wireline and tubing conveyed perforating (TCP) gun systems, hardware and accessories, shaped charges, and electronic logging tools.

The HID detector combines the photomultiplier tube (PMT) and crystal in a hermetically sealed package. Hunting's proprietary packing allows for external shock energy to be substantially dampened, and it minimizes the effects caused by change in temperature.

The HID is excellent for these applications:

Wireline	Other	MWD/LWD
Natural Gamma Ray	Ore Grading	Standard Gamma Ray
Perforation Gamma Ray	Continuous Mining Detectors	Directional Gamma Ray
PLT, Tracer & Geothermal	Industrial Monitoring	Near Bit Detectors

### Specifications

Part Number Series	E2920
<b>Measurements</b>	
Pulse Height Resolution	Less than 9% with typical PMT
<b>Environmental</b>	
Operating Temperature Rating	-40 to 200°C (-40 to 392°F)
Survival Temperature	-55 to 205°C (-67 to 401°F)
Max. Heat/Cool Range	3°C/min (5.4°F/min)
Vibration (3 Axis)	30 G RMS (15 – 300 Hz random)
Shock (3 Axis)	1,000 G, 0.5 ms
<b>Mechanical</b>	
Crystal Diameter	0.70 to 2.00 in (17.8 to 50.8 mm)
Crystal Length	1.00 to 12.00 in (25.4 to 304.8 mm)
<b>Electrical (with Hamamatsu PMT)</b>	
Voltage	1000 to 1750 VDC
Signal	Analog Gamma Counts
PMT Amplification	105 to 106