



# COMPASS DIRECTIONAL GUIDANCE, INC. TECHNICAL DATA SHEET

## Compass Gamma Module



Gamma ray tools record naturally occurring gamma rays in the formations adjacent to the wellbore. This nuclear measurement indicates the radioactive content of the formations. Effective in any environment, gamma ray tools are the standard device used for the correlation of logs in cased and open holes.

Gamma ray tools use a super sensitive hermetically sealed Sodium Iodide Scintillator crystal and a ruggedized high temperature Photomultiplier for maximum log quality.

### Applications

- Depth determination
- Depth correlation within the well and between wells
- Lithology identification
- Qualitative evaluation of shaliness
- Qualitative evaluation of radioactive mineral deposits

### Uses

- Distinguish shales from non-shales
- Estimate clay content in sands and limestones
- Correlation of real-time data with offset logs to determine geologic location
- Picking casing and coring point

### Compass Gamma Module Specifications

	Standard Module	Focused Module
<b>Application</b>	Logging/MWD	Geosteer/MWD
<b>Mechanical</b>		
Diameter	1.875"	1.30"
Length (make up)	34.05"	13.6"
Weight	15.0 lb.	3.0 lb.
Operating Temp.	-77° to +350° F.	-77° to +350° F.
End Connectors	200°, 10 Pin GE	MDM-15 Pin
Material	BeCu	BeCu
Pressure	18,000 PSI	18,000 PSI
<b>Performance</b>		
Sensitivity	1.7 Counts per API	0.6 Counts per API
Accuracy	+/- 5% to 300° F.	+/- 5% to 300° F.
	+/- 10% to 350° F.	+/- 10% to 350° F.
Resolution	6.8"	6.8"
<b>Environmental</b>		
Survival Temp.	400° F.	400° F.
Max Heat/Cool	5° F/Minute	5° F/Minute
Vibration (3 axis)		
	50-300 Hz	30 G.
Random	30 G.	30 G.
Shock (Z-axis)	500 G., 0.5 mS	500 G., 0.5 mS
Shock (Y-axis)	1000 G., 0.5mS	1000 G., 0.5mS
<b>Power</b>		
Input Voltage	22-30 Volts	22-30 Volts
Input Current	18-14 mA	18-14 mA
Maximum Voltage	31.5 Volts	31.5 Volts
<b>Output Signal</b>		
Pulse	+5V to 0V, 2(+/-0.5)	+5V to 0V, 2(+/-0.5)
	microseconds	microseconds

