



Downhole Camera System

The Groundsearch colour borehole video camera system is supplied by GeoVISION™ and has a maximum depth capacity of 600m. It allows high-quality, real-time video imaging and DVD recording of boreholes, shafts and voids. It uses a stainless steel, colour camera with a motorised mechanism to view downwards, pan 360 degrees and tilt 170 degrees. There is a compass to orientate features with respect to magnetic north in most open and PVC-cased bores/wells.

The camera has eight built-in high brightness LEDs with a lights on and off circuit for that is used with eight adjustable, supplementary lights for better quality videos in poor quality water.

Factors that determine the quality of borehole images may include:

- Water clarity.
- Distance from the object.
- Amount of light.
- Location of light source in relation to the camera and the object. Suspended particles may reflect light directly into the camera lens – reduced by using supplementary light source.
- Stability and location of the camera – controlled by the use of adjustable centralisers.
- Angle of view between the camera and the object – flexible panning and tilting maximises viewing.



Camera Specifications:

Camera Specifications	
Camera Model	Standard Colour SSM1
Housing Material	Stainless Steel
Lens window material	Sapphire
Max camera depth in feet/ metres. Max cable length and underwater limit -	2000 / 600
Weight in ounces/grams	12 / 340
Lux rating F2.0	0.2
Lens with glass element (mm)	2.45
Resolution horizontal lines	550
Camera lights On/Off circuitry	Yes
Max operating temperature C/F	60 / 140
Min operating temperature C/F	-40/-40

Camera Dimensions	
Diameter in inches/mm at the thickest point	1 5/8 / 41.63mm
Length in inches/mm	2 3/4 / 69.85mm

Viewing Specifications	
Min borehole diameter in inches/ mm for camera passage (this specification assumes some minor irregularities in the pipe or borehole)	1 3/4 / 44.5

Min recommended borehole size in inches/mm for good image	1 7/8 / 25.40
Max borehole diameter in inches/cm viewing down under good conditions for good image	36 / 90
Max borehole diameter in feet/ cm when using GeoVision™ supplemental Super Eight Light under good conditions for good image	15 / 460
Max viewing distance in feet/cm from camera when using pan and tilt under good conditions for good image	6 / 183
Max viewing distance in feet/m from camera when using both the pan and tilt and the adjustable Super 8 light under good conditions for good image. Using the 3.6mm lens	20 / 6

Focal Length	
Min distance in inches/cm to subject for excellent focus	1.5 / 3.8
Max distance in inches/cm to subject for excellent focus	60 / 152
Min distance in inches/cm to subject for usable focus	1 / 2.54

Lighting	
Number of High Brightness LED's in camera	8