

Model 650

WeedSeeker® Sensor

The WeedSeeker Model 650 is an active light source, chlorophyll-identifying selective spray sensor. The unique, patented optical/electronic system detects and sprays weeds, while not spraying bare ground or pavement. The benefit is a dramatic reduction in amount of herbicide needed to maintain weed control. In addition to a sharp decline in chemical use, labor and application costs drop as well.

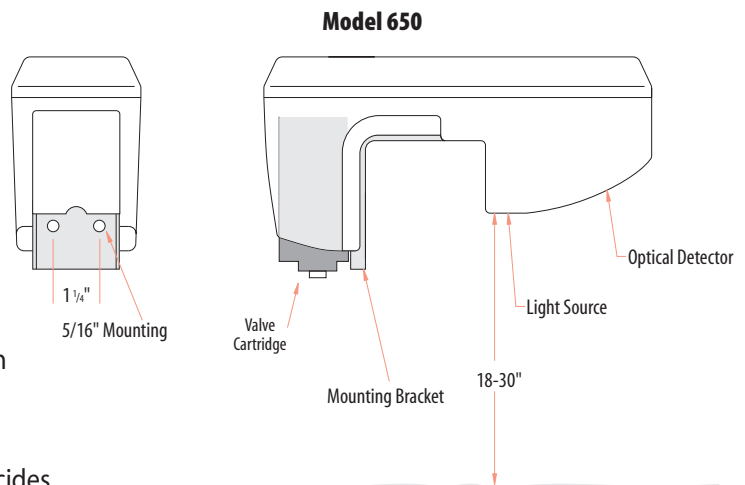
A high-impact nylon housing encloses the electronics, light sources and high-speed solenoid valve. The sensor emits a focused beam of light on the ground, and the circuitry analyzes the reflected signal for the light signature of chlorophyll. If a weed is present, the valve cartridge sprays a burst of chemical directly on it.



The sensor operates on 12VDC, and is typically configured for a 12" spray pattern matching its 12" *field of view*. The sensor is mounted 18" - 30" from the ground, and systems may have a single sensor, or as many as 120 sensors on a spray boom.

Applications

- ◆ Dramatic herbicide reduction
- ◆ Sprays only green plants, not bare ground
- ◆ Internal light source allows day or night operation
- ◆ Easy to mount on existing equipment
- ◆ Replaceable spray valve cartridge
- ◆ Economical use of lower cost non-selective herbicides
- ◆ Strip spraying between trees and vines, between row-crop rows, fallow field burn-down
- ◆ Efficient weed control along highways, curbs and gutters, airport runways and maintenance yards



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Specifications

900-1-010

Electrical

Voltage	12VDC nominal	(11.2V – 14.5V)
Current	160mA nominal, 240mA when valve cartridge is on	

Mechanical

Dimensions	L: 10.9" W: 3.38" H: 5.9" (27.7 x 8.6 x 15.0 cm)	
Weight	2.0 lb (0.90 kg)	
Housing Material	High-Impact Glass-Filled Nylon, UV Resistant	

Emission Wavelengths

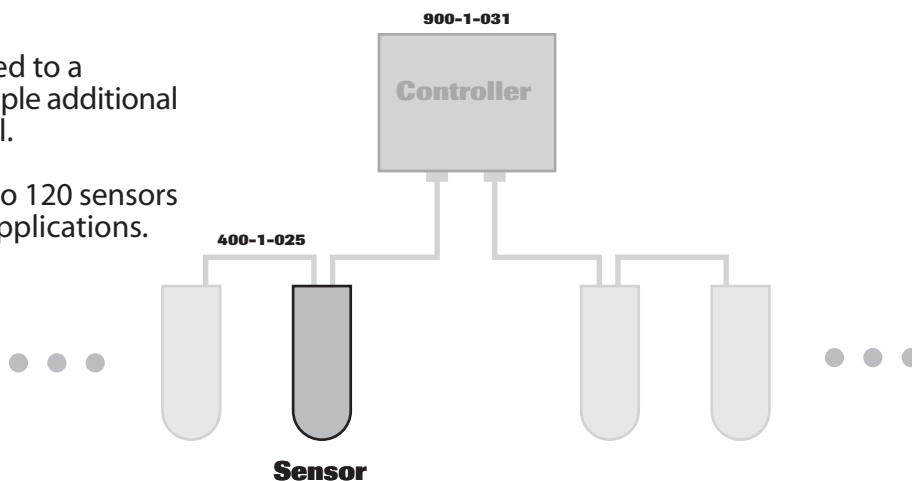
Near Infrared	770nm	~25nm BW
Red	656nm	~25nm BW

Operational Parameters

Control Signal Voltage	Activates a Valve Cartridge or Valve Driver
Speed Range for Spraying	3 – 10 mph (higher speed is possible; contact factory)
FOV (<i>Field of View</i>)	12" nominal x 0.5"
Mounting Height	18" – 30"

A WeedSeeker Sensor is connected to a Controller, and typically with multiple additional sensors, up to 20 per side, 40 total.

Large array systems can have up to 120 sensors on a wide boom for broad field applications.



Related Components

VC01 Valve Cartridge (Standard)	900-1-005
VDC 05 Valve Driver Cartridge (for external solenoid)	900-1-028
VC01-DL Valve Cartridge (for data logging)	900-1-004
Interconnect "Daisy" Cable (xx = various lengths)	400-1-025-xx