

# NightScope™ Infrared Detector

## Technical Specification

## Models NS-350, NS-352

### Disclaimer

This information detailing **NightScope™ Infrared Detector** electrical performance is provided only for your convenience. It is your responsibility to ensure that your application meets with your specifications. Boulder Creek Engineering, LLC makes no representations or warranties of any kind whether express or implied, related to this information, including but not limited to its quality, performance, merchantability, or fitness for purpose.

### Electrical Specifications – Absolute Maximum Ratings

Voltage on Power (RED) with respect to Ground (BLACK)	-0.6V to +16.0V
Voltage on Detect High (BLUE) with respect to Ground (BLACK)	0V to +16.0V
Voltage on Detect Low (YELLOW) with respect to Ground (BLACK)	0V to +16.0V
Maximum current out of Detect High (BLUE)	200 mA
Maximum current into Detect Low (YELLOW)	200 mA

Stresses above those listed under “Absolute Maximum Ratings” may cause permanent damage to the device.

### Electrical Specifications – DC Characteristics

Characteristic	Sym.	Min.	Typ.	Max.	Units	Condition / Notes
Supply Voltage (Power - RED)	$V_{PWR}$	5.0	-	16.0	V	
Supply Current (Power - RED)	$V_{PWR}$		30 24		mA	$V_{PWR} = 5.0$ V, Train Detected $V_{PWR} = 5.0$ V, No Train
Supply Current (Power - RED)	$I_{PWR}$		47 24		mA	$V_{PWR} = 16.0$ V, Train Detected $V_{PWR} = 16.0$ V, No Train
Detect High (BLUE) Output High Voltage	$V_{OH}$		$>(V_{PWR} - 0.1)$		V	Output source current < 200 mA
Detect High (BLUE) Output Low Voltage	$V_{OL}$	Open Drain with 4.7k ohm pull down resistor to Ground (BLACK)				
Detect Low (YELLOW) Output High Voltage	$V_{OH}$	Open Circuit (Open Drain)				
Detect Low (YELLOW) Output Low Voltage	$V_{OL}$		0.1		V	Output sink current < 200 mA

In the “no train” state, Detect High (BLUE) is pulled down with the resistor value noted.