



4090 Series

OPTICAL PREEMPTION DETECTORS

TOMAR's 4090 Series Optical Preemption Detectors sense the optical pulses emitted by properly equipped emergency or transit vehicles. Mounted to observe the approaches of an intersection, 4090 Detectors are used with TOMAR 2000, 3000 and 4000 Series Optical Signal Processors to inform the traffic control system of the presence of designated vehicles.

The 4090-x-ST detectors incorporate a self-test feature for true closed loop detector and wiring welfare monitoring. Each 4090-X-ST detector includes a small infrared LED which periodically injects a special test signal into the detectors photo sensor. The 2140,3140 and 4140 Series OSPs receive the special test signal and therefore know that the detector is fully functional. Should a detector fail self-test a front panel indication and an entry in the OSP log indicate the problem.

Using 4090 Series detectors and Strobecom II throughout your traffic control system reduces emergency response time, allows emergency vehicles to travel with greater safety, and improves transit vehicles timeliness.

TOMAR 4090 Series Detectors offer these important features:

- Closed loop self-test for detector welfare, monitoring and reporting (ST models only).
- Military derived sensor technology for direct sunlight rejection and detection performance unmatched by ANY other system.
- Fully encapsulated electronics for complete resistance to water, heat, and vibration.
- Complete electronics protection from damage due to miswiring or electrical transients.
- Simple advanced detector installation without any special cabling for enhanced detection around corners and over hills.
- Tool-less tilt/swivel for each detector head makes aiming easy

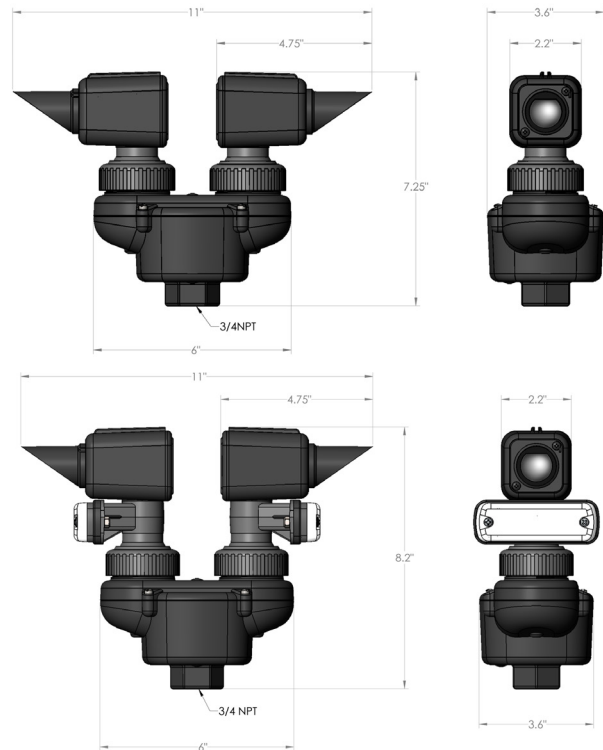
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Specifications for 4090 Series Detectors

Item	Description
Maximum Range	2500 feet minimum when used with a TOMAR Optical Signal Processor.
Optical Pulse Rise Time Discrimination	The 4090 Series input stages are optimized for the detection of strobe pulses with a rise time from start of pulse to peak of pulse of 10 microseconds or less. Slower pulses such as varying sunlight and incandescent emergency lighting will be highly attenuated and substantially ignored by the detector's digital discriminators.
4090-x-ST self testing detectors	The 4090-x-ST Series incorporate a self-test feature for true closed loop detector sensor and wiring welfare monitoring.
Field of View	13 degrees conical centered about the viewport normal axis (typical).
Power Requirements	VOLTAGE: 12 to 30VDC CURRENT: 15 mA maximum
Wiring Connections	Blue Wire - GROUND Yellow - SIGNAL Orange Wire - +12 to 30 VDC Shield and Drain Wire - CONNECT TO BLUE WIRE AT TRAFFIC CABINET
Temperature Range	-40° Celsius to +75° Celsius
Physical Construction	The 4090 Series enclosures are black, glass-filled, UV stabilized, polyamide suitable for all-weather use. All electronic circuitry is completely encapsulated in polyurethane for protection from shock, vibration, and moisture. A weep hole is provided for allowing the escape of condensation or other internal moisture build-up in the sight tube of the detector.
Mounting	The 4090 Series are easily mounted using standard hardware on either span wire or mast arm. The unit has a 3/4" female pipe mount hub and internal terminal block for connection to a 3/C shielded detector cable.

4090 detector series ordering information

Catalog Number	Description
4090-1-SD	One direction, one channel detector, no self-test (for model 2070, 2080, and 3080 optical signal processors).
4090-21-SD	Two direction, one channel detector, no self-test (for model 2070, 2080, and 3080 optical signal processors)
4090-22-SD	Two direction, two channel detector, no self-test (for model 2070, 2080, and 3080 optical signal processors)
4090-1-ST	One direction, one channel detector, with self-test (for model 2140, 3140, and 4140 optical signal processors)
4090-21-ST	Two direction, one channel detector, with self-test (for model 2140, 3140, and 4140 optical signal processors)
4090-22-ST	Two direction, two channel detector, with self-test (for model 2140, 3140, and 4140 optical signal processors)



TRUE 10 Year Warranty!

10 year warranty covers the 4090 Series and all STROBECOM II components. Unlike other manufacturers, TOMAR's ten year warranty has NO fees or charges for warranty repairs after five years.

NOTICE: The sale of these items are restricted to state and local governments and to authorized distributors only.