









## OPEN-AREA SMOKE IMAGING DETECTION (OSID) REFERENCE GUIDE

OSID (Open-area Smoke Imaging Detector) combines dual wavelength (IR and UV) beams with CMOS imaging detection. This technology features high tolerance to vibration and structural movement and OSID differentiates better between smoke and environmental conditions than traditional beam detectors. OSID operates in both pitch dark as well as bright sunlight.

One Imager (receiver) can have up to 7 Emitters and provides easy 3D coverage for atria etc.

Fast and easy installation and commissioning is achieved through the flexible ball & socket arrangement and the use of the laser alignment tool. Trouble shooting is simple thanks to the on-board memory and the OSID Diagnostic SW package, both unique for this industry.

Below is an overview of this award winning OSID range.

<b>OSI-10</b>	<b>Imager 8° FOV</b> Distance 30-150 m with OSE-SP/W This configuration is for a 1 on 1 system The OSI-10 is not suited to work with High Powered Emitters	
<b>OSI-90</b>	<b>Imager 80° FOV</b> Distance 6-34 m with OSE-SP/W Distance 12-68 m with OSE-HPW Distance 12-50 m with OSE-HP-01	
<b>OSE-SP-01</b>	<b>Emitter battery powered-alkaline battery</b> Using battery powered Emitters, with a guaranteed 5 year life, drastically reduce the wiring and installation costs	
<b>OSE-HP-01</b>	Emitter High Power battery powered-alkaline battery Using battery powered Emitters, with a guaranteed 3 year life, drastically reduce the wiring and installation costs	
<b>OSE-SPW</b>	<b>Emitter Wired 24 Vdc</b> A preferred solution when 24 Vdc is close by	
<b>OSE-HPW</b>	<b>Emitter High Power Wired 24 Vdc</b> Allows to double the detection ranges of the OSI-90	

# OSID



<b>OSID-INST</b>	<p><b>OSID Installation Kit</b> Kit including laser alignment tool, test filter, PC cable, cleaning cloth, reflectors and manual</p>	
<b>VKT-301</b>	<p><b>OSID Demo kit</b> Kit consisting of 2 X OSE-SP-01, 1 X OSI-90, 1 X OSID-INST and mounting plates, fitted in a rugged carry case</p>	
<b>OSP-001</b>	<p><b>FTDI Cable 1.5m</b> Allows to connect a PC and hence OSID Diagnostic SW to the Imager. The FTDI cable can be extended with another 20 m using cable with an active USB amplifier</p>	
<b>OSP-002</b>	<p><b>Laser Alignment tool</b> A unique alignment tool for fast alignment. Aligns and locks the eyeball. Does also activate Emitters when locked</p>	
<b>OSID-WG</b>	<p><b>Wire Guard</b> A steel cage to protect OSID Imagers and Emitters from vandalism and accidental damage</p>	
<b>OSID-EHI</b>	<p><b>Imager Environmental Housing</b> Custom designed IP 66, NEMA 4-4X protective and environmental housings protect OSID Imagers from dust and water ingress in industrial environments</p>	
<b>OSID-EHE</b>	<p><b>Emitter Environmental Housing</b> Custom designed IP 66, NEMA 4-4X protective and environmental housings protect OSID Emitters from dust and water ingress in industrial environments</p>	
<b>OSE-ACF</b>	<p><b>Anti-condensation film for Emitters</b> An easy applicable film that provide long time resistance to condensation on the acrylic Emitter lens</p>	
<b>OSEH-ACF</b>	<p><b>Anti-condensation film for OSID-EH housings</b> An easy applicable film that provide long time resistance to condensation on the glass fronts</p>	
<b>OSID Diagnostic Tool</b>	<p><b>Diagnostic software package</b> A unique software program that allows visualisation of the Imager's view, quality of alignment and IR/UV real time graphs. The program also features real time logging capability for trouble shooting and site evaluation purposes</p>	
<b>OSID Selection Assistant</b>	<p><b>System selection tool</b> The program is an intuitive Excel based program that for a given area will calculate 90° and 10° OSID solutions as well offer a price comparison with traditional beams. It also gives the exact location to point the alignment laser tool for optimal FOV for the Imagers in multi-Emitter solutions</p>	
<b>OSE-RBL</b>	<p><b>Emitter replacement battery Lithium</b></p>	
<b>OSE-RBA</b>	<p><b>Emitter replacement battery Alkaline</b></p>	
<b>OSI-LS</b>	<p><b>Light shield for Imagers</b></p>	
<b>OSI-RS</b>	<p><b>Imager Reset Station</b></p>	

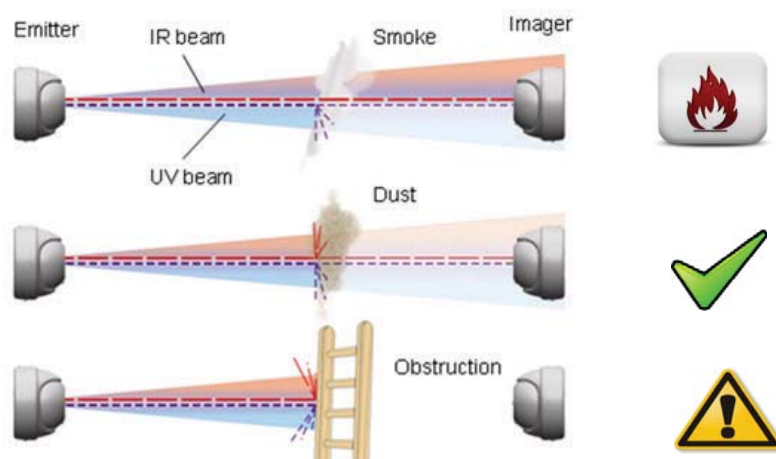


## AVAILABLE FIELDS OF VIEW AND DETECTION RANGES

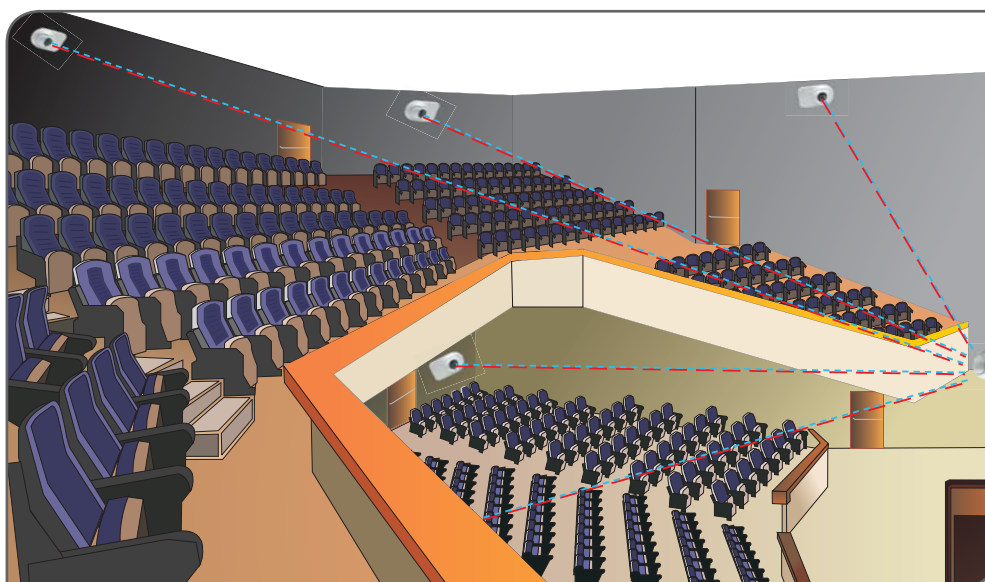
Image Lens Type	Usable Field of View		Detection Range				Max. Number of Emitters
	Horizontal	Vertical	Standard Power		High Power		
			Min	Max	Min	Max	
10°	7°	4°	30 m (98 ft)	150 m (492 ft)	-	-	1
90°	80°	48°	6 m (20 ft)	34 m (111 ft)	12 m (39 ft)	68 m (223 ft)/ 50 m (164 ft) *	7

\* Range with OSE-HP-01

## ONE-ON-ONE APPLICATION AND THEORY OF OPERATION



## TYPICAL MULTI-EMITTER APPLICATION



# OSID



## PRODUCT SPECIFICATIONS

General	
<b>Alarm Thresholds (Configurable)</b>	Low - Highest sensitivity / earliest alarm: 20% (0.97 dB) Medium - Medium sensitivity: 35% (1.87 dB) High - Lowest sensitivity / maximum immunity to nuisance smoke conditions: 50% (3.01 dB) Industrial mode - unapproved sensitivity at 65% (4.56 dB)
<b>Alarm Latching (Configurable)</b>	Latching / Non-latching configured via DIP switch
<b>Status LEDs (Imager)</b>	Red: Fire Alarm; Bi-color Yellow/Green: Trouble or Normal
<b>IP Rating</b>	IP 44 for Electronics; IP 66 for Optics Enclosure
<b>DIP Switch Configuration (Termination Card)</b>	Configuration for alarm thresholds, number of Emitters and alarm latching/non latching
Electrical	
<b>Imager Supply voltage</b>	20-30 VDC (24 VDC nominal)
<b>Imager Current Consumption</b>	Typical at 24 VDC: 8 mA (one Emitter), 10 mA (seven Emitters)
<b>Emitter Current Consumption</b>	Externally powered Emitter (at 24 VDC): 350 µA Standard Power, 800 µA High Power Battery-powered Emitter: Built-in 5 Year Replacement Alkaline Battery, 3 Year Replacement with OSE-HP-01
<b>Cable Gauge</b>	0.2 - 4 mm <sup>2</sup> (26-12 AWG)
<b>Trouble/Fault Relay</b>	2 A @ 30 VDC, NO-C-NC Dry Relay Contacts
<b>Fire Alarm Relay</b>	2 A @ 30 VDC, NO-C-NC Dry Relay Contacts
<b>Heater Input Power</b>	24 VDC, 16 mA (400 mW)
Environmental	
<b>Operating Temperature</b>	-10° C to 55° C (14° F to 131° F)
<b>Humidity</b>	10 to 95% RH Non-condensing
Mechanical	
<b>Dimensions (WHD)</b>	208 mm x 136 mm x 96 mm (8.2 in x 5.4 in x 3.8 in)
<b>Weight</b>	Imager: 610 g; Emitter (battery powered): 1.2 kg Emitter (wired): 535 g
<b>Adjustment Angle</b>	Horizontal: ±60°; Vertical: ±15°
<b>Maximum Misalignment Angle</b>	±2°

## OSID AWARDS



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