



# Standard OMNI-BEAM Sensors

## OMNI-BEAM Standard Sensor Heads: summary of available models

Standard Sensor Heads	Sensing Mode	Range	Response	Page
	OSBE and OSBR	Opposed	150 feet	2 milliseconds 8
	OSBD	Diffuse (proximity); high speed	12 inches	2 milliseconds 8
	OSBDX	Diffuse (proximity); high power	6 feet	15 milliseconds 8
	OSBLV	Retroreflective	30 feet	4 milliseconds 8
	OSBLVAG	Retroreflective, polarized	15 feet	4 milliseconds 8
	OSBCV	Convergent	focus at 1.5"	4 milliseconds 9
	OSBF	Fiber optic (glass fibers); high speed, infrared	see specs	2 milliseconds 9
	OSBFX	Fiber optic (glass fibers); high power, infrared	see specs	15 milliseconds 10
	OSBFV	Fiber optic (glass fibers); high speed; visible red	see specs	2 milliseconds 10
	OSBEF & OSBRF	Opposed fiber optic (glass fibers); infrared	see specs	2 milliseconds 11
	OSBFP	Fiber optic (plastic fibers); visible red	see specs	2 milliseconds 11
	OSBFAC	AC-coupled fiber optic mode (glass fibers)	see specs	see specs 12

## OMNI-BEAM Standard Power Blocks: summary of available models

Standard Power Blocks	Input Voltage	Output Configuration	Cable or QD*	Page
	OPBA2	105 to 130V ac	Solid-state ac relay	6' cable 14
	OPBB2	210 to 250V ac	Solid-state ac relay	6' cable 14
	OPBA2QD	105 to 130V ac	Solid-state ac relay	QD fitting, mini 14
	OPBB2QD	210 to 250V ac	Solid-state ac relay	QD fitting, mini 14
	OPBAE	105 to 130V ac	No output: for powering emitter only	6' cable 14
	OPBBE	210 to 250V ac	No output: for powering emitter only	6' cable 14
	OPBAEQD	105 to 130V ac	No output: for powering emitter only	QD fitting, mini 14
	OPBBEQD	210 to 250V ac	No output: for powering emitter only	QD fitting, mini 14
	OPBT2	10 to 30V dc	Bi-Modal; NPN sinking or PNP sourcing	6' cable 13
	OPBT2QD	10 to 30V dc	Bi-Modal; NPN sinking or PNP sourcing	QD fitting, mini 13
	OPBT2QDH	10 to 30V dc	Bi-Modal; NPN sinking or PNP sourcing	QD fitting, euro 13
	OPBTE	10 to 30V dc	No output: for powering emitter only	6' cable 13
	OPBTEQD	10 to 30V dc	No output: for powering emitter only	QD fitting, mini 13
	OPBTEQDH	10 to 30V dc	No output: for powering emitter only	QD fitting, euro 13

\*minfast™ or eurofast™

## OMNI-BEAM Output Logic Modules: summary of available models

### Logic Modules (page 15)

### Timing Function



OLM5	Delay timer module (on delay, off delay, or on/off delay; 0.1 to 15 seconds)
OLM8	Pulse timer module (one-shot or delayed one-shot; 15 seconds max. pulse, 15 seconds max. delay)
OLM8M1	Pulse timer module (one-shot or delayed one-shot; 1.5 seconds max. pulse, 1.5 seconds max. delay)

### NOTES

- 1) QD and QDH model power blocks have integral QD (Quick Disconnect) fitting; all other models have attached 6-foot PVC-covered cable.
- 2) For complete information, see the referenced pages.

# Standard OMNI-BEAM Sensor Heads

## Sensing Mode and Models

## Excess Gain

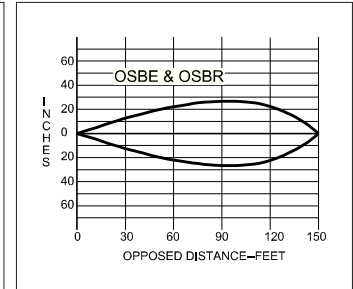
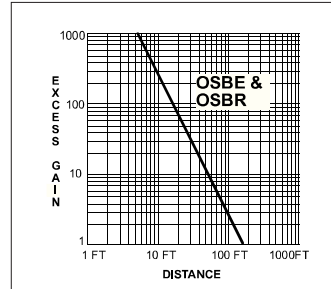
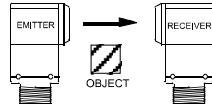
## Beam Pattern

### OPPOSED Mode



#### OSBE & OSBR

**Range:** 150 feet (45m)  
**Beam:** infrared, 880nm  
**Response:** 2ms  
**Repeatability:** 0.01ms  
**Effective Beam:** 1" dia.

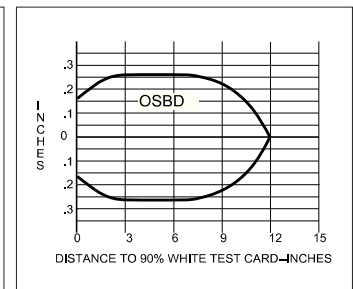
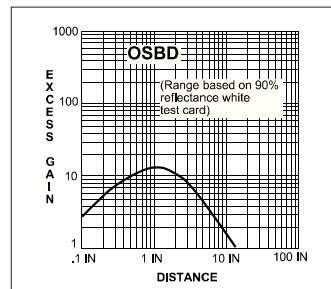
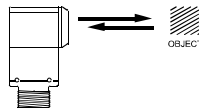


### HIGH-SPEED DIFFUSE (PROXIMITY) Mode



#### OSBD

**Range:** 12 inches (30cm)  
**Beam:** infrared, 880nm  
**Response:** 2ms  
**Repeatability:** 0.1ms

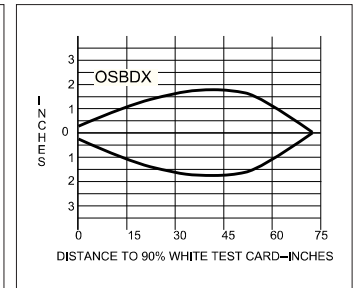
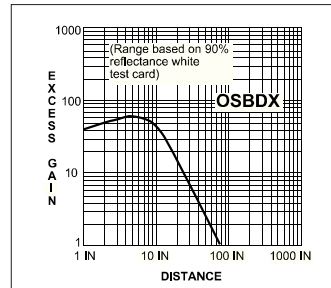


### HIGH-POWER DIFFUSE (PROXIMITY) Mode

Diffuse (proximity) mode sensors detect objects by sensing their own emitted light reflected from the object. They are ideal for use when the reflectivity and profile of the object to be detected are sufficient to return a large percentage of emitted light back to the sensor. Model OSBDX is the first choice for diffuse (proximity) mode applications when there is no requirement for less than 15ms response and where there are no background objects to falsely return light.

#### OSBDX

**Range:** 6 feet (2m)  
**Beam:** infrared, 880nm  
**Response:** 15ms  
**Repeatability:** 1ms

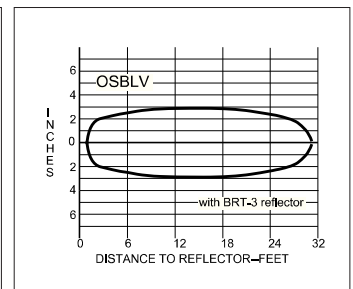
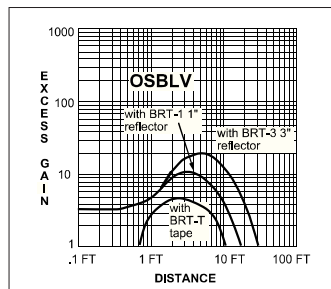
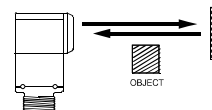


### RETROREFLECTIVE Mode



#### OSBLV

**Range:** 6 inches to 30 feet  
 (0,15 to 9m)  
**Beam:** visible red, 650nm  
**Response:** 4ms  
**Repeatability:** 0.2ms



### POLARIZED RETRO Mode

The *visible red sensing beam* of these retroreflective sensors makes them very easy to align. The "AG" (anti-glare) model polarizes the emitted light and filters out unwanted reflections, making sensing possible in applications otherwise considered unsuited to retroreflective sensing. Use "AG" models only in very clean environments, and use with the model BRT-3 3" reflector. NOTE: for detailed information on retroreflective targets, see the Banner product catalog.

#### OSBLVAG

**Range:** 12 inches to 15 feet  
 (0,3 to 4,5m)  
**Beam:** visible red, 650nm  
**Response:** 4ms  
**Repeatability:** 0.2ms

