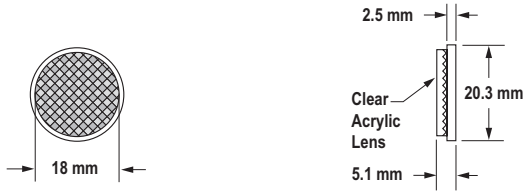
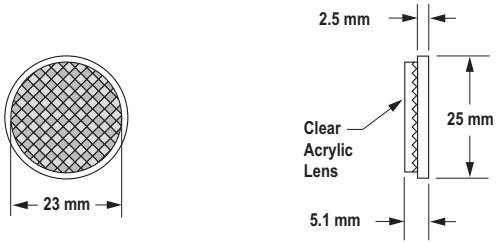
BRT-.6

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C



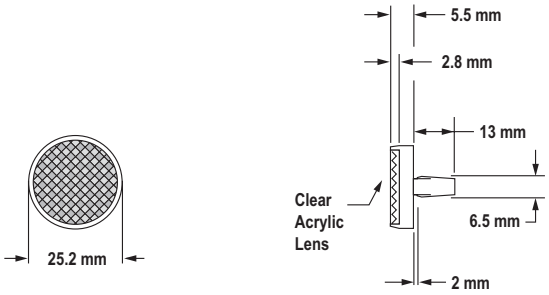
BRT-1

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C



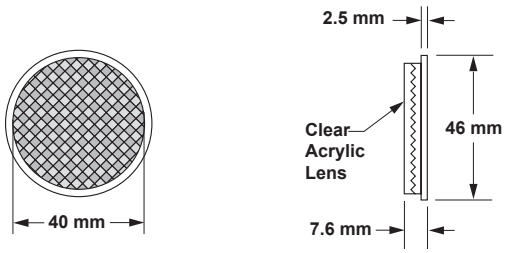
BRT-25R

Description: Round, rivet-secured acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C



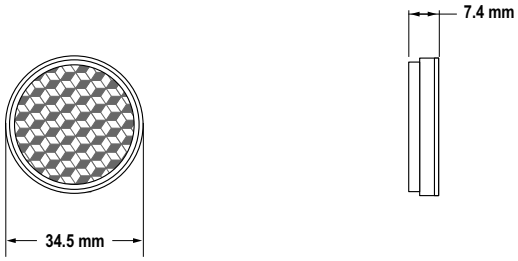
BRT-1.5

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C



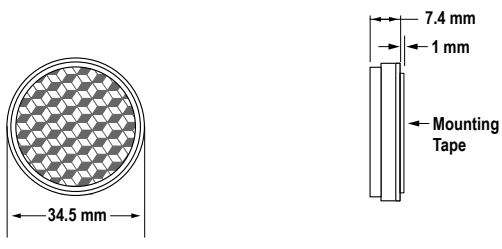
BRT-34

Description: Round, acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C



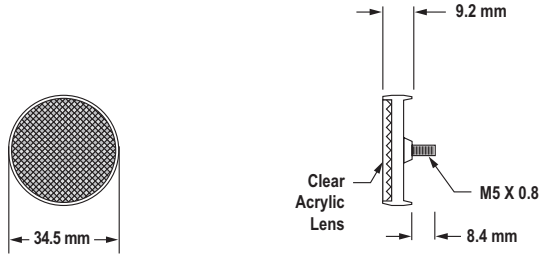
BRT-34T

Description: Round, acrylic target includes mounting tape
Reflectivity Factor: 1.2
Max. Temperature: 65° C



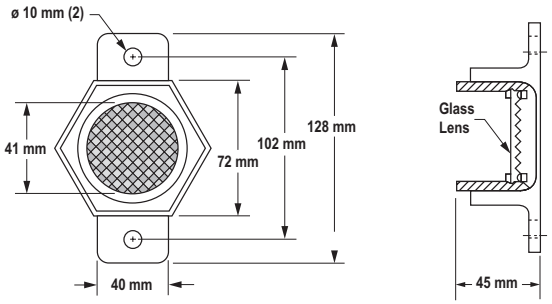
BRT-35DM

Description: Round, acrylic target with mounting stud
Reflectivity Factor: 1.2
Max. Temperature: 50° C
Other: This target has micro-prism geometry.



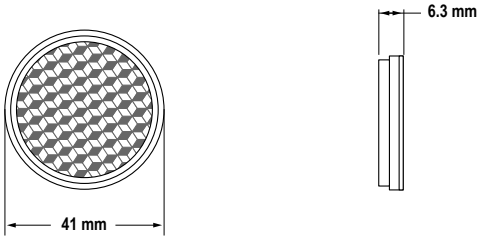
BRT-41AHT

Description: Round, borosilicate (Pyrex type) glass target
Reflectivity Factor: 1.0
Max. Temperature: 200° C



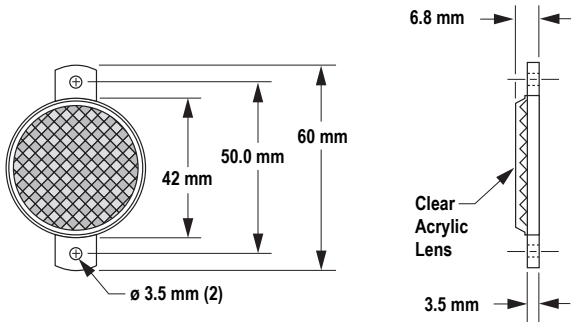
BRT-42

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C



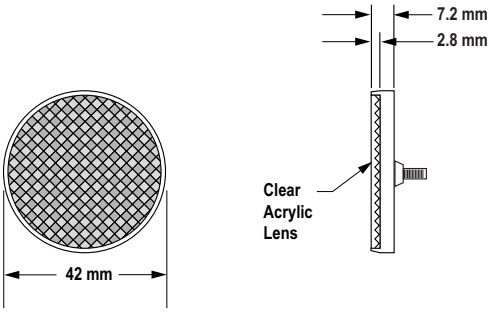
BRT-42A

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C



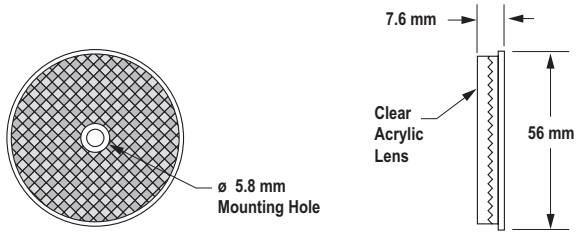
BRT-42D

Description: Round, acrylic target with mounting stud
Reflectivity Factor: 1.0
Max. Temperature: 50° C



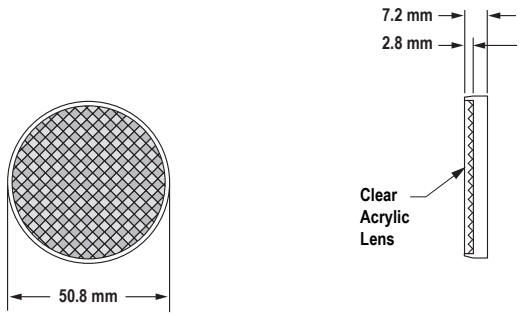
BRT-2A

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C



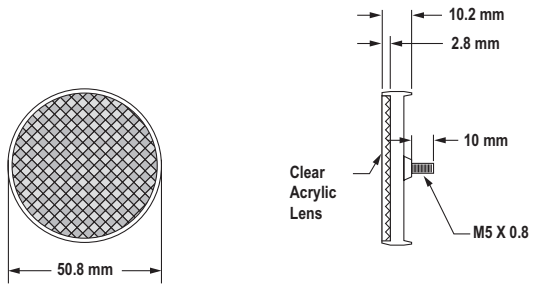
BRT-50

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C



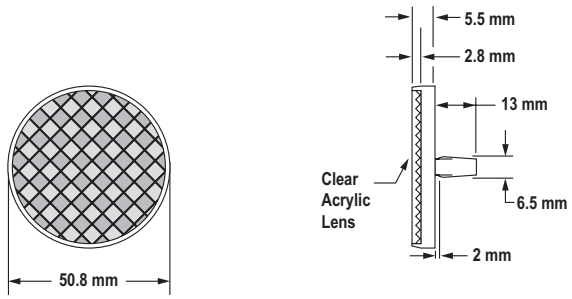
BRT-50D

Description: Round, acrylic target with mounting stud
Reflectivity Factor: 1.0
Max. Temperature: 65° C
Other: Optional brackets are available. See page 376.



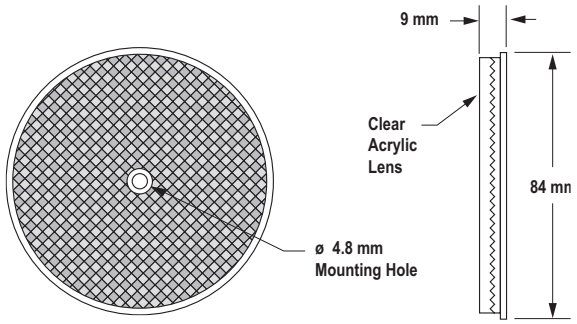
BRT-50R

Description: Round, rivet-secured acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C
Other: Optional brackets are available. See page 376.



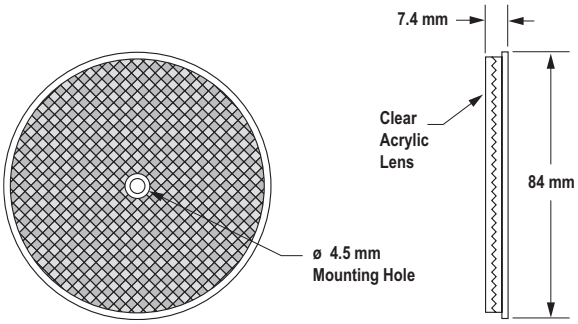
BRT-3

Description: Round, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 65° C
Other: Optional brackets are available. See page 376.



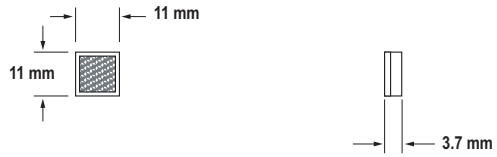
BRT-84

Description: Round, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 65° C
Other: Optional brackets are available. See page 376.



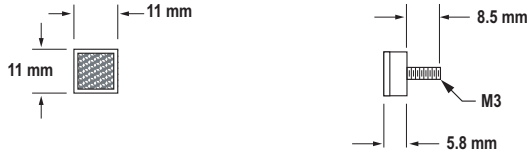
BRT-11X11M

Description: Square, acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



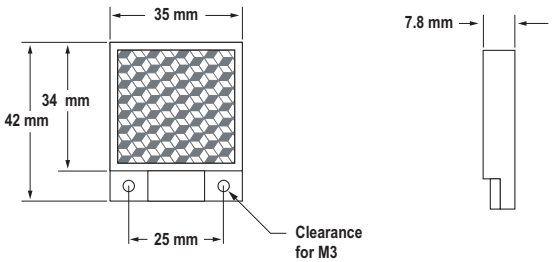
BRT-11X11MD

Description: Square, acrylic target with mounting stud
Reflectivity Factor: 1.2
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



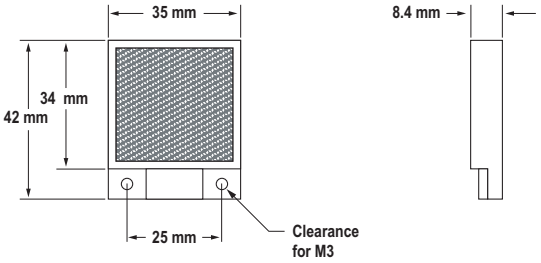
BRT-35X35B

Description: Square, acrylic target
Reflectivity Factor: 1.3
Max. Temperature: 65° C



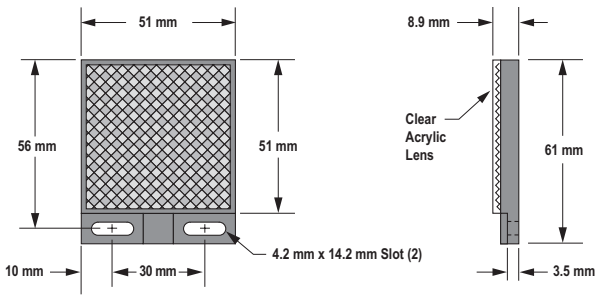
BRT-35X35BM

Description: Square, acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



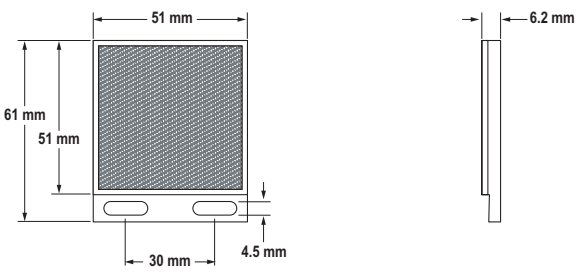
BRT-2X2

Description: Square, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C
Others: Optional brackets are available. See page 376.



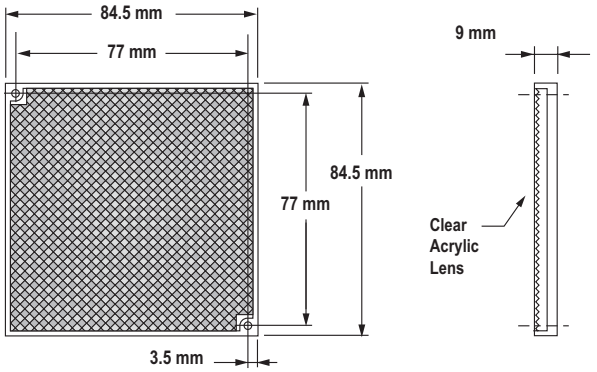
BRT-51X51BM

Description: Square, acrylic target
Reflectivity Factor: 1.5 **Max. Temperature:** 50° C
Other: This target has micro-prism geometry. Optional brackets are available on page 376. Replaces reflector BRT-36X40BM.



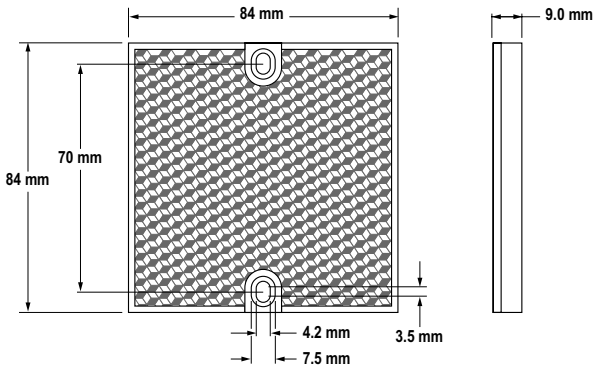
BRT-77X77C

Description: Square, acrylic target
Reflectivity Factor: 2.0
Max. Temperature: 50° C
Other: Optional brackets are available. See page 376.



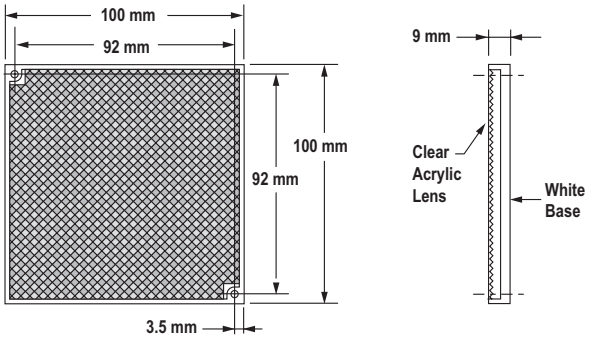
BRT-84X84A

Description: Square, acrylic target
Reflectivity Factor: 2.0
Max. Temperature: 50° C



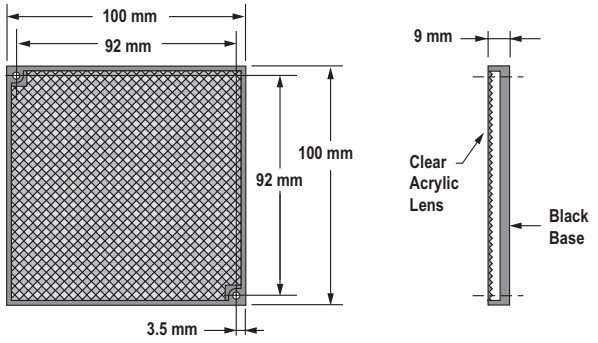
BRT-92X92C

Description: Square, acrylic target
Reflectivity Factor: 3.0
Max. Temperature: 50° C
Other: Optional brackets are available. See page 376.



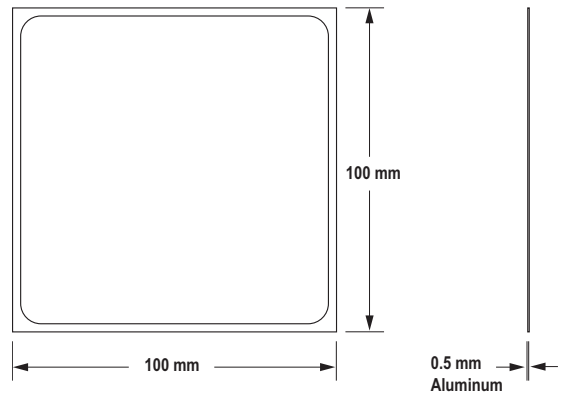
BRT-92X92CB

Description: Square, acrylic target with black mounting base
Reflectivity Factor: 3.0
Max. Temperature: 50° C
Other: Optional brackets are available. See page 376.



BRT-4HT

Description: Square, aluminum target
Reflectivity Factor: 0.15
Max. Temperature: 480° C
Other: This target is not recommended for polarized retroflective sensors.



BRT-250
BRT-540
BRT-700

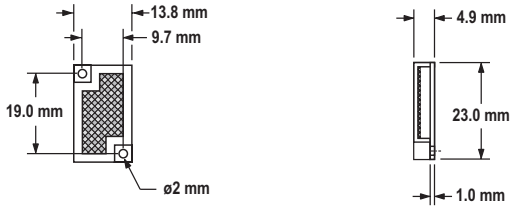
- 250 x 250 mm
- 540 x 540 mm
- 700 x 700 mm

Other: Square reflector with rigid aluminum backing for use with LT7



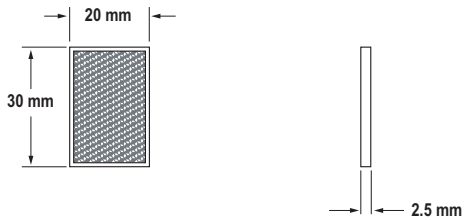
BRT-23X14CM

Description: Rectangular, acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



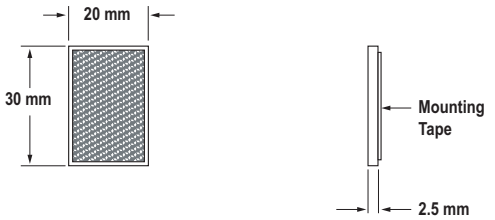
BRT-30X20M

Description: Rectangular, acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C



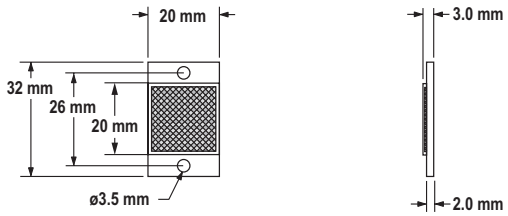
BRT-30X20MT

Description: Rectangular, acrylic target includes mounting tape
Reflectivity Factor: 1.2
Max. Temperature: 65° C



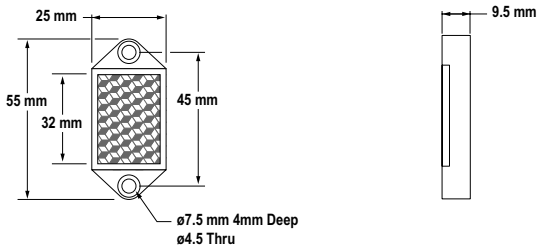
BRT-32X20AM

Description: Rectangular, thin profile acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



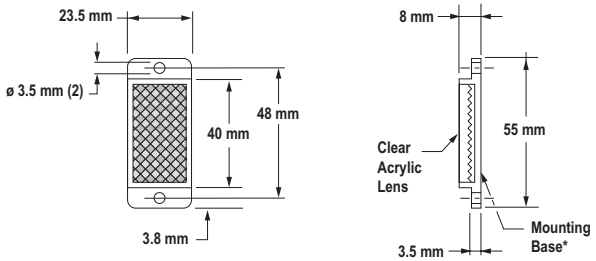
BRT-32X22A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.3
Max. Temperature: 65° C



BRT-35X20A
BRT-35X20AB

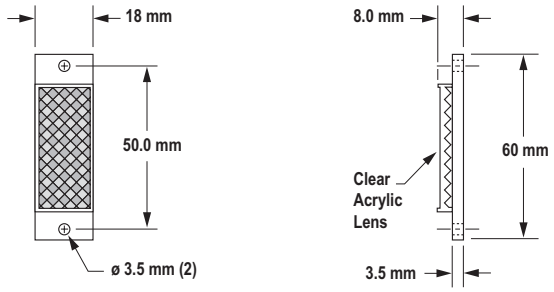
Description: Rectangular, acrylic target*
Reflectivity Factor: 1.4
Max. Temperature: 50° C



*Mounting base available in white (BRT-35X20A) or black (BRT-35X20AB).

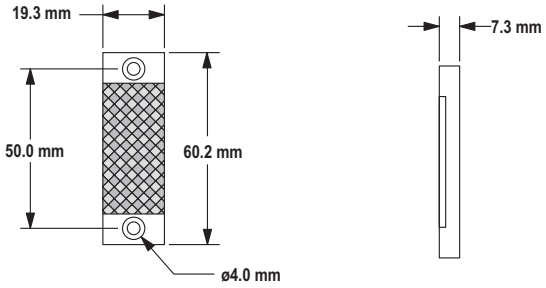
BRT-40X18A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C



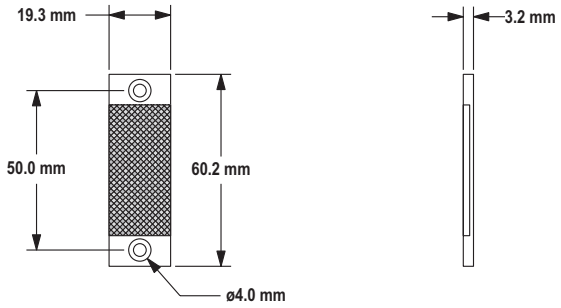
BRT-40X19A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.3
Max. Temperature: 50° C



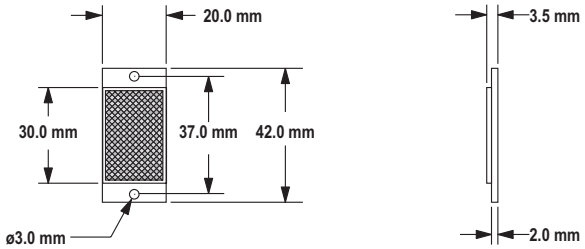
BRT-40X19AM

Description: Rectangular, thin profile acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 50° C
Other: This target has micro-prism geometry.



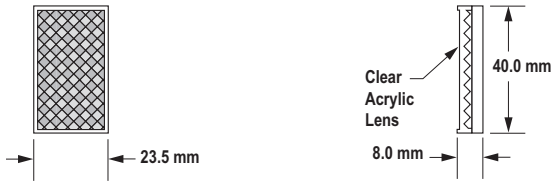
BRT-40X20AM

Description: Rectangular, thin profile acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 50° C
Other: This target has micro-prism geometry.



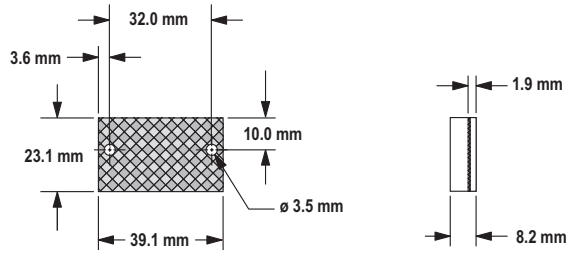
BRT-40X23

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



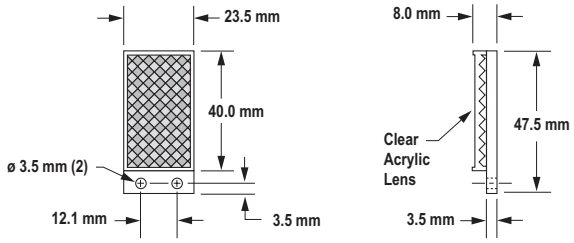
BRT-40X23A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



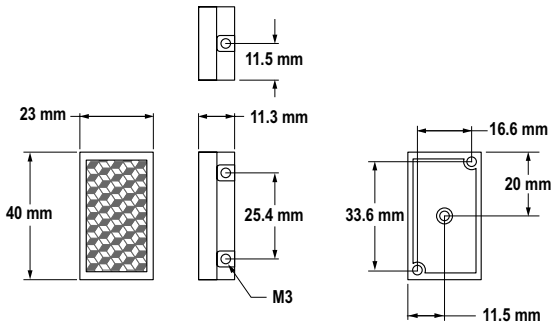
BRT-40X23B

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



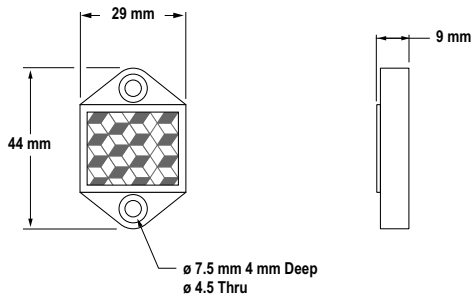
BRT-40X23ABC

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



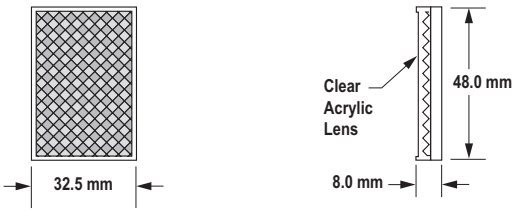
BRT-44X29A6

Description: Rectangular, acrylic target
Reflectivity Factor: 1.1
Max. Temperature: 50° C
Other: 6 mm facets; close to the face retroreflective sensing with bifurcated lens.



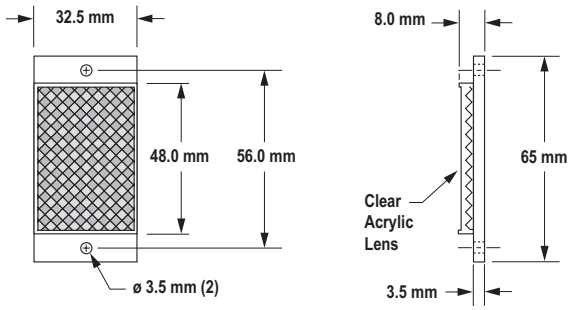
BRT-48X32

Description: Rectangular, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C



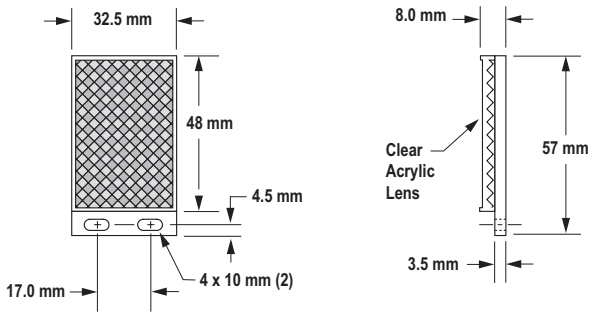
BRT-48X32A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C



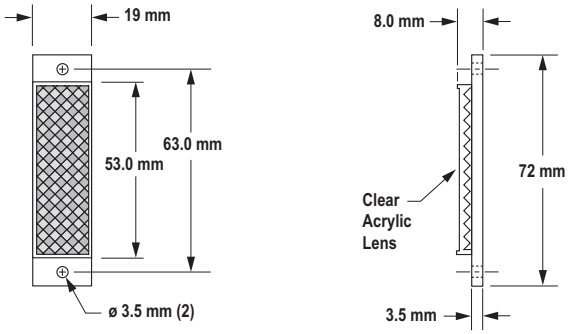
BRT-48X32B

Description: Rectangular, acrylic target
Reflectivity Factor: 1.0
Max. Temperature: 50° C



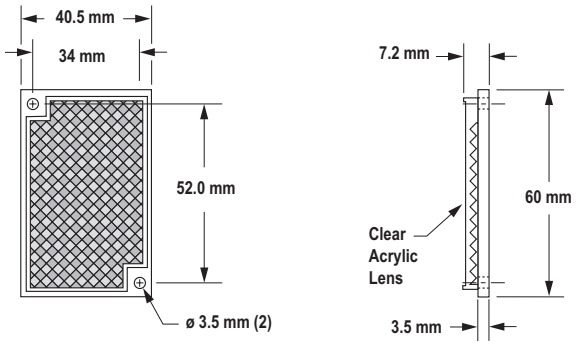
BRT-53X19A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



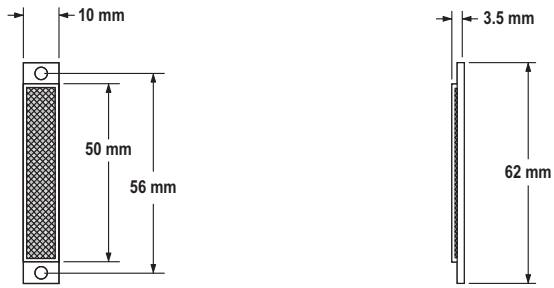
BRT-60X40C

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4 **Max. Temperature:** 50° C
Other: This target has micro-prism geometry. Optional brackets are available. See page 376.



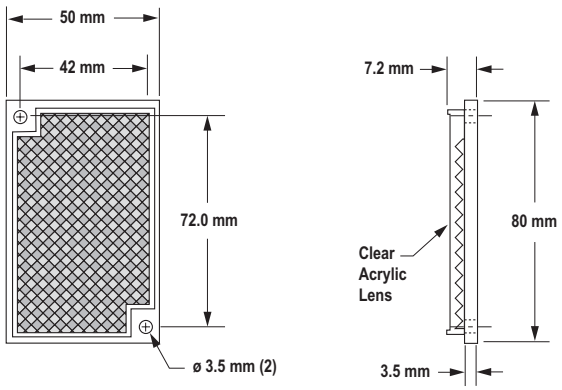
BRT-62X10AM

Description: Rectangular, thin profile acrylic target
Reflectivity Factor: 1.2
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



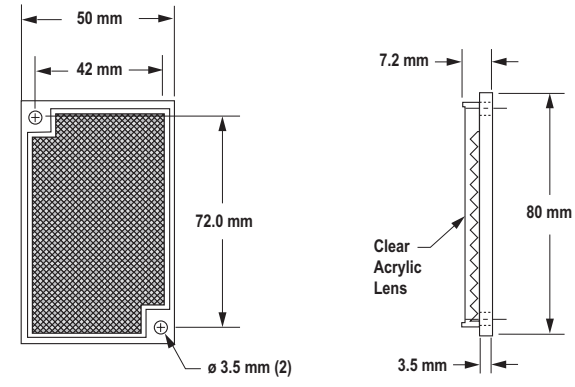
BRT-80X50C

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 65° C



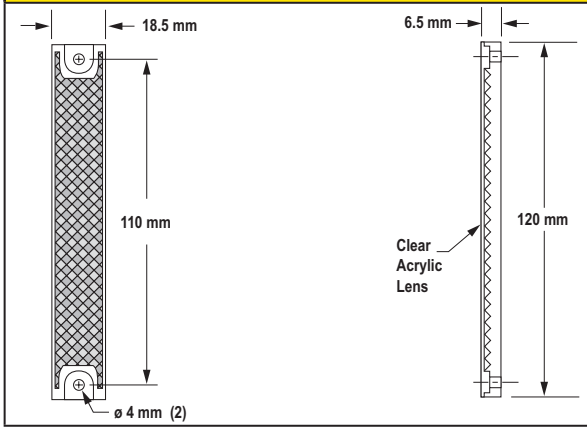
BRT-80X50CM

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 65° C
Other: This target has micro-prism geometry.



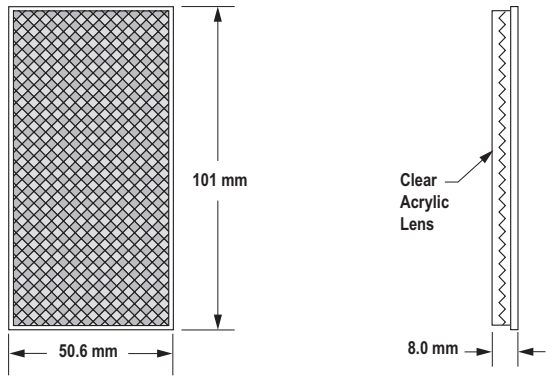
BRT-100X18A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



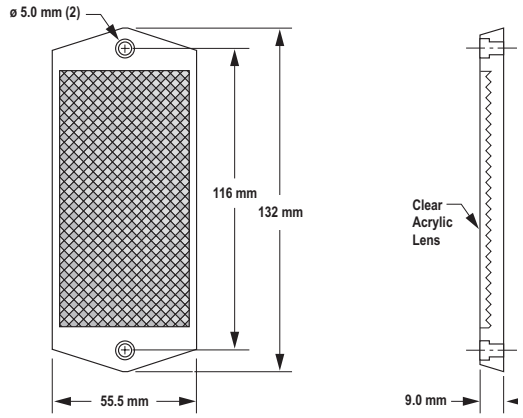
BRT-100X50

Description: Rectangular, acrylic target
Reflectivity Factor: 1.5
Max. Temperature: 50° C



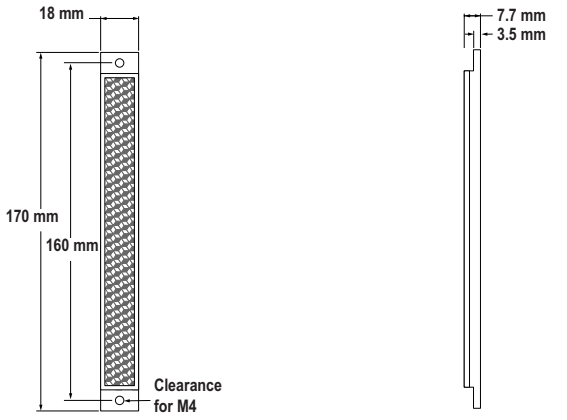
BRT-100X55A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.5
Max. Temperature: 50° C



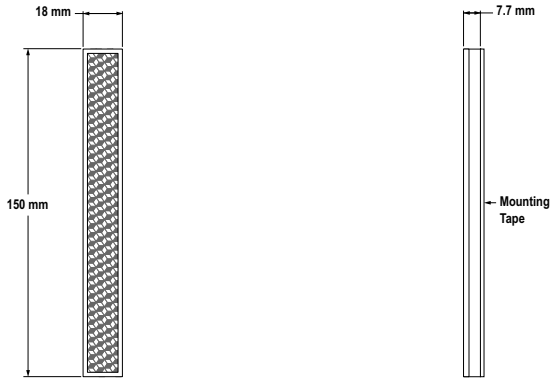
BRT-150X18A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 65° C



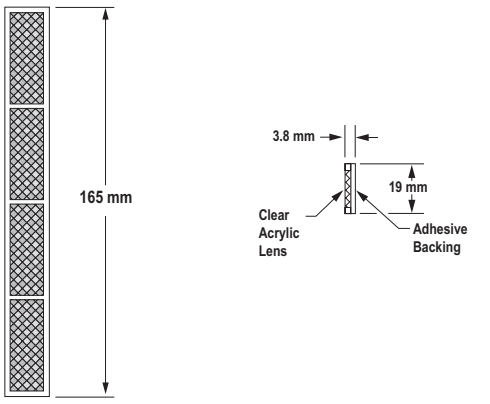
BRT-150X18T

Description: Rectangular, acrylic target includes mounting tape.
Reflectivity Factor: 1.4
Max. Temperature: 65° C



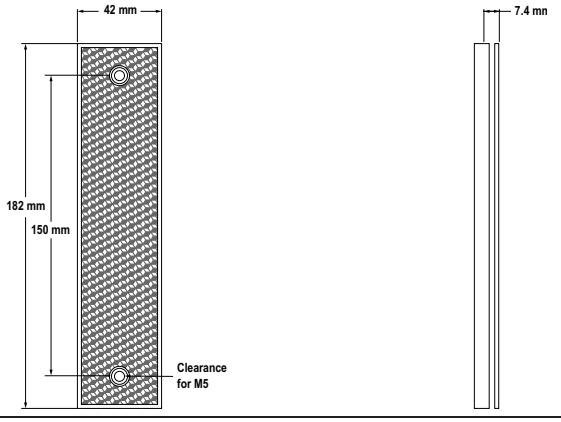
BRT-L

Description: Rectangular, acrylic target
Reflectivity Factor: 0.8
Max. Temperature: 65° C



BRT-180X40A

Description: Rectangular, acrylic target
Reflectivity Factor: 1.4
Max. Temperature: 50° C



Retroreflective Tape

NOTE: Sensing range and signal strength at any given sensor-to-target distance will vary due to target reflectivity and target area. A "Reflectivity Factor" is included for each target model to help predict sensor performance, relative to the excess gain curve plotted for target model BRT-3. Consider, also, target area when predicting performance. Changing to a high reflectivity reflector (like BRT-92X92C) may also extend sensor range and/or reduce the need for frequent reflector maintenance. A high reflectivity factor AND large surface area are needed for maximum range.

Model	Reflectivity Factor	Maximum Temperature	Size	Unit	
BRT-THG-3X3-10	0.7	60° C	75 x 75 mm	10 per pack	
BRT-THG-4X4-5	0.7	60° C	100 x 100 mm	5 per pack	
BRT-THG-8.5X11-2	0.7	60° C	216 x 280 mm	2 per pack	
BRT-THG-18X36	0.7	60° C	457 x 914 mm	Single sheet	
BRT-THG-1-100	0.7	60° C	25 mm wide	2.5 m length	
BRT-THG-2-100	0.7	60° C	50 mm wide	2.5 m length	
BRT-THG-3-100	0.7	60° C	75 mm wide	2.5 m length	
BRT-THT-100†	0.07	175° C	25 mm wide	2.5 m length	
BRT-TVHG-2X2*	0.8	60° C	50 x 50 mm	4 per pack	
BRT-TVHG-8X10P	0.8	60° C	203 x 254 mm	1 per pack	

NOTE: Retroreflective material has a pressure-sensitive adhesive. For maximum adhesion, surfaces must be clean and dry before applying. For best results, use full size; target may be trimmed as necessary.

† These targets are not recommended for polarized retroreflective sensors.

* These are sealed micro-prism style pieces and may not be cut.
Suitable for use with Laser sensors, VS3 sensors and SME312LPC model sensors.
Not suggested for close range (less than 102 mm) except with VS3 sensors.

Tubular Enclosures

- *Available for A-GAGE® EZ-ARRAY™ or MINI-ARRAY®*
- *Ideal for high-power washdown environments*
- *Made of clear FDA-grade polycarbonate tubing, with acetal end caps*
- *Includes stainless mounting brackets and hardware*
- *Rated NEMA 4X; IP67*



MORE INFO ONLINE Detailed Dimensions

EZA-TE Tubular Enclosures

MORE INFO ONLINE Download PDF

Model	Used With		Enclosure Height (L)	Data Sheet
	Emitter/Receiver Model	Emitter/Receiver Array Length		
EZA-TE-150	EZ-ARRAY	EA5..-150	150 mm	439 mm	117107
EZA-TE-300		EA5..-300	300 mm	541 mm	
EZA-TE-450		EA5..-450	450 mm	744 mm	
EZA-TE-600		EA5..-600	600 mm	846 mm	
EZA-TE-750		EA5..-750	750 mm	1024 mm	
EZA-TE-900		EA5..-900	900 mm	1151 mm	
EZA-TE-1050		EA5..-1050	1050 mm	1354 mm	
EZA-TE-1200		EA5..-1200	1200 mm	1455 mm	
EZA-TE-1500		EA5..-1500	1500 mm	1760 mm	
EZA-TE-1800		EA5..-1800	1800 mm	2065 mm	

NOTE: Use of the enclosure affects the sensing range of the emitter/receiver used: when in pairs, range can be reduced by 50%.

MSA-TE Tubular Enclosures

MORE INFO ONLINE Download PDF

Model	Used With			Enclosure Height (L)	Data Sheet
	Emitter/Receiver Model		Emitter/Receiver Array Length		
MSA-TE-4	MINI-ARRAY	BMEL616A/BMRL616A	133 mm	338 mm	109307
		BMEL632A/BMR632A	143 mm		
	High-Resolution MINI-ARRAY	MAHE6A/MAHR6A	163 mm		
MSA-TE-8	MINI-ARRAY	BMEL1216A/BMRL1216A	286 mm	439 mm	
		BMEL1232A/BMR1232A	295 mm		
	High-Resolution MINI-ARRAY	MAHE13A/MAHR13A	325 mm		
MSA-TE-12	MINI-ARRAY	BMEL1816A/BMRL1816A	438 mm	541 mm	
		BMEL1832A/BMRL1832A	448 mm		
MSA-TE-16	High-Resolution MINI-ARRAY	MAHE19A/MAHR19A	488 mm	643 mm	
MSA-TE-20	MINI-ARRAY	BMEL2416A/BMRL2416A	591 mm	744 mm	
		BMEL2432A/BMRL2432A	600 mm		
	High-Resolution MINI-ARRAY	MAHE26A/MAHR26A	600 mm		
MSA-TE-24	MINI-ARRAY	BMEL3016A/BMRL3016A	743 mm	846 mm	
		BMEL3032A/BMRL3032A	752 mm		
MSA-TE-28	High-Resolution MINI-ARRAY	MAHE32A/MAHR32A	813 mm	947 mm	

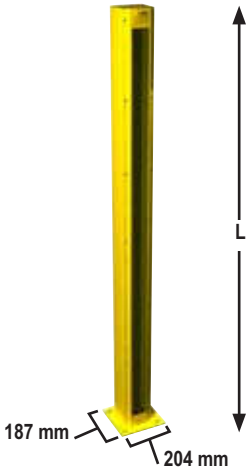
NOTE: Use of the enclosure affects the sensing range of the emitter/receiver used: when in pairs, range can be reduced by 50%.

More on next page

MSA-TE Tubular Enclosures (cont'd)

Model	Used With		Enclosure Height (L)	Data Sheet
	Emitter/Receiver Model	Emitter/Receiver Array Length		
MSA-TE-32	MINI-ARRAY	BMEL3616A/BMRL3616A	895 mm	1049 mm	109307
		BMEL3632A/BMRL3632A	905 mm		
	High-Resolution MINI-ARRAY	MAHE38A/MAHR38A	975 mm		
MSA-TE-36	MINI-ARRAY	BMEL4216A/BMRL4216A	1048 mm	1151 mm	
		BMEL4232A/BMRL4232A	1057 mm		
MSA-TE-40	High-Resolution MINI-ARRAY	MAHE45A/MAHR45A	1138 mm	1252 mm	
MSA-TE-44	MINI-ARRAY	BMEL4816A/BMRL4816A	1200 mm	1354 mm	
		BMEL4832A/BMRL4832A	1210 mm		
MSA-TE-48	High-Resolution MINI-ARRAY	MAHE51A/MAHR51A	1300 mm	1455 mm	

NOTE: Use of the enclosure affects the sensing range of the emitter/receiver used: when in pairs, range can be reduced by 50%.



Heated Enclosures

- *Available for A-GAGE® MINI-ARRAY® or High-Resolution MINI-ARRAY®*
- *Protects emitter/receiver in outdoor environments*
- *Includes humidistat and resistance wires to keep window free of condensation, snow or ice*
- *Provides choice of stainless steel or aluminum housings*

MINI-ARRAY® and High-Resolution MINI-ARRAY® Heated Enclosures

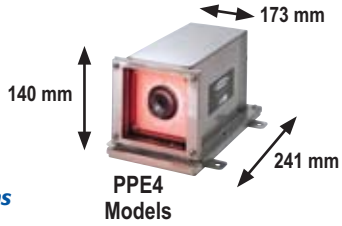
Models*	Material	Finish**	Array Length	Overall Enclosure\ Height (L)	Clear Window Height	Data Sheet
BMHE4A/BMHL4G	Aluminum	Painted	133 to 1210 mm	1.7 m	1.5 m	55557
BMHE5A/BMHL5G	Aluminum	Painted	1505 to 1514 mm	2.0 m	1.8 m	
BMHE6A/BMHL6G	Aluminum	Painted	1810 to 1819 mm	2.2 m	2.0 m	
BMHE4SS/BMHL4GSS	Stainless Steel	Painted	133 to 1210 mm	1.7 m	1.5 m	
BMHE5SS/BMHL5GSS	Stainless Steel	Painted	1505 to 1514 mm	2.0 m	1.8 m	
BMHE6SS/BMHL6GSS	Stainless Steel	Painted	1810 to 1819 mm	2.2 m	2.0 m	
BMHE4SSN/BMHL4GSSN	Stainless Steel	Non-painted	133 to 1210 mm	1.7 m	1.5 m	
BMHE5SSN/BMHL5GSSN	Stainless Steel	Non-painted	1505 to 1514 mm	2.0 m	1.8 m	
BMHE6SSN/BMHL6GSSN	Stainless Steel	Non-painted	1810 to 1819 mm	2.2 m	2.0 m	

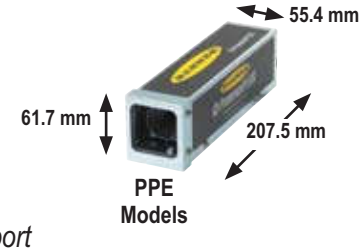
* Enclosures require a power supply (see page 447).
** Standard color is Federal Safety Yellow (Federal Standard color# 23538). Contact Factory for other colors.

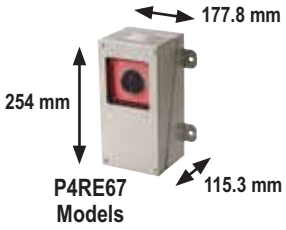
*Presence*PLUS® Enclosure Kits

- *Protects sensor, ring light or both*
- *Keeps dust and dirt off lens and light*
- *Prevents accidental bumps and scratches*
- *Discourages vandalism and tampering*
- *Helps maintain lens focus by enclosing the lens and sensor*
- *Available in models that protect camera and light during washdown*
- *Offers choice of models with glass or plastic viewport*

MORE INFO ONLINE Detailed Dimensions







*Presence*PLUS® Enclosure Kits

MORE INFO ONLINE Download PDF

Model	Description	Used With	Data Sheet
P4RE67-G	Heavy-duty stainless-steel enclosure kit—glass viewport; NEMA 6 rated	*P4* (right-angle) & Ring Light	121996
P4RE67-P	Heavy-duty stainless-steel enclosure kit—polycarbonate viewport; NEMA 6 rated		
PPE-G	Heavy-duty cold-rolled steel industrial protection kit—glass viewport; NEMA 1 rated	*Pro* Camera & Lens	115342
PPE-P	Heavy-duty cold-rolled steel industrial protection kit—polycarbonate viewport; NEMA 1 rated		
PPE-RG	Replacement viewport—glass	PPE-G	—
PPE-RP	Replacement viewport—polycarbonate	PPE-P	
SMBPPES	Straight Mounting bracket	PPE-P &PPE-G	—
SMBPPEA	Right-angle mounting bracket		
SMBPPEF	Front mounting bracket		
PPE4-G	Heavy-duty stainless-steel enclosure kit—glass viewport; NEMA 4 rated	*Pro* Camera & Ring Light	111362
PPE4-P	Heavy-duty stainless-steel enclosure kit—polycarbonate viewport; NEMA 4 rated		

Lens Shields

- *Covers the lens of the emitter/receiver to prevent damage*
- *Available for EZ-ARRAY™, MINI-ARRAY® and High-Resolution MINI-ARRAY®*
- *Installs easily*
- *Made of rugged polycarbonate*



MORE INFO ONLINE Detailed Dimensions

A-GAGE® EZ-ARRAY™ Lens Shields

MORE INFO ONLINE Download PDF

Model	Installation	Used With		Lens Shield Length (L)	Data Sheet
		Emitter/Receiver Model	Emitter/Receiver Array Length		
EZS-150EA	Adhesive	EA5..150	150 mm	218 mm	61960
EZSS-150EA	Snap-on			196 mm	127944
EZS-300	Adhesive	EA5..300	300 mm	368 mm	61960
EZSS-300	Snap-on			346 mm	127944
EZS-450	Adhesive	EA5..450	450 mm	518 mm	61960
EZSS-450	Snap-on			496 mm	127944
EZS-600	Adhesive	EA5..600	600 mm	667 mm	61960
EZSS-600	Snap-on			645 mm	127944
EZS-750	Adhesive	EA5..750	750 mm	817 mm	61960
EZSS-750	Snap-on			795 mm	127944
EZS-900	Adhesive	EA5..900	900 mm	967 mm	61960
EZSS-900	Snap-on			945 mm	127944
EZS-1050	Adhesive	EA5..1050	1050 mm	1116 mm	61960
EZSS-1050	Snap-on			1094 mm	127944
EZS-1200	Adhesive	EA5..1200	1200 mm	1266 mm	61960
EZSS-1200	Snap-on			1244 mm	127944
EZS-1500	Adhesive	EA5..1500	1500 mm	1565 mm	61960
EZSS-1500	Snap-on			1543 mm	127944
EZS-1800	Adhesive	EA5..1800	1800 mm	1865 mm	61960
EZSS-1800	Snap-on			1843 mm	127944
EZSS-2100	Snap-on	EA5..2100	2100 mm	2144 mm	127944
EZSS-2400	Snap-on	EA5..2400	2400 mm	2444 mm	127944

NOTE: When shields are installed on both the emitter and receiver, maximum operating range is reduced by 20%.

A-GAGE® MINI-ARRAY® Lens Shields

MORE INFO ONLINE Download PDF

Model	Installation	Used With			Lens Shield Length (L)	Data Sheet
		Emitter/Receiver Model		Emitter/Receiver Array Length		
MSS12	Adhesive	MINI-ARRAY	BMEL1216A/BMRL1216A	286 mm	341 mm	44418
			BMEL1232A/BMRL1232A	295 mm		
MSS24			BMEL2416A/BMRL2416A	591 mm	643 mm	
			BMEL2432A/BMRL2432A	600 mm		

NOTE: When shields are installed on both the emitter and receiver, maximum operating range is reduced by 20%.
* Other shield lengths are available, contact factory at 1-888-373-6767.

More on next page

A-GAGE® MINI-ARRAY® Lens Shields (cont'd)

Model	Installation	Used With			Lens Shield Length (L)	Data Sheet
		Emitter/Receiver Model		Emitter/Receiver Array Length		
MSS36	Adhesive	MIN-ARRAY	BMEL3616A/BMRL3616A	895 mm	948 mm	61960
			BMEL3632A/BMRL3632A	905 mm		
MSS48			BMEL4816A/BMRL4816A	1200 mm	1253 mm	
			BMEL4832A/BMRL4832A	1210 mm		

NOTE: When shields are installed on both the emitter and receiver, maximum operating range is reduced by 20%.
* Other shield lengths are available, contact factory at 1-888-373-6767.

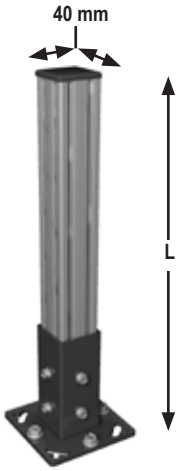
LX Lens Shields

Model	Installation	Used With		Lens Shield Length (L)	Data Sheet
		Emitter/Receiver Model	Array Length		
LXS3	Adhesive	LX3 models	67 mm	98.3 mm	113743
LXS6		LX6 models	143 mm	174.5 mm	
LXS12		LX12 models	295 mm	326.9 mm	

NOTE: When shields are installed on both the emitter and receiver, maximum operating range is reduced by 20%.

MSA Stands

- *Supports emitters and receivers*
- *Available without stand base, for attaching to a surface*
- *Available in four heights*
- *Assembles easily*
- *Includes mounting hardware.*



MORE INFO ONLINE Detailed Dimensions

MSA Stands

MORE INFO ONLINE Download PDF

Model*	Description	Stand Height (L)	Data Sheet
MSA-S24-1	EZ-ARRAY, MINI-ARRAY and High-Resolution MINI-ARRAY	610 mm	43687
MSA-S42-1		1067 mm	
MSA-S66-1		1676 mm	
MSA-S84-1		2132 mm	

* Available without base by adding suffix **NB** to model number (example, **MSA-S24-1NB**)

Adjustable Mounting Systems

- *Provides flexible mounting and positioning of sensors and lights*
- *Includes 3" and 6" column mounting kits for mounting area lights and backlights*
- *Features Bogen Arm and clamp for use with P4 and Pro sensors*
- *Offers 2" mounting knuckle assembly for spot lights*



SMBPPLK **SMBPPK6** **SMBPPK3** **SMBPPF1 & SMBPPFB**

MSA Stands

Model	Description	Used With
SMBPPK3	3" Column, Base, and Knuckle Kit	*Pro* *P4* Vision Lights
SMBPPK6	6" Column, Base, and Knuckle Kit	
SMBPPK	Mounting Bracket Knuckle	
SMBPPKE3	3" Column	
SMBPPKE6	6" Column	
SMBPPKB	Mounting Bracket Base	
SMBPPLK	2" Mounting Knuckle Assembly	
SMBPPF1	Bogen Arm with Single Knob	
SMBPPFB	Bogen Arm Clamp	

Elevated Use—Stand-off Pipe, Brackets and Adapters

	Model	Description	Length	Used With
	**SA-M30E12**	Thermoplastic Acetal adapter and cover (M30 to ½" NPSM/DN15)	—	SOP-E12-150SS SOP-E12-300SS
	SOP-E12-150SS	Stainless steel pipe (½" NPSM/DN15)	150 mm	K50L K80L
	SOP-E12-300SS		300 mm	
	SA-E12M30	Thermoplastic Acetal mounting base (½" NPSM/DN15 to M30)	—	SOP-E12-150SS SOP-E12-300SS
	**SMBE12USS**	Stainless steel bracket for wall or other flat surfaces	—	

Elevated Use—Cabinet Mounts and Extensions

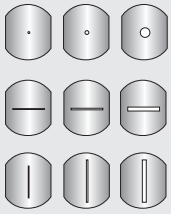
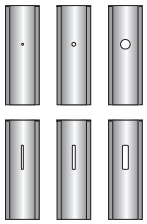
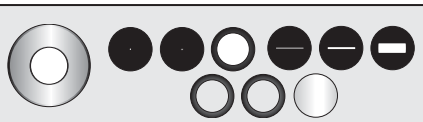
	Model	Description	Length	Used With
	**SA-M30M30-75**	Thermoplastic Acetal standoff with 30 mm mounting base for cabinet mounting or use with most 30 mm brackets	75 mm	K50L
	SA-30RL55X93	Zinc coated, oversized right-angle legend plate for identification labels	—	SA-M30M30-75
	**SA-M22M22-50**	Thermoplastic Acetal standoff with 22.5 mm mounting base for cabinet mounting	50 mm	K30L

Elevate Use—Hanging Bracket

	Model	Description	Length	Used With
	**SA-30RL55X93C**	Zinc coated bracket with strain relief	—	K50 Push Button VTB

Apertures and Aperture Kits

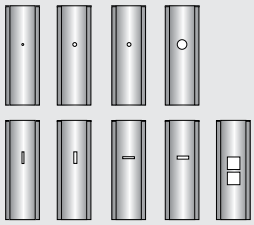
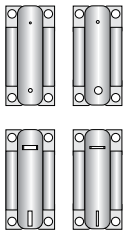
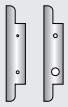
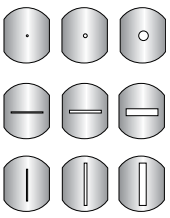
Opposed-mode sensors may be fitted with apertures which narrow or shape the effective beam of the sensor to more closely match the size of profile of the object to be sensed. A common exaample is the use of “line” or “slit” type aperture when wire or thread is being sensed.

Model	Aperture Description	Units	Product	Used With
APQS18-020	Circular, 0.5 mm dia.	6		QS18 Opposed-mode
APQS18-040	Circular, 1.0 mm dia.	6		
APQS18-100	Circular, 2.5 mm dia.	6		
APQS18-020H	Horizontal, slotted, 0.5 x 6.4 mm	6		
APQS18-040H	Horizontal, slotted, 1.0 x 6.4 mm	6		
APQS18-100H	Horizontal, slotted, 2.5 x 6.4 mm	6		
APQS18-020V	Vertical, slotted, 0.5 x 12.7 mm	6		
APQS18-040V	Vertical, slotted, 1.0 x 12.7 mm	6		
APQS18-100V	Vertical, slotted. 2.5 x 12.7 mm	6		
APQS18-DVHX2	Kit with 2 of each aperture	18		
APQ20-0.5	Circular, 0.5 mm dia.	2		Q20 Opposed-mode
APQ20-1	Circular, 1 mm dia.	2		
APQ20-2	Circular, 2 mm dia.	2		
APQ20-0.5V	Vertical, slotted, 0.5 mm	2		
APQ20-1V	Vertical, slotted, 1 mm	2		
APQ20-2V	Vertical, slotted, 2 mm	2		
APK-Q20	Kit with 2 of each aperture	12		
AP31-020	Circular, 0.5 mm dia.	20		MINI-BEAM Opposed-mode
AP31-040	Circular, 1.0 mm dia.	20		
AP31-100	Circular, 2.5 mm dia.	20		
AP31-020H	Horizontal, slotted, 0.5 x 6.4 mm	20		
AP31-040H	Horizontal, slotted, 1.0 x 6.4 mm	20		
AP31-100H	Horizontal, slotted, 2.5 x 6.4 mm	20		
AP31-200H	Horizontal, slotted, 5.1 x 6.4 mm	20		
AP31-020V	Vertical, slotted, 0.5 x 12.7 mm	20		
AP31-040V	Vertical, slotted, 1.0 x 12.7 mm	20		
AP31-100V	Vertical, slotted, 2.5 x 12.7 mm	20		
AP31-200V	Vertical, slotted, 5.1 x 12.7 mm	20		
AP31-DVHX2	Kit with 2 of each aperture	22		
AP18SC*	Kit includes 3 round apertures of: 0.5, 1.0 & 2.5 mm dia.	3		S18 & M18
AP18SR*	Kit includes 3 rectangular apertures of: 0.5, 1.0 & 2.5 mm dia.	3		S18 & M18
AP18SCN*	Kit includes 3 round apertures of: 0.5, 1.0 & 2.5 mm dia.	3		T18
AP18SRN*	Kit includes 3 rectangular apertures of: 0.5, 1.0 & 2.5 mm dia.	3		T18
APG18S	Kit with glass lens to protect plastic sensor lens from chemical environments	1		S18, M18 & T18
* Kits include Teflon® FEP® lens, o-ring and thread-on housing.				
APG30S	Kit includes: a thread-on stainless steel housing, a flat glass lens, two quad-ring seals, and 3 round and 3 slotted aperture disks	1		SM30

* Teflon® is a registered trademark of Dupont™.

More on next page

Apertures and Aperture Kits (cont'd)

Model	Aperture Description	Units	Product	Used With
APQ12-.5	Circular, 0.5 mm dia.	10		Q12 Opposed- mode
APQ12-1	Circular, 1.0 mm dia.	10		
APQ12-1.5	Circular, 1.5 mm dia.	10		
APQ12-2	Circular, 2.0 mm dia.	10		
APQ12-.5H	Horizontal, slotted, 0.5 mm dia.	10		
APQ12-1H	Horizontal, slotted, 1.0 mm dia.	10		
APQ12-.5V	Vertical, slotted, 0.5 mm dia.	10		
APQ12-1V	Vertical, slotted, 1.0 mm dia.	10		
APQ12-4S	Protective jacket, 4 mm square	10		
APKQ12	Kit containing 2 of each aperture	18		
APVS2-0204	Circular, 2 openings, 0.5 & 1.0 mm dia.	2		VS2 Opposed-mode
APVS2-0608	Circular, 2 openings, 1.5 and 2.0 mm dia.	2		
APVS2-02R	Horizontal (1) and vertical (1), slotted, 0.5 mm wide	2		
APVS2-04R	Horizontal (1) and vertical (1), slotted, 1.0 mm wide	2		
APVS4-0206	Circular, 2 openings, 0.5 & 1.5 mm dia.	2		VS4 Opposed-mode
APVS4-0408	Circular, 2 openings, 1.0 & 2.0 mm dia.	2		
APQS30-040	Circular, 1.0 mm dia.	6		QS30 Opposed-mode
APQS30-100	Circular, 2.5 mm dia.	6		
APQS30-200	Circular, 5 mm dia.	6		
APQS30-040H	Horizontal, slotted, 1 x 12 mm	6		
APQS30-100H	Horizontal, slotted, 2.5 x 12 mm	6		
APQS30-200H	Horizontal, slotted, 5 x 12 mm	6		
APQS30-040V	Vertical, slotted, 1 x 17 mm	6		
APQS30-100V	Vertical, slotted, 2.5 x 17 mm	6		
APQS30-200V	Vertical, slotted, 5 x 17 mm	6		
APQS30-DVHX2	Kit with 2 of each aperture	18		

Ultrasonic Wave Guides

Guide attaches to 18 mm threaded barrel of ultrasonic sensors to focus ultrasonic sensing beam.

Model	Size	Style	Product	Used With	Data Sheet
UWG18-5.0	5.0 mm inside dia.	Barrel		QS18U S18U	130153
UWG18-6.4	6.4 mm inside dia.	Barrel			

Replacement Lens Assemblies

Lens assemblies are field-replaceable. In addition, some lenses may be used to convert from one sensing mode to another, or to change the sensing range of a particular sensor. The possible conversions are listed in the table below.

Model	Replacement Lens for	Possible Sensing Mode or Range Changes	Used With
UC-300AG	LVAG	Change LV to LVAG	MINI-BEAM
UC-300BZ	W and DBZ	Change D to DBZ and F to DBZ	
UC-300C.7	C, CV and CVG	Change CV2 to CV	
UC-300C2	C2 and CV2	Change CV to CV2	
UC-300E	E and R	—	
UC-300EL	EL and RL	Extend range of E/R	
UC-300EPD	EPD	—	
UC-300F	F and FV	Change D to F and DBZ to F	
UC-300FP	FP (old style)	—	
UC-300FP2	FP	—	
UC-300L	LV and D	Change F to D, LVAG to LV and DBZ to D	
UC-300LP	LP	—	
UC-300RPD	RPD	—	
UC-45L	E, R, DL, DX and LV	N/A	Q45
UC-45LL	LL		
UC-45LLP	LLP		
UC-45LP	LP		
UC-45D	D		
UC-45F	F and FV		
UC-45FP	FP		
UC-45C	CV		
UC-45C4	CV4		
OUC-C	CV, CVB and CVG	N/A	OMNI-BEAM
OUC-D	D		
OUC-F	F, FAC, FV, FVB, FVG, FX, EF and RF		
OUC-FP	FP, FPB and FPG		
OUC-L	DX, LV, E and R		
OUC-LAG	LVAG and LVAGC		
UC-R55	R58E	N/A	R58E

Laser Alignment Tools

Model		Description	Supply Voltage	Used With	Data Sheet
LAT-1		• Simplifies the alignment of any opposed-mode sensor pair • Class 2 visible red laser beam • Aluminum housing with black anodized finish • Rated NEMA 1; IEC IP50	9V battery for 20 hours of continuous use	Opposed-mode sensors	54599
LAT-1-SS				EZ-ARRAY	
LAT-2	 LAT-2 shown with LT7	• Allows for long distance alignment greater than 50 m • Clip-on attachment for sensor	—	LT7	120244
LAT1812		• Enables easy sensor alignment at long distances • Kit includes one SMB1812 bracket and M12 laser emitter (Class 2 visible red laser) • Clip-on attachment for 18 mm threaded barrel sensors	10 to 30V dc	18 mm threaded barrel sensors	—
LAT3012		• Enables easy sensor alignment at long distances • Kit includes one SMB3012 bracket and M12 laser emitter (Class 2 visible red laser) • Clip-on attachment for 30 mm threaded barrel sensors	10 to 30V dc	30 mm threaded barrel sensors	—

BEAM-TRACKER™ Alignment Tool

The BEAM-TRACKER is a low-cost, wireless, battery-operated, and completely self-contained photoelectric diagnostic sensor. It is a quick and simple way to evaluate photoelectric system performance. It receives light from all modulated photoelectric emitters and transmits light to receivers to check the system operation. It has a built-in frequency emitter that will be detected by any Banner photoelectric receiver, as well as by those of most other photoelectric manufacturers. It is a valuable tool for locating the center of the beam when installing long-range opposed-mode photoelectric sensor pairs and for locating sources of severe EMI and RFI noise.

Model		Supply Voltage	Beam	Construction	Data Sheet
BT-1		9V battery for 10 hours of continuous use	70 kHz infrared	Cycolac® T case	03490

Portable Demo Box

The Portable Demo Box is used to power dc self-contained photoelectric sensors for testing purposes. It is battery-powered and features bicolor LEDs which indicate sensor output status and output type (NPN or PNP). It is designed for a 4-pin Euro-style connector, but cable adapters are available to convert to Pico-style or Mini-style connectors. A 4-pin wiring barrier is mounted on the top of the box to allow connection of cabled dc sensors.

Model		Supply Voltage	Cable Type	Cable Adapters	Data Sheet
DBQ5		3 - 9V battery	4-pin Euro	Euro-to-Pico p/n 39536 Euro-to-Mini p/n 39537	—

Test Power Supply

Test power supply is a 1 amp power supply used to power *P4* sensors and lighting for proving an application without integation into a control panel.

Model		Input	Input	Trigger Option	Used With	Data Sheet
P4D1		100-240V ac	North America (AC plug)	• 24V dc NPN Sensor • Continuous pulse • Single pulse	*P4* Vision Lighting	—

Portable Programming Box

The handheld Portable Programming Box communicates with the M-GAGE™ and T-GAGE®, enabling you to remotely configure a sensor that is underground or otherwise inaccessible.

Model		Supply Voltage	Optional 115V ac Adapter	Used With	Data Sheet
DPB1		2 - 9V battery	**SP-DPB1**	M-GAGE T-GAGE	—

A-GAGE® MINI-ARRAY® Series Power Supplies for Heated Enclosures

Models		Used With	Primary	Secondary	Data Sheet
BMHPS4		Two BMHE4 Enclosures	105 to 130V ac	23V ac	56831
BMHPS5		Two BMHE5 Enclosures	105 to 130V ac	27V ac	
BMHPS6		Two BMHE6 Enclosures	105 to 130V ac	35V ac	
BMHPS14		One BMHE4 Enclosure	105 to 130V ac	23V ac	
BMHPS15		One BMHE5 Enclosure	105 to 130V ac	27V ac	
BMHPS16		One BMHE6 Enclosure	105 to 130V ac	35V ac	

Continuous Power Supplies

12 or 24V dc power supplies provide power to dc sensors and specialty lights.

Model		Input	Input Cord	Outputs	Output Cable	Used With	Data Sheet
PSDINA-24-4 (DIN-rail mountable)		100-240V ac 50/60 Hz	—	24V dc @ 4 A max.	—	dc Sensors Vision Lights	134840
PSA-12		100-250V ac 50/60 Hz	North America (NEMA 5-15)	12V dc ±5% with voltage regulation of ±1% 3.5 A max.	1.8 m Terminated with 9-pin D-sub connector (female pins)	Continuous LED Lights	67445
PSA-12E			Cont. Europe (Schuko CEE 7)				
PSA-24		100-250V ac 50/60 Hz	North America (NEMA 5-15)	24V dc ±5% with voltage regulation of ±1% 2.2 A max.	1.8 m Terminated with 9-pin D-sub connector (female pins)	Continuous LED Lights	67447
PSA-24E			Cont. Europe (Schuko CEE 7)				
PSC-24*		115-250V ac 50/60 Hz (Auto Select)	North America (NEMA 5-15)	24V dc ±5% with voltage regulation of ±1% 2.2 A max.	1.8 m 2-wire Unterminated	SCM Strobe Control Module	67446
PSC-24E*			Cont. Europe (Schuko CEE 7)				

* These products are not stocked and are non-returnable.

Lighting Variable Power Supplies*

Variable power supplies provide power to two separate Banner continuous LED lights.

Model		Input	Input Cord	Outputs	Output Cable	Used With	Data Sheet
PS2V-12		100-140V ac 60 Hz	North America (NEMA 5-15)	2-channels 6-12V dc	1.8 m Terminated with 9-pin D-sub connector (female pins)	Continuous LED Lights	67449
PS2V-12E		200-250V ac 50 Hz	Cont. Europe (Schuko CEE 7)	2 A max. per channel			

* These products are not stocked and are non-returnable.

Lighting Power Supply Extension Cables*

Model	Length	Input Cord	Used With
DB906	1.8 m	Cable powers one continuous light (one end male pins and one end female; both ends terminated with 9-pin D-sub connector)	Continuous LED Lights
DB910	3.0 m		
DB9Y	1.8 m	Cable powers two continuous lights with one supply (9 m trunk with male connector and 9 m branches with female connector; ends terminated with 9-pin D-sub connector)	Continuous LED Lights
DB906S	1.8 m	Cable powers one strobed light (one end male pins and one end female; both ends terminated with 9-pin D-sub connector)	Strobed LED Lights
DB910S	3.0 m		
DB9YS	1.8 m	Cable powers one strobed light (9 m trunk with male connector and 9 m branches with female connector; ends terminated with 9-pin D-sub connector)	Strobed LED Lights

* These products are not stocked and are non-returnable.

USB Serial Adapter

Model		Description	Power	Used With	Data Sheet
INTUSB485-1		For connection of 5-pin communication cable to computer USB port	USB Cable	EZ-ARRAY	130144

Power Supplies and Interface Modules

The power supplies provide a low-cost interface between ac power supply and dc-operated sensors. They can source up to 100 milliamps. All models are available with integral TEACH push button and remote TEACH function. The interface module is a passive module that allows additional status indicators to be located in the user's control cabinet. It provides remote indication and TEACH capability.

Model		Description	Sensor Input	Input Supply	Sensor Supply	Data Sheet
PS24-1N		**Power Supply** e/m relay output, status lights, and TEACH button	NPN	24V ac	15V dc	123566
PS24-1P			PNP			
PS115-1N			NPN	115V ac		
PS115-1P			PNP			
SIM-525T		**Passive Interface Module** Status lights and TEACH button	—	10-30V dc	—	123240

Sensor Interface Modules

Low-cost modules provide a dc powered interface for *Presence*PLUS® *P4* vision sensors.

Model		Input	Outputs	Connections	Used With	Data Sheet
PPSIM-NT		10-30V dc	Current Sinking (NPN)	Two 13-pin Terminals	*Presence*PLUS *P4*	126330
PPSIM-NC				One 13-pin Terminals One DB-15 Connector		
PPSIM-PT			Current Sourcing (PNP)	Two 13-pin Terminals		126330
PPSIM-PC				One 13-pin Terminals One DB-15 Connector		

Light Interface Modules

Low-cost interface module allows strobe operation of Banner vision lighting with any vision sensor or system.

Model		Input	Strobe Output	Used With	Data Sheet
PPLIM		24V dc	5V @ 10 mA max.	Vision lighting	128190



Next Section