


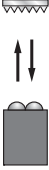


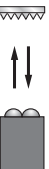







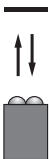





Opposed / Retroreflective Mode (non-polarized/polarized)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>Opposed Mode Sensing range: 4m Visible red 660nm</p>	2m cable 	10-30V DC	Emitter	<u>UP-T4000D-EX6C3L2</u>
			NPN	<u>UP-T4000N-CX6C4U2</u>
			PNP	<u>UP-T4000P-CX6C4U2</u>
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	Emitter	<u>UP-T4000D-EX6P4LP</u>
			NPN	<u>UP-T4000N-CX6P4UP</u>
			PNP	<u>UP-T4000P-CX6P4UP</u>
 <p>Retroreflective Mode Sensing range: 2m (Note) Visible red 660nm</p>	2m cable 	10-30V DC	NPN	UP-L2000N-CX6C4U2
			PNP	UP-L2000P-CX6C4U2
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-L2000N-CX6P4UP</u>
			PNP	<u>UP-L2000P-CX6P4UP</u>
			—	—
 <p>Polarized Retroreflective Sensing range: 1m (Note) Visible red 680nm</p>	2m cable 	10-30V DC	NPN	UP-L1000N-CX6C4U2-PF
			PNP	UP-L1000P-CX6C4U2-PF
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-L1000N-CX6P4UP-PF</u>
			PNP	<u>UP-L1000P-CX6P4UP-PF</u>
			—	—

Note: Used with RE-6152 (supplied with sensor) reflector.  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle







## Diffuse Mode

S : UP SERIES

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 Diffuse Mode Sensing range: 200mm Visible red 680nm	2m cable 	10-30V DC	NPN	UP-D0200N-CX6C4U2
			PNP	UP-D0200P-CX6C4U2
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-D0200N-CX6P4UP</u>
			PNP	<u>UP-D0200P-CX6P4UP</u>
			—	—
 Diffuse Mode (flush-front profile) Sensing range: 200mm Visible red 680nm	2m cable 	10-30V DC	NPN	<u>UP-D0200N-CX6C4U2-F</u>
			PNP	<u>UP-D0200P-CX6C4U2-F</u>
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-D0200N-CX6P4UP-F</u>
			PNP	<u>UP-D0200P-CX6P4UP-F</u>
			—	—
 Divergent Diffuse Mode (wide-angle) Sensing range: 50mm Visible red 660nm	2m cable 	10-30V DC	NPN	<u>UP-D0050N-CX6C4U2-W</u>
			PNP	<u>UP-D0050P-CX6C4U2-W</u>
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-D0050N-CX6P4UP-W</u>
			PNP	<u>UP-D0050P-CX6P4UP-W</u>
			—	—

**Note:**  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle  
 — S-02 —

Convergent Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 Convergent Mode Sensing range: 10mm Spot size at focus: 1mm Visible red 660nm	2m cable 	10-30V DC	NPN	<u>UP-C0010N-CX6C4U2</u>
			PNP	<u>UP-C0010P-CX6C4U2</u>
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-C0010N-CX6P4UP</u>
			PNP	<u>UP-C0010P-CX6P4UP</u>
			—	—
 Convergent Mode Sensing range: 20mm Spot size at focus: 1.75mm Visible red 680nm	2m cable 	10-30V DC	NPN	<u>UP-C0020N-CX6C4U2</u>
			PNP	<u>UP-C0020P-CX6C4U2</u>
			—	—
	4 Pin Pico-style 6" Pigtail QD 	10-30V DC	NPN	<u>UP-C0020N-CX6P4UP</u>
			PNP	<u>UP-C0020P-CX6P4UP</u>
			—	—
			—	—
			—	—
			—	—
			—	—
			—	—
			—	—

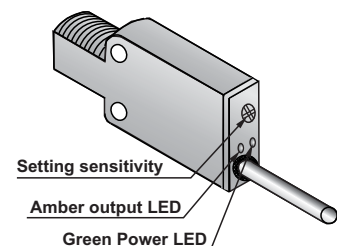
Note:  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle  
 — S-03 —

## Specifications

<b>Supply Voltage</b>	10 to 30V dc (10% maximum ripple) at less than 25mA, exclusive of load
<b>Supply Protection Circuitry</b>	Protected against reverse polarity and transient voltages
<b>Output configuration</b>	Solid state complementary (SPDT):NPN or PNP (current sinking or sourcing) output models available
<b>Output Rating</b>	150mA maximum each output at 25°C <b>OFF- state leakage current:</b> less than 10 μ A@ 30Vdc <b>On-state saturation voltage:</b> less than 2.0V@150mA
<b>Output Protection Circuitry</b>	Protected against false pulse on power-up and continuous overload or short circuit of outputs
<b>Output Response</b>	<b>Opposed Mode:</b> 8milliseconds ON,4 milliseconds OFF <b>All others:</b> 1.5 milliseconds Note:500millisecond delay on power-up, outputs do not conduct During this time
<b>Repeatability</b>	<b>Opposed Mode:</b> 1 millisecond <b>All others:</b> 175 microseconds
<b>Adjustments</b>	1-turn slotted GAIN(sensitivity)Adjustment Potentiometer.
<b>Indicators</b>	2 LEDs, visible from back and sides of sensor: 1Green, 1 Amber <b>Green steady:</b> power ON <b>Amber steady:</b> light sensed
<b>Construction</b>	Black polycarbonate/ABS alloy housing; totally encapsulated circuitry
<b>Environmental Rating</b>	IEC IP 67
<b>Connections</b>	2 M 4-wite PVC Cable, 9 m PVC cable, or 4 pin pico-style 150mm pigtail QD
<b>Operating Conditions</b>	<b>Temperature:</b> -20 to +55°C <b>Relative Humidity:</b> 90%@50 C (non-condensing)
<b>EMC</b>	IEC 60947-5-2, Parts 7.2.6.1. 2. 3 or RFI>3V/m(in 30-1000MHz), EFT>1KV, ESD>4KV(contact)
<b>Voltage Withstand Ability</b>	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure
<b>Insulation Resistance</b>	>20M Ω , with 500V DC megger between all supply terminals connected together and enclosure
<b>Vibration Resistance</b>	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min
<b>Shock Resistance</b>	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each
<b>Mounting Bracket</b>	Miniature-beam2-A1(See accessories)
<b>Certifications</b>	<b>CE</b>
<b>Cable</b>	2M 3.4 φ 4X0.15 (Emitter :2X0.15) PUR.
<b>Pigtail Type</b>	See <b>Pigtail Series</b> or our <b>Cables &amp; Connectors</b> catalogue.

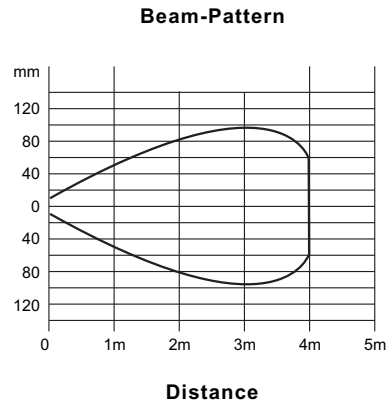
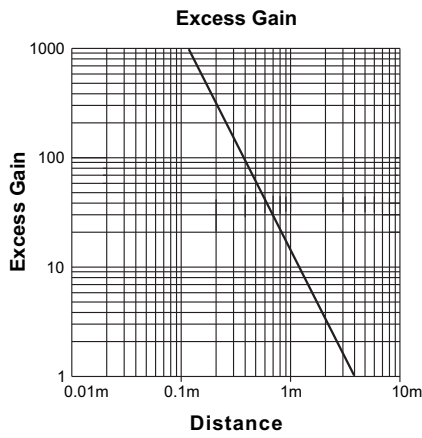
### MINI-BEAM2 Features

- Designed after the popular MINI-BEAM , but only one-third the size of the original.
- 12mm threaded barrel on most models.
- Uses advanced miniaturized microprocessor-based circuitry.
- Available for opposed, retro reflective, diffuse, and convergent sensing modes.
- 10 to 30V dc operation.
- Complementary outputs (one normally open and one normally closed), each with 150mA switching capacity.
- IP 67 and NEMA 6 environmental ratings.
- Status indicators.
- Models with either integral, unterminated cable or 150mm pigtail with 4-pin Pico-style connector .

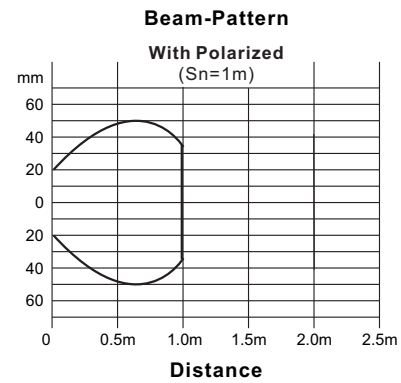
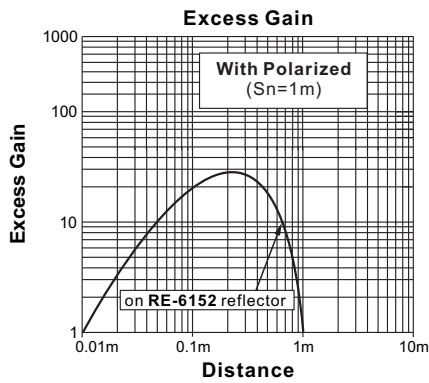
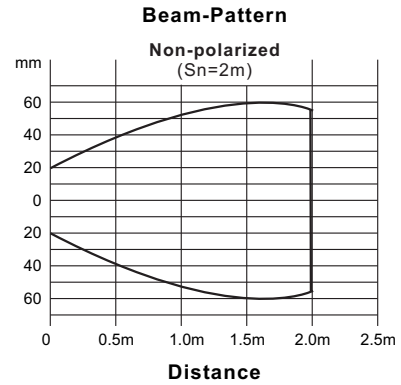
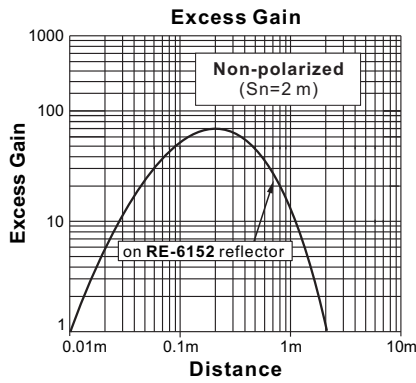


Sensing Characteristics (Typical)

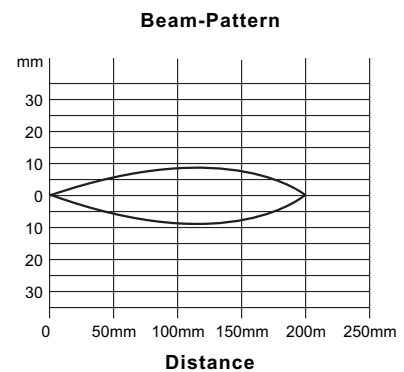
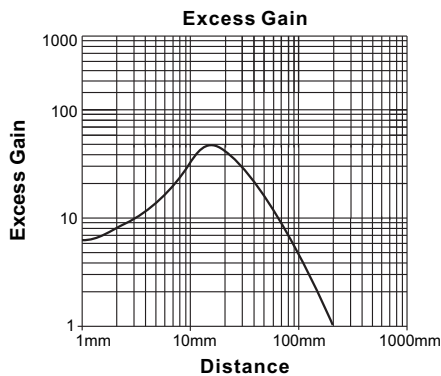
Opposed Mode (Sn=4m)



Retroreflective Mode



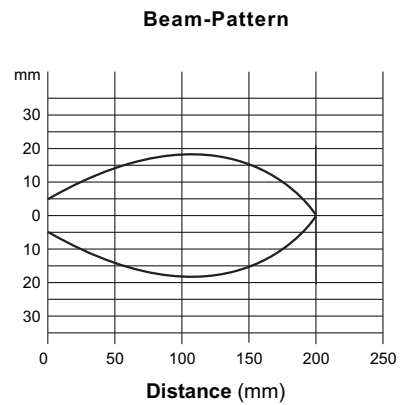
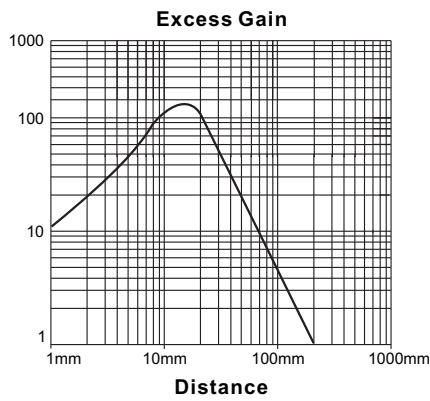
Standard Diffuse Mode (Sn=200mm)



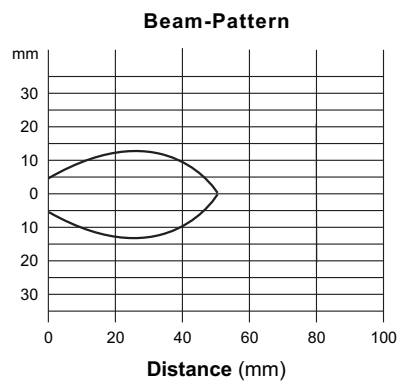
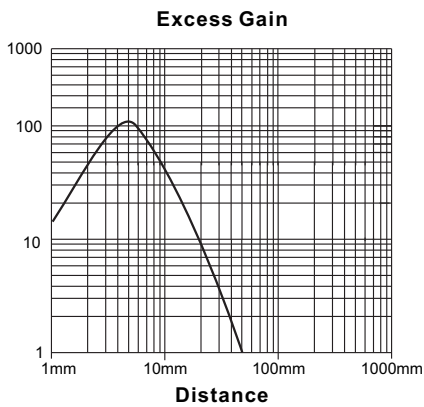
## Sensing Characteristics (Typical)

S : UP SERIES

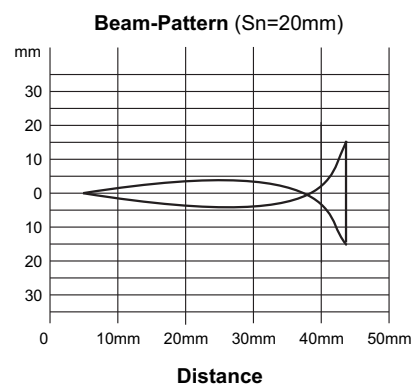
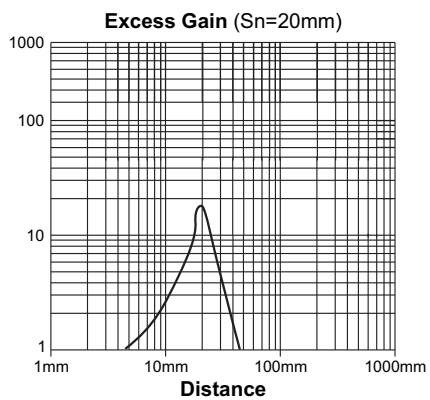
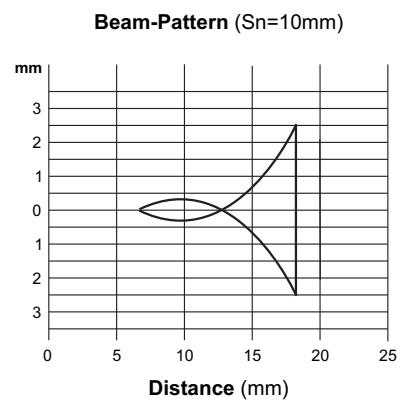
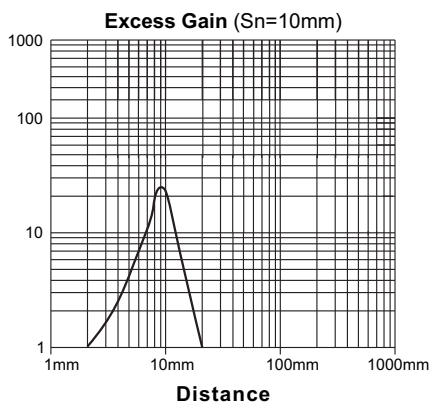
### Diffuse (Flush-Front Profile Type, Sn=200mm)



### Divergent Diffuse (Wide-Angle Type, Sn=50mm)



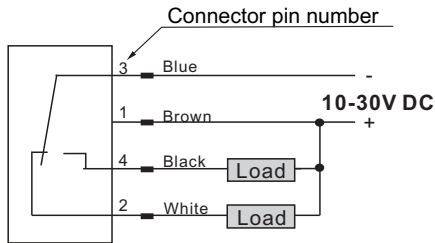
### Converent mode



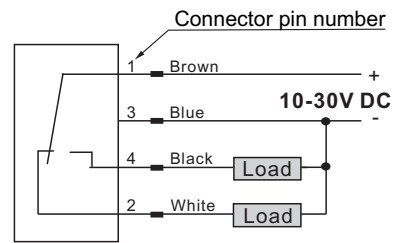
Connection Diagrams & Dimensions

Connection Diagrams

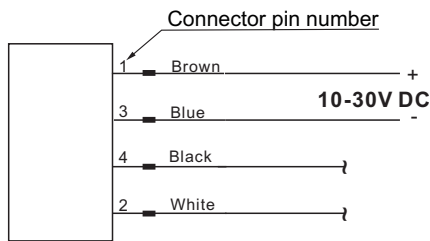
NPN output type



PNP output type



Emitter of Thru-beam Mode

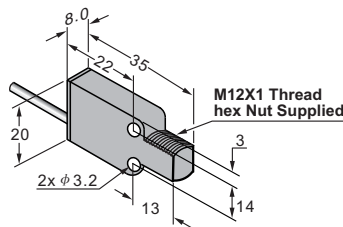


4-Pin Pico-Style Connector

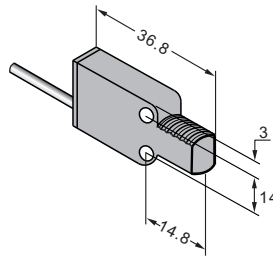


Dimensions (Unit: mm)

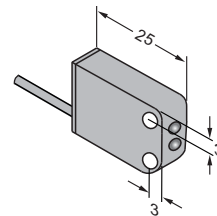
Retroreflective Mode/  
Standard Diffuse Mode



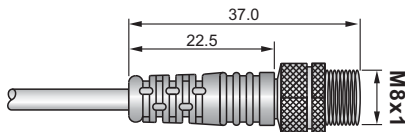
Opposed Mode/  
Convergent Modes



Flush-front profile Diffuse/  
Divergent Diffuse Mode

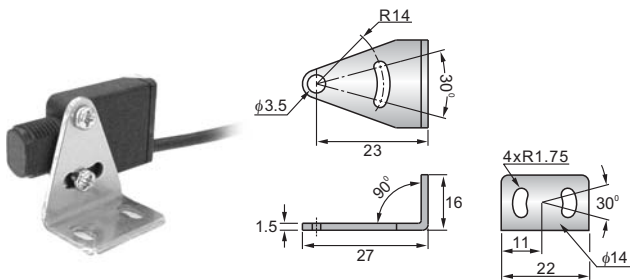


Pigtail\* Type

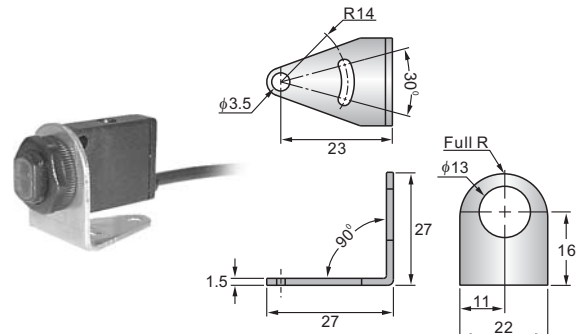


\*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

MB-2722 (Sensor mounting bracket\*-optional)



MB-2727 (Sensor mounting bracket\*-optional)



\*: Please see **Accessories** (Universal Mounting Brackets Series).