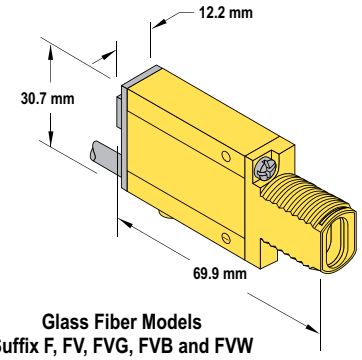
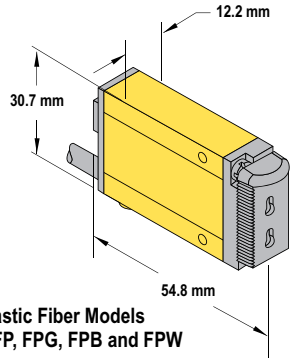
MINI-BEAM® *Expert*™ Sensors

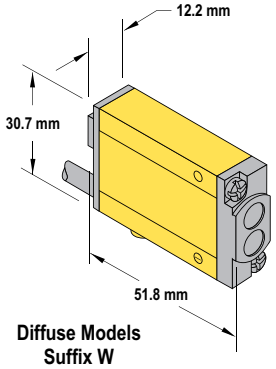
Retroreflective, Diffuse and Convergent Models
Suffix LV, LP, D, DV, CV, CV2, CVG, CVB and CVW



Glass Fiber Models
Suffix F, FV, FVG, FVB and FVW



Plastic Fiber Models
Suffix FP, FPG, FPB and FPW



Diffuse Models
Suffix W

ACCESSORIES page 118

ONLINE
AUTOCAD, STEP, IGES & PDF

MINI-BEAM® *Expert*, 10-30V dc

Infrared LED Visible Red LED

Sensing Mode/LED	Range	Connection	Output	Models	Excess Gain	Beam Pattern
RETRO	5 m†	2 m	Bipolar NPN/PNP	**SME312LV**	EGC-7 (p. 119)	BP-7 (p. 123)
		5-Pin Euro QD		**SME312LVQD**		
POLAR RETRO	10 mm - 3 m†	2 m		**SME312LP**	EGC-8 (p. 119)	BP-8 (p. 123)
		5-Pin Euro QD		**SME312LPQD**		
CLEAR OBJECT POLAR RETRO	1 m	2 m		**SME312LPC***	EGC-9 (p. 119)	BP-9 (p. 123)
		5-Pin Euro QD		**SME312LPCQD***		
DIFFUSE	380 mm	2 m	Bipolar NPN/PNP	**SME312D**	EGC-15 (p. 119)	BP-15 (p. 123)
		5-Pin Euro QD		**SME312DQD**		
DIFFUSE	1100 mm	2 m		**SME312DV**	EGC-17 (p. 120)	BP-17 (p. 124)
		5-Pin Euro QD		**SME312DVQD**		
DIVERGENT DIFFUSE	130 mm	2 m		**SME312W**	EGC-16 (p. 119)	BP-16 (p. 123)
		5-Pin Euro QD		**SME312WQD**		

More on next page

Connection options: A model with a QD requires a mating cordset (see page 118).

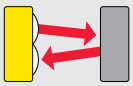
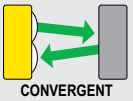
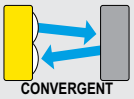
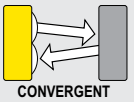
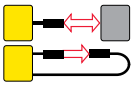
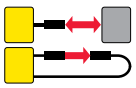
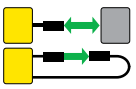
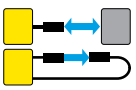
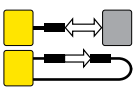
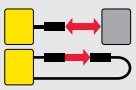
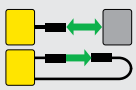
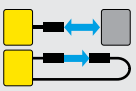
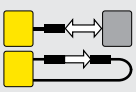
For 9 m cable, add suffix **W/30** to the 2 m model number (example, **SME312D W/30**).

* NOTE: For clear object detection, sensing range varies, according to the efficiency and reflective area of the retroreflector(s) used.
For these low-contrast applications, the model BRT-2X2 reflector is recommended and is included with each SME312LPC(QD) sensor.
- For applications with high vibration, the model BRT-51X51BM, with its micro-prism geometry, is recommended.
- For long-range applications, the BRT-77X77C reflector provides a range up to 2 m.
- SME312LPC(QD) are for use with corner cube type reflectors only; reflective tape is not recommended. See page 710 for more information.

† NOTE: Retroreflective range is specified using one model BRT-3 retroreflector, unless otherwise noted. Actual sensing range may differ, depending on the efficiency and reflective area of the retroreflector used. See Accessories section for more information.

MINI-BEAM® *Expert*, 10-30V dc (cont'd)

Infrared LED · Visible Red LED · Visible Green LED · Visible Blue LED · Visible White LED

Sensing Mode/LED	Range	Connection	Output	Models	Excess Gain	Beam Pattern
 CONVERGENT	16 mm	2 m	Bipolar NPN/PNP	SME312CV	EGC-28 (p. 120)	BP-28 (p. 124)
		5-Pin Euro QD		SME312CVQD		
	43 mm	2 m		SME312CV2	EGC-29 (p. 120)	BP-29 (p. 124)
		5-Pin Euro QD		SME312CV2QD		
 CONVERGENT	16 mm	2 m		SME312CVG	EGC-30 (p. 120)	BP-30 (p. 124)
		5-Pin Euro QD		SME312CVGQD		
 CONVERGENT	16 mm	2 m		SME312CVB	EGC-31 (p. 120)	BP-31 (p. 124)
		5-Pin Euro QD		SME312CVBQD		
 CONVERGENT	16 mm	2 m		SME312CVW	EGC-32 (p. 120)	BP-32 (p. 124)
		5-Pin Euro QD		SME312CVWQD		
 GLASS FIBER	Range varies by sensing mode and fiber optics used	2 m		SME312F	EGC-41 & EGC-42 (p. 121)	BP-41 & BP-42 (p. 125)
		5-Pin Euro QD		SME312FQD		
 GLASS FIBER		2 m		SME312FV	EGC-43 & EGC-44 (p. 121)	BP-43 & BP-44 (p. 125)
		5-Pin Euro QD		SME312FVQD		
 GLASS FIBER		2 m		SME312FVG	EGC-45 (p. 121)	BP-45 (p. 125)
		5-Pin Euro QD		SME312FVGQD		
 GLASS FIBER		2 m		SME312FVB	EGC-46 (p. 121)	BP-46 (p. 125)
		5-Pin Euro QD		SME312FVBQD		
 GLASS FIBER		2 m		SME312FVW	EGC-47 (p. 121)	BP-47 (p. 125)
		5-Pin Euro QD		SME312FVWQD		
 PLASTIC FIBER	Range varies by sensing mode and fiber optics used	2 m	Bipolar NPN/PNP	SME312FP	EGC-54 & EGC-55 (p. 122)	BP-54 & BP-55 (p. 126)
		5-Pin Euro QD		SME312FPQD		
 PLASTIC FIBER		2 m		SME312FPG	EGC-56 (p. 122)	BP-56 (p. 126)
		5-Pin Euro QD		SME312FPGQD		
 PLASTIC FIBER		2 m		SME312FPB	EGC-57 (p. 122)	BP-57 (p. 126)
		5-Pin Euro QD		SME312FPBQD		
 PLASTIC FIBER		2 m		SME312FPW	EGC-58 (p. 122)	BP-58 (p. 126)
		5-Pin Euro QD		SME312FPWQD		

Connection options: A model with a QD requires a mating cordset (see page 118).

For 9 m cable, add suffix **W/30** to the 2 m model number (example, **SME312CV W/30**).

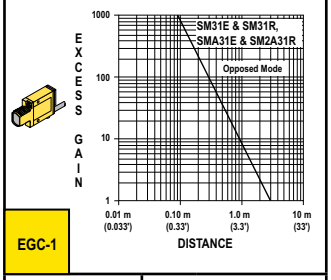
MINI-BEAM® *Expert*™ Specifications

Supply Voltage and Current	10 to 30V dc (10% max. ripple) at less than 45 mA, exclusive of load
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	**Bipolar:** One current sourcing (PNP) and one current sinking (NPN) open-collector transistor. Configuration in TEACH sequence for Light Operate (LO) or Dark Operate (DO).
Output Rating	150 mA max. each output at 25° C, derated to 100 mA at 70° C (derate ≈ 1 mA per ° C) **OFF-state leakage current:** less than 5 µA @ 30V dc **Output saturation voltage (PNP output):** less than 1 V at 10 mA and less than 2 V at 150 mA **Output saturation voltage (NPN output):** less than 200 mV at 10 mA and less than 1 V at 150 mA
Output Protection Circuitry	Protected against false pulse on power-up and continuous overload or short-circuit of outputs
Output Response Time	Sensors will respond to either a “light” or a “dark” signal of 500 microseconds or longer duration, 1 kHz max.
Delay at Power-up	1 second; outputs do not conduct during this time.
Repeatability	100 microseconds (all models)
Adjustments	Push-button TEACH mode sensitivity setting; remote TEACH mode input is provided (gray wire)
Indicators	**Two LEDs:** Yellow and Bicolor Green/Red **Green:** power ON **Red:** OFF when no signal is received. **Yellow (TEACH Mode):** ON to indicate sensor is ready to learn output ON condition OFF to indicate sensor is ready to learn output OFF condition **Yellow (RUN Mode):** ON when outputs are conducting See data sheet for more detailed information.
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring seal, acrylic lenses, and stainless steel screws.
Environmental Rating	Meets NEMA standards 1, 2, 3, 3S, 4, 4X, 6, 12, and 13; IEC IP67
Connections	PVC-jacketed 5-conductor 2 m or 9 m unterminated cable, or 5-pin Euro-style quick-disconnect (QD) fitting are available. QD cordsets are ordered separately. See page 118.
Operating Conditions	**Temperature:** -20° to +70° C **Relative humidity:** 90% at 50° C (non-condensing)
Application Notes	The first condition presented during TEACH mode becomes the output ON condition.
Certifications	CE c UL us
Hookup Diagrams	DC08 (p. 745)

Excess Gain Curves (Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED P = Visible Red LED Polarized ■ = Visible Red Clear Object Detection Polarized

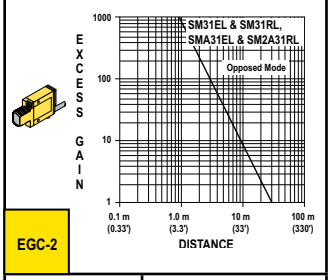
Opposed Mode MINI-BEAM®



EGC-1

Range: 3 m **LED:** ○

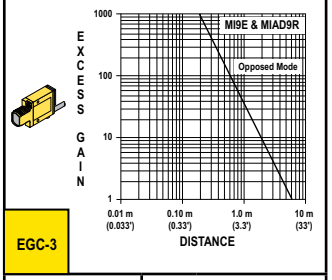
Opposed Mode MINI-BEAM®



EGC-2

Range: 30 m **LED:** ○

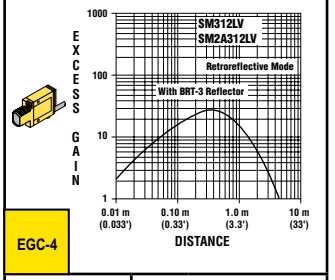
Opposed Mode MINI-BEAM® NAMUR



EGC-3

Range: 6 m **LED:** ○

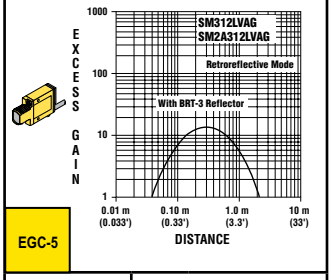
Retroreflective Mode MINI-BEAM®



EGC-4

Range: 5 m **LED:** ●

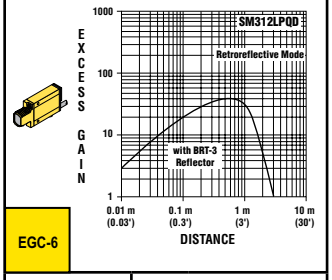
Polarized Retroreflective Mode MINI-BEAM®



EGC-5

Range: 2 m **LED:** P

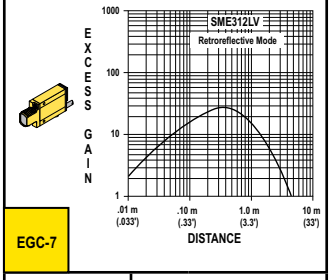
Retroreflective Mode MINI-BEAM®



EGC-6

Range: 3 m **LED:** P

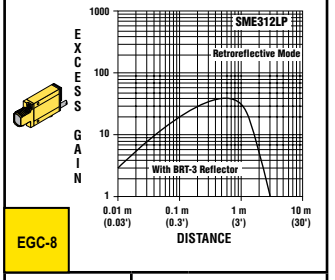
Retroreflective Mode MINI-BEAM® *Expert*™



EGC-7

Range: 5 m **LED:** ●

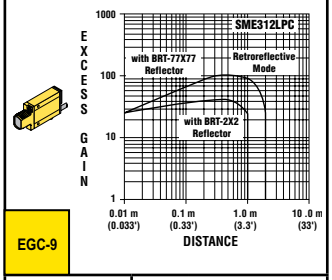
Polarized Retroreflective Mode MINI-BEAM® *Expert*™



EGC-8

Range: 3 m **LED:** P

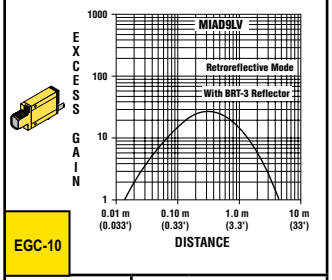
Retroreflective Mode MINI-BEAM® *Expert*™



EGC-9

Range: 1 m **LED:** ■

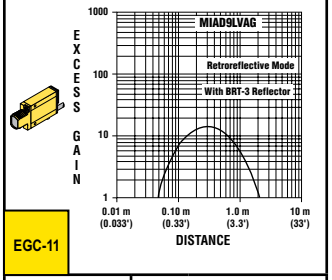
Retroreflective Mode MINI-BEAM® NAMUR



EGC-10

Range: 5 m **LED:** ●

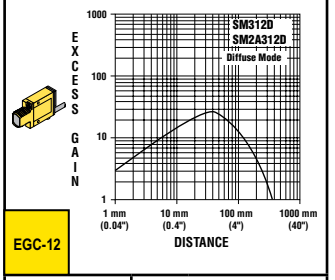
Polarized Retroreflective Mode MINI-BEAM® NAMUR



EGC-11

Range: 2 m **LED:** P

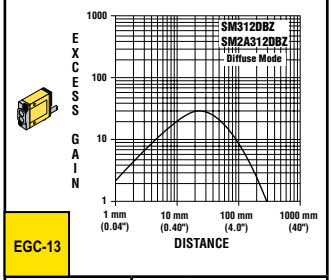
Diffuse Mode MINI-BEAM®



EGC-12

Range: 380 mm **LED:** ○

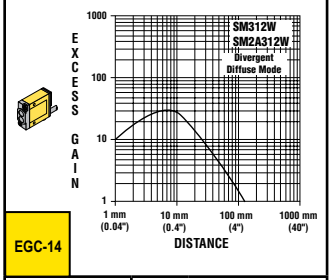
Diffuse Mode MINI-BEAM®



EGC-13

Range: 300 mm **LED:** ○

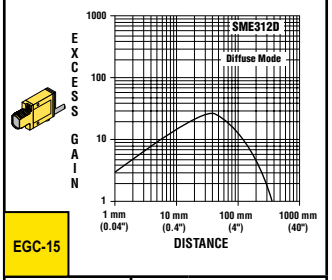
Divergent Diffuse Mode MINI-BEAM®



EGC-14

Range: 130 mm **LED:** ○

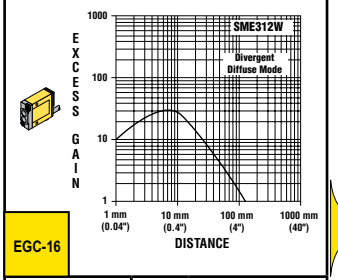
Diffuse Mode MINI-BEAM® *Expert*™



EGC-15

Range: 380 mm **LED:** ○

Divergent Diffuse Mode MINI-BEAM® *Expert*™



EGC-16

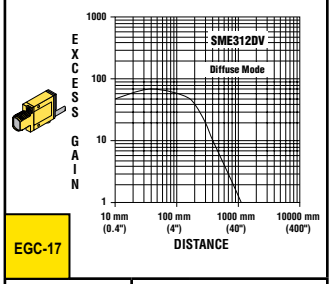
Range: 130 mm **LED:** ○

More on next page

Excess Gain Curves (Diffuse and Convergent mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED ● = Visible Green LED ● = Visible Blue LED ○ = Visible White LED

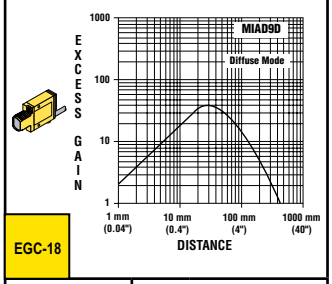
Diffuse Mode MINI-BEAM® *Expert*™



EGC-17

Range: 1100 mm **LED:** ●

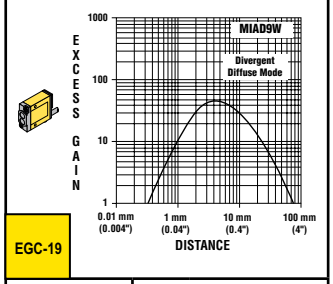
Diffuse Mode MINI-BEAM® NAMUR



EGC-18

Range: 380 mm **LED:** ○

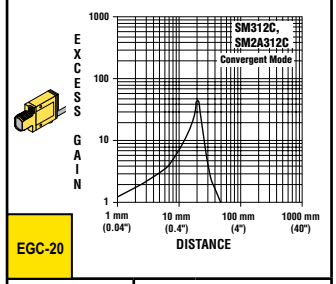
Divergent Diffuse Mode MINI-BEAM® NAMUR



EGC-19

Range: 75 mm **LED:** ○

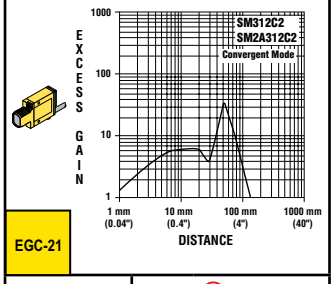
Convergent Mode MINI-BEAM®



EGC-20

Range: 16 mm **LED:** ○

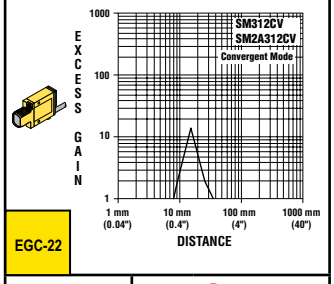
Convergent Mode MINI-BEAM®



EGC-21

Range: 43 mm **LED:** ○

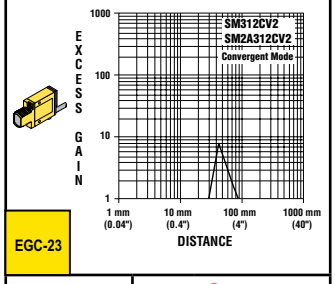
Convergent Mode MINI-BEAM®



EGC-22

Range: 16 mm **LED:** ●

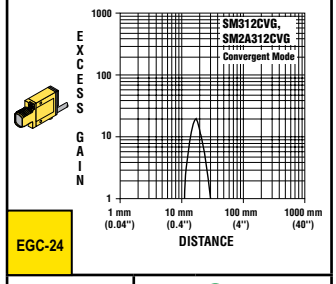
Convergent Mode MINI-BEAM®



EGC-23

Range: 43 mm **LED:** ●

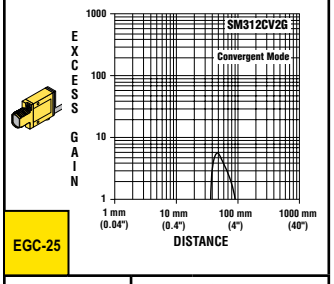
Convergent Mode MINI-BEAM®



EGC-24

Range: 16 mm **LED:** ●

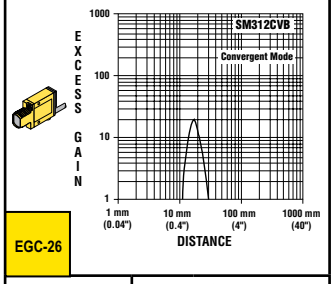
Convergent Mode MINI-BEAM®



EGC-25

Range: 49 mm **LED:** ●

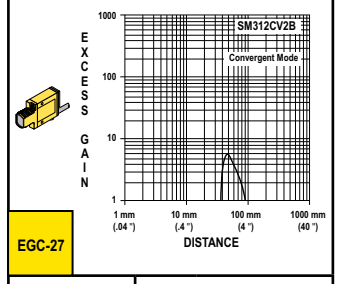
Convergent Mode MINI-BEAM®



EGC-26

Range: 16 mm **LED:** ●

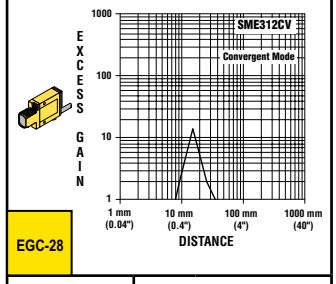
Convergent Mode MINI-BEAM®



EGC-27

Range: 49 mm **LED:** ●

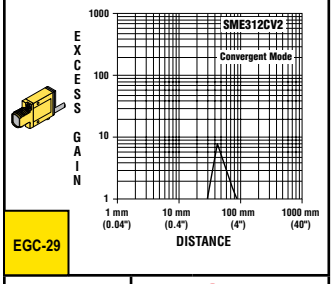
Convergent Mode MINI-BEAM® *Expert*™



EGC-28

Range: 16 mm **LED:** ●

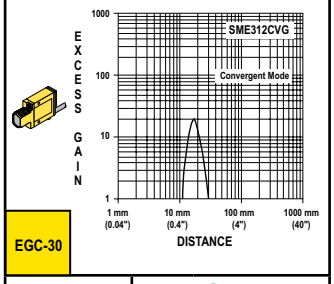
Convergent Mode MINI-BEAM® *Expert*™



EGC-29

Range: 43 mm **LED:** ●

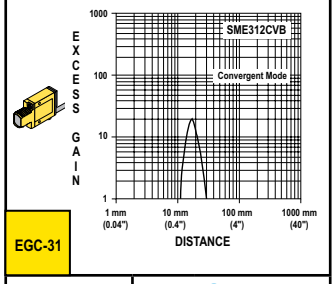
Convergent Mode MINI-BEAM® *Expert*™



EGC-30

Range: 16 mm **LED:** ●

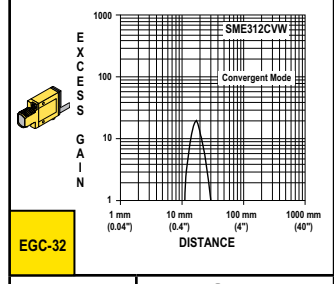
Convergent Mode MINI-BEAM® *Expert*™



EGC-31

Range: 16 mm **LED:** ●

Convergent Mode MINI-BEAM® *Expert*™



EGC-32

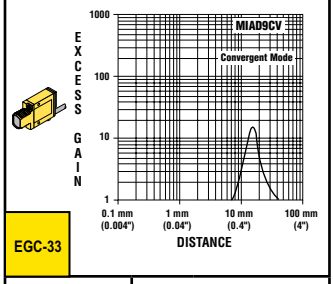
Range: 16 mm **LED:** ○

More on next page

Excess Gain Curves (Convergent and Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED ● = Visible Green LED ● = Visible Blue LED ○ = Visible White LED

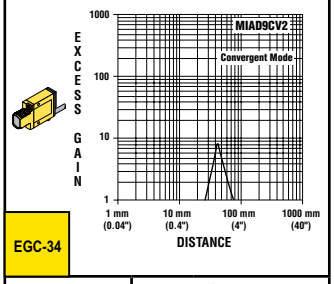
Convergent Mode MINI-BEAM® NAMUR



EGC-33

Range: 16 mm **LED:** ●

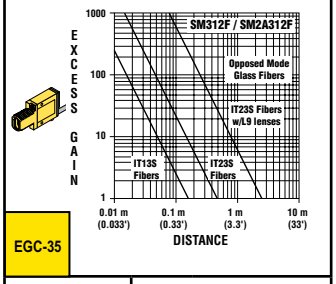
Convergent Mode MINI-BEAM® NAMUR



EGC-34

Range: 43 mm **LED:** ●

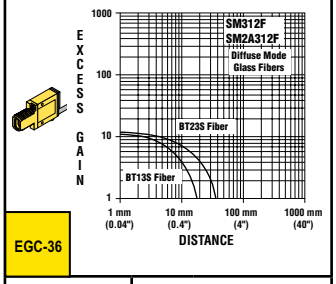
Opposed Mode—Glass Fiber MINI-BEAM®



EGC-35

Range: Varies **LED:** ○

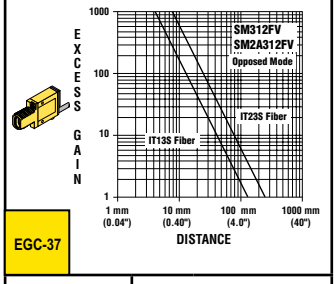
Diffuse Mode—Glass Fiber MINI-BEAM®



EGC-36

Range: Varies **LED:** ○

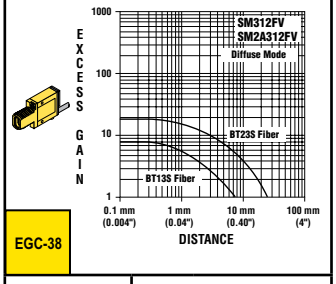
Opposed Mode—Glass Fiber MINI-BEAM®



EGC-37

Range: Varies **LED:** ●

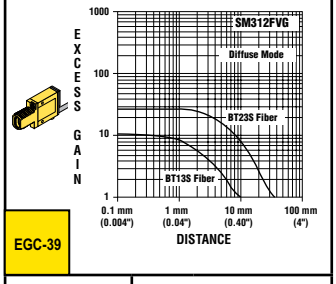
Diffuse Mode—Glass Fiber MINI-BEAM®



EGC-38

Range: Varies **LED:** ●

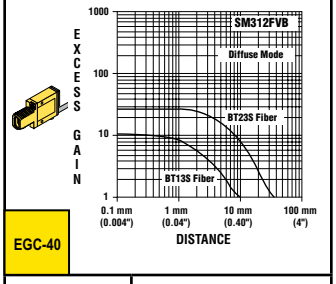
Diffuse Mode—Glass Fiber MINI-BEAM®



EGC-39

Range: Varies **LED:** ●

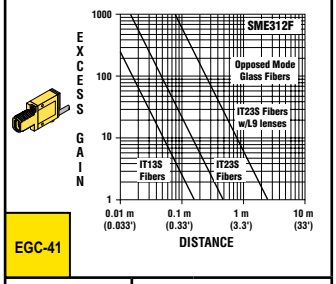
Diffuse Mode—Glass Fiber MINI-BEAM®



EGC-40

Range: Varies **LED:** ●

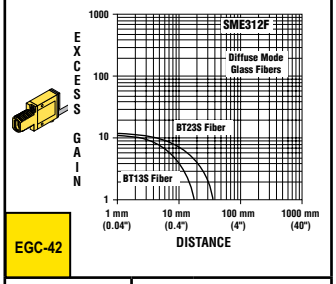
Opposed Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-41

Range: Varies **LED:** ○

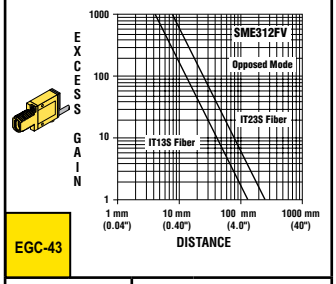
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-42

Range: Varies **LED:** ○

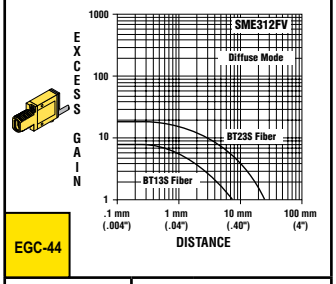
Opposed Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-43

Range: Varies **LED:** ●

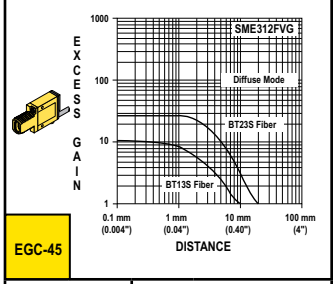
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-44

Range: Varies **LED:** ●

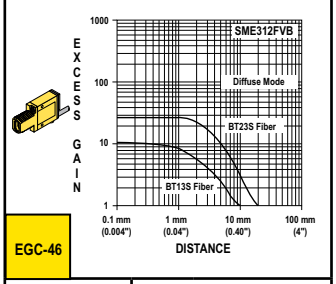
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-45

Range: Varies **LED:** ●

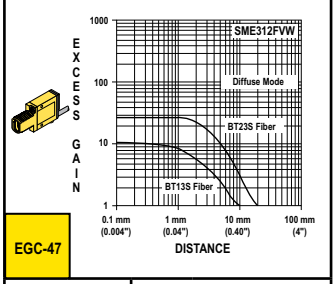
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-46

Range: Varies **LED:** ●

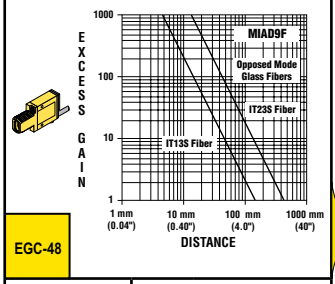
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



EGC-47

Range: Varies **LED:** ○

Opposed Mode—Glass Fiber MINI-BEAM® NAMUR



EGC-48

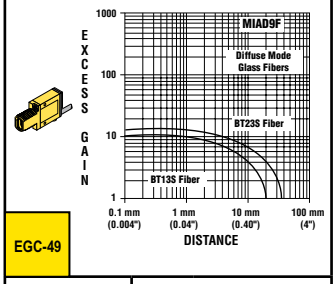
Range: Varies **LED:** ○

More on next page

Excess Gain Curves (Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED ● = Visible Green LED ● = Visible Blue LED ○ = Visible White LED

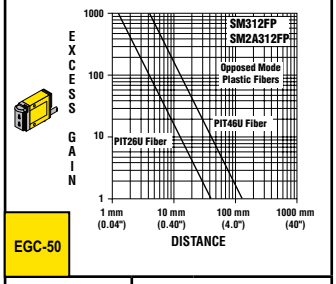
Diffuse Mode—Glass Fiber MINI-BEAM® NAMUR



EGC-49

Range: Varies **LED:** ○

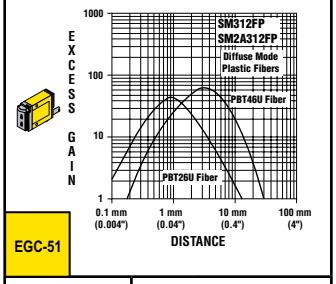
Opposed Mode—Plastic Fiber MINI-BEAM®



EGC-50

Range: Varies **LED:** ●

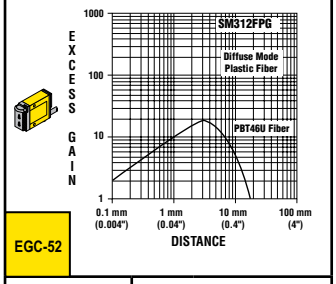
Diffuse Mode—Plastic Fiber MINI-BEAM®



EGC-51

Range: Varies **LED:** ●

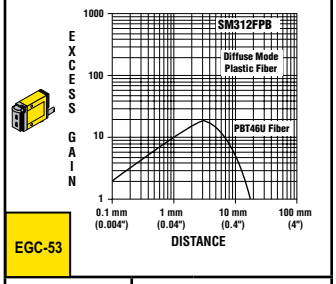
Diffuse Mode—Plastic Fiber MINI-BEAM®



EGC-52

Range: Varies **LED:** ●

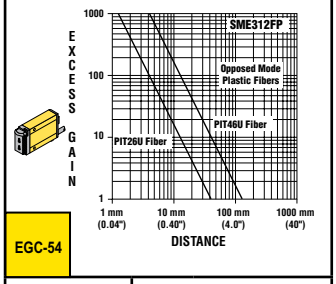
Diffuse Mode—Plastic Fiber MINI-BEAM®



EGC-53

Range: Varies **LED:** ●

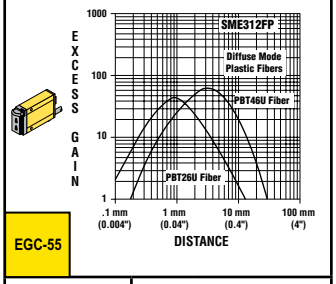
Opposed Mode—Plastic Fiber MINI-BEAM® *Expert*™



EGC-54

Range: Varies **LED:** ●

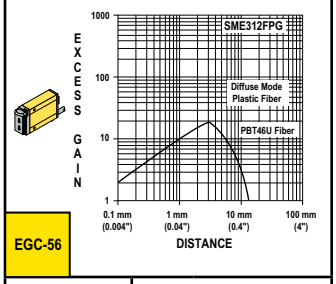
Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



EGC-55

Range: Varies **LED:** ●

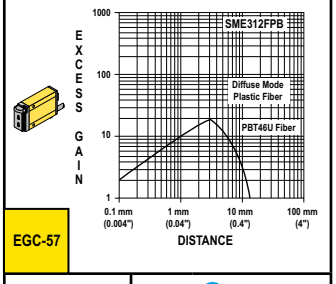
Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



EGC-56

Range: Varies **LED:** ●

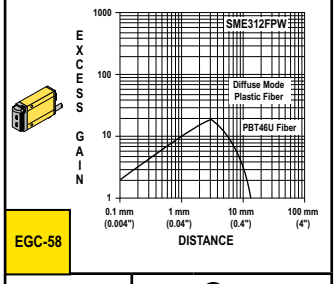
Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



EGC-57

Range: Varies **LED:** ●

Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



EGC-58

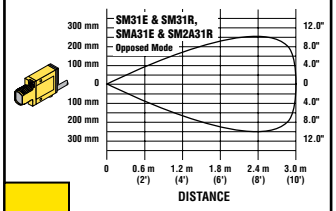
Range: Varies **LED:** ○

Beam Patterns (Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED P = Visible Red LED Polarized ■ = Visible Red Clear Object Detection Polarized

Opposed Mode MINI-BEAM®

Effective Beam: 3.5 mm

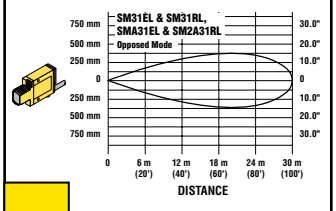


BP-1

Range: 3 m **LED:** ○

Opposed Mode MINI-BEAM®

Effective Beam: 13 mm

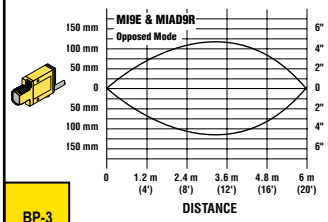


BP-2

Range: 30 m **LED:** ○

Opposed Mode MINI-BEAM® NAMUR

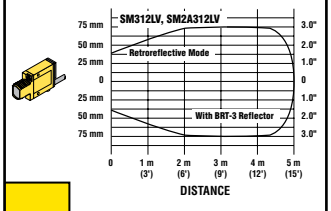
Effective Beam: 13 mm



BP-3

Range: 6 m **LED:** ○

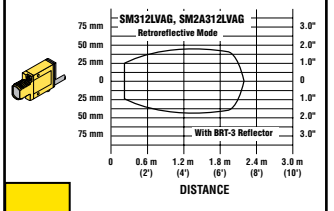
Retroreflective Mode MINI-BEAM®



BP-4

Range: 5 m **LED:** ●

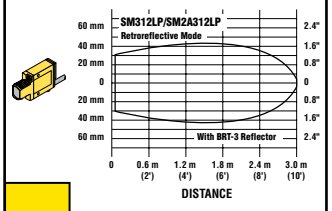
Polarized Retroreflective Mode MINI-BEAM®



BP-5

Range: 2 m **LED:** P

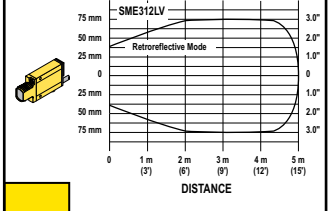
Polarized Retroreflective Mode MINI-BEAM®



BP-6

Range: 3 m **LED:** P

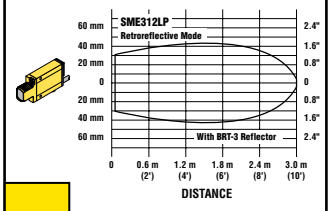
Retroreflective Mode MINI-BEAM® *Expert*™



BP-7

Range: 5 m **LED:** ●

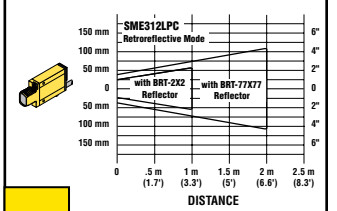
Polarized Retroreflective Mode MINI-BEAM® *Expert*™



BP-8

Range: 3 m **LED:** P

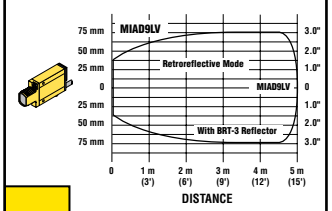
Retroreflective Mode MINI-BEAM® *Expert*™



BP-9

Range: 1 m **LED:** ■

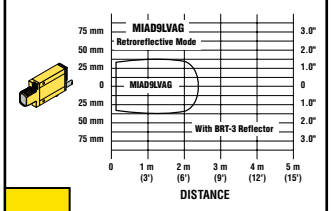
Retroreflective Mode MINI-BEAM® NAMUR



BP-10

Range: 5 m **LED:** ●

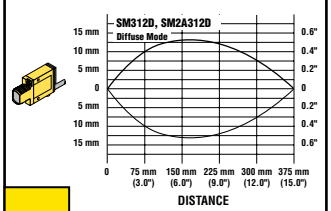
Polarized Retroreflective Mode MINI-BEAM® NAMUR



BP-11

Range: 2 m **LED:** P

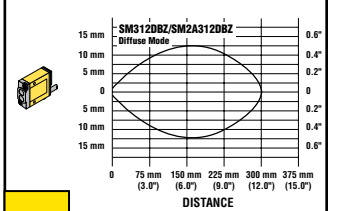
Diffuse Mode MINI-BEAM®



BP-12

Range: 380 mm **LED:** ○

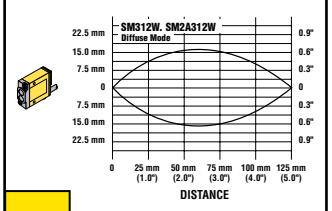
Diffuse Mode MINI-BEAM®



BP-13

Range: 300 mm **LED:** ○

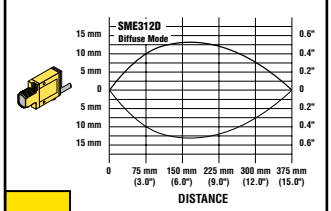
Divergent Diffuse Mode MINI-BEAM®



BP-14

Range: 130 mm **LED:** ○

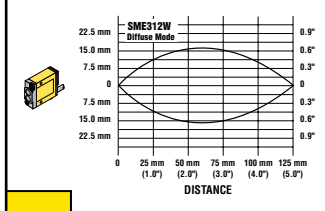
Diffuse Mode MINI-BEAM® *Expert*™



BP-15

Range: 380 mm **LED:** ○

Diffuse Mode MINI-BEAM® *Expert*™



BP-16

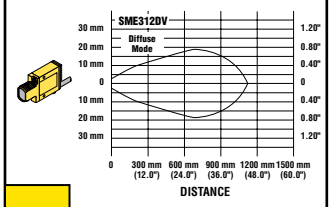
Range: 130 mm **LED:** ○

More on next page

Beam Patterns (Convergent and Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED ● = Visible Green LED ● = Visible Blue LED ○ = Visible White LED

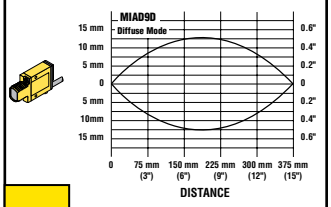
Diffuse Mode MINI-BEAM® *Expert*™



BP-17

Range: 1100 mm **LED:** ●

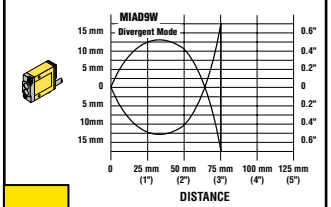
Diffuse Mode MINI-BEAM® NAMUR



BP-18

Range: 380 mm **LED:** ○

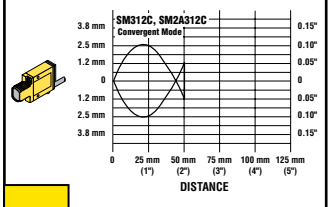
Divergent Diffuse Mode MINI-BEAM® NAMUR



BP-19

Range: 75 mm **LED:** ○

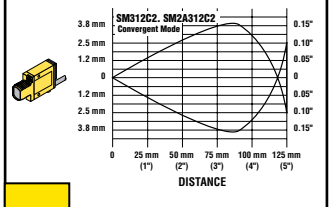
Convergent Mode MINI-BEAM®



BP-20

Range: 16 mm **LED:** ○

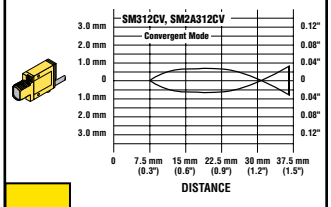
Convergent Mode MINI-BEAM®



BP-21

Range: 43 mm **LED:** ○

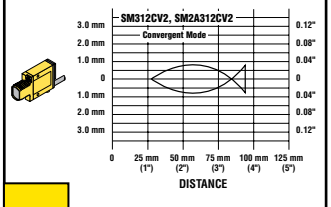
Convergent Mode MINI-BEAM®



BP-22

Range: 16 mm **LED:** ●

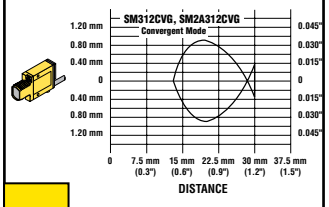
Convergent Mode MINI-BEAM®



BP-23

Range: 43 mm **LED:** ●

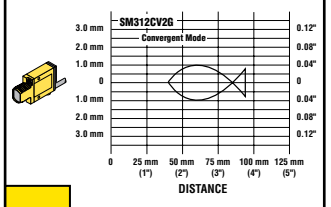
Convergent Mode MINI-BEAM®



BP-24

Range: 16 mm **LED:** ●

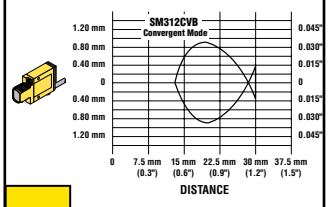
Convergent Mode MINI-BEAM®



BP-25

Range: 49 mm **LED:** ●

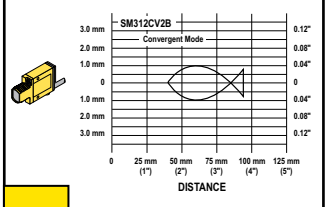
Convergent Mode MINI-BEAM®



BP-26

Range: 16 mm **LED:** ●

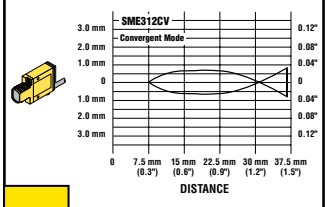
Convergent Mode MINI-BEAM®



BP-27

Range: 49 mm **LED:** ●

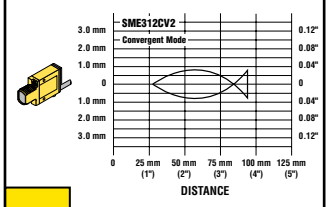
Convergent Mode MINI-BEAM® *Expert*™



BP-28

Range: 16 mm **LED:** ●

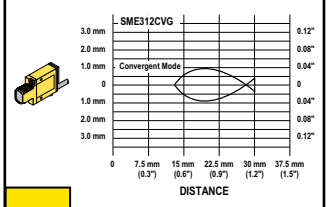
Convergent Mode MINI-BEAM® *Expert*™



BP-29

Range: 43 mm **LED:** ●

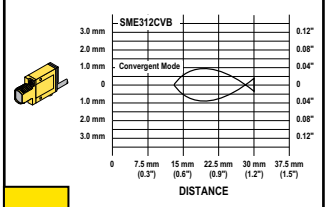
Convergent Mode MINI-BEAM® *Expert*™



BP-30

Range: 16 mm **LED:** ●

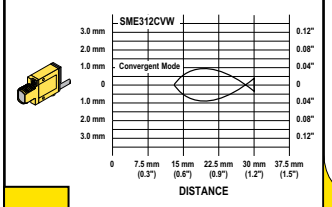
Convergent Mode MINI-BEAM® *Expert*™



BP-31

Range: 16 mm **LED:** ●

Convergent Mode MINI-BEAM® *Expert*™



BP-32

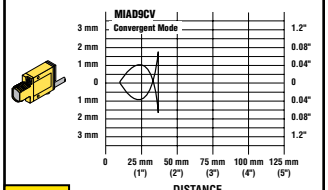
Range: 16 mm **LED:** ○

More on next page

Beam Patterns (Convergent and Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED ● = Visible Green LED ● = Visible Blue LED ○ = Visible White LED

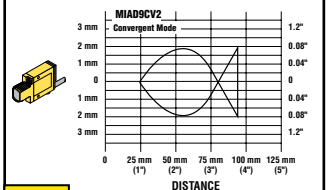
Convergent Mode MINI-BEAM® NAMUR



BP-33

Range: 16 mm **LED:** ●

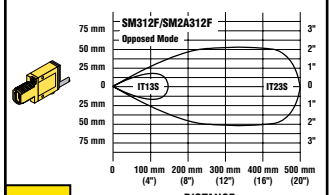
Convergent Mode MINI-BEAM® NAMUR



BP-34

Range: 43 mm **LED:** ●

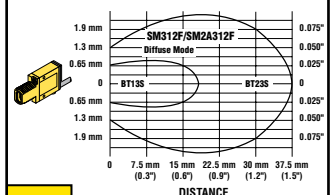
Opposed Mode—Glass Fiber MINI-BEAM®



BP-35

Fiber: Individual **LED:** ○

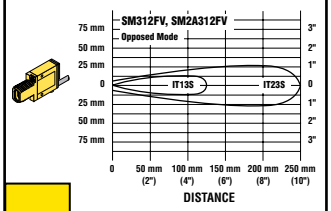
Diffuse Mode—Glass Fiber MINI-BEAM®



BP-36

Range: Varies **LED:** ○

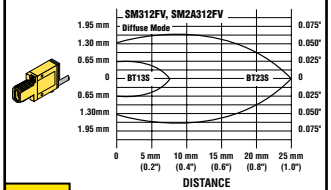
Opposed Mode—Glass Fiber MINI-BEAM®



BP-37

Range: Varies **LED:** ●

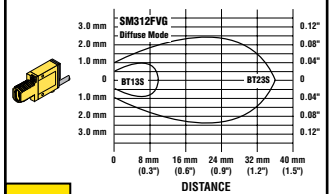
Diffuse Mode—Glass Fiber MINI-BEAM®



BP-38

Range: Varies **LED:** ●

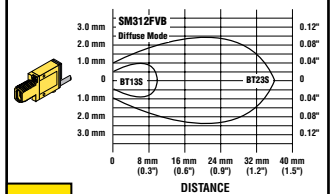
Diffuse Mode—Glass Fiber MINI-BEAM®



BP-39

Range: Varies **LED:** ●

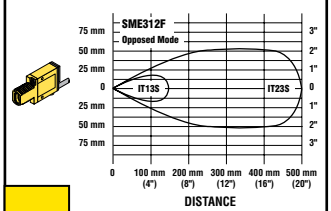
Diffuse Mode—Glass Fiber MINI-BEAM®



BP-40

Range: Varies **LED:** ●

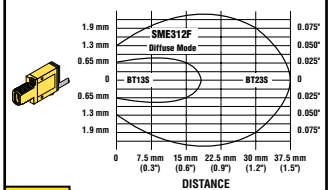
Opposed Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-41

Range: Varies **LED:** ○

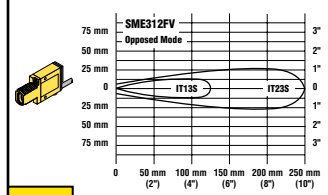
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-42

Range: Varies **LED:** ○

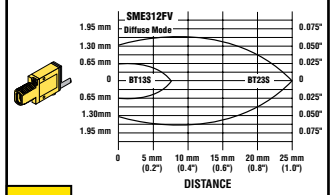
Opposed Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-43

Range: Varies **LED:** ●

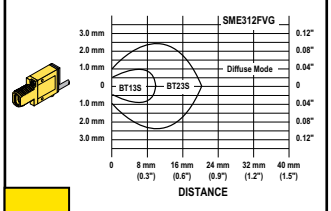
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-44

Range: Varies **LED:** ●

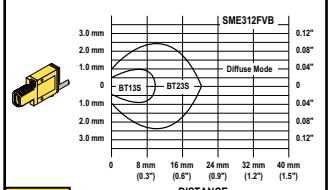
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-45

Range: Varies **LED:** ●

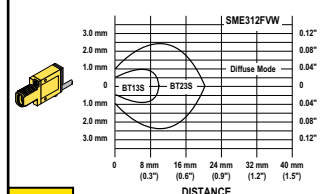
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-46

Range: Varies **LED:** ●

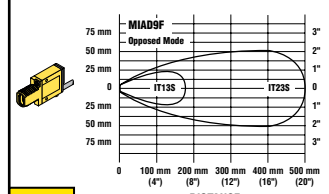
Diffuse Mode—Glass Fiber MINI-BEAM® *Expert*™



BP-47

Range: Varies **LED:** ○

Opposed Mode—Glass Fiber MINI-BEAM® NAMUR



BP-48

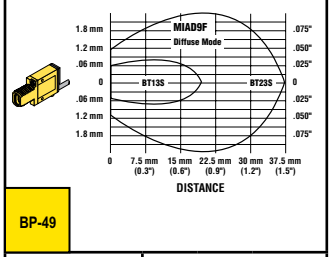
Range: Varies **LED:** ○

More on next page

Beam Patterns (Diffuse mode performance based on 90% reflectance white test card)

○ = Infrared LED ● = Visible Red LED ● = Visible Green LED ● = Visible Blue LED ○ = Visible White LED

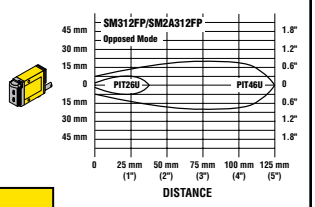
Diffuse Mode—Glass Fiber MINI-BEAM® NAMUR



BP-49

Range: Varies **LED:** ○

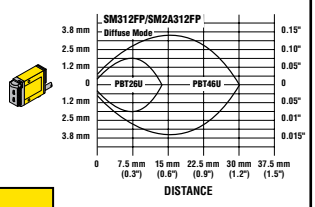
Opposed Mode—Plastic Fiber MINI-BEAM®



BP-50

Range: Varies **LED:** ●

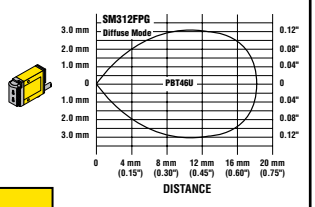
Diffuse Mode—Plastic Fiber MINI-BEAM®



BP-51

Range: Varies **LED:** ●

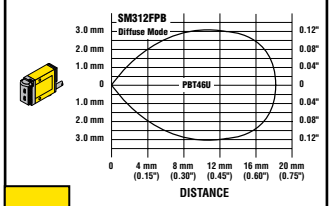
Diffuse Mode—Plastic Fiber MINI-BEAM®



BP-52

Range: Varies **LED:** ●

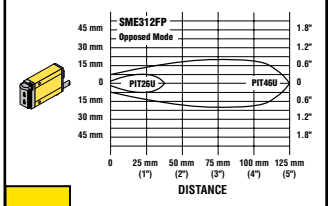
Diffuse Mode—Plastic Fiber MINI-BEAM®



BP-53

Range: Varies **LED:** ●

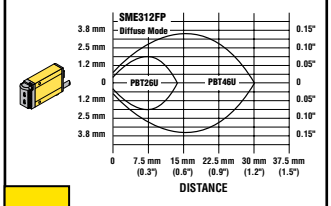
Opposed Mode—Plastic Fiber MINI-BEAM® *Expert*™



BP-54

Range: Varies **LED:** ●

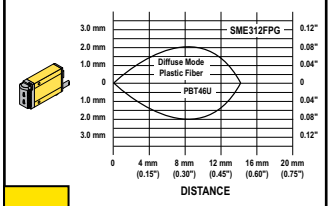
Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



BP-55

Range: Varies **LED:** ●

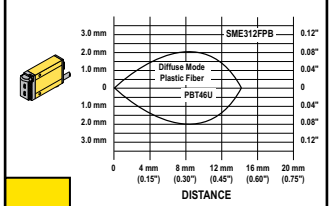
Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



BP-56

Range: Varies **LED:** ●

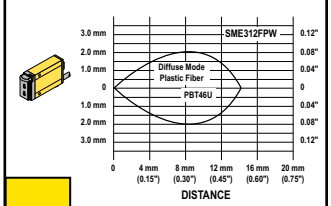
Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™



BP-57

Range: Varies **LED:** ●

Diffuse Mode—Plastic Fiber MINI-BEAM® *Expert*™

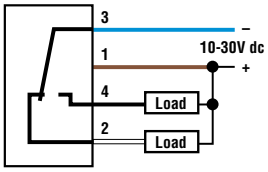


BP-58

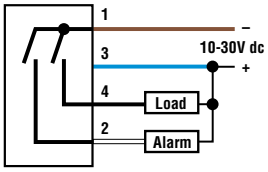
Range: Varies **LED:** ○

DC Hookups

DC05 Complementary Current Sinking (NPN) Standard Hookup

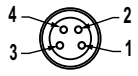
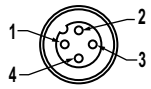


Current Sinking (NPN) Plus Current Sinking Alarm

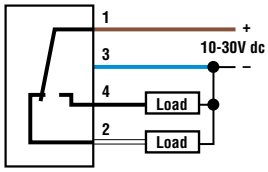


Key

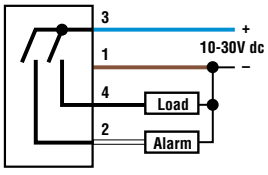
1 = Brown
2 = White
3 = Blue
4 = Black

4-Pin Pico	4-Pin Euro
	

DC06 Complementary Current Sourcing (PNP) Standard Hookup

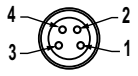
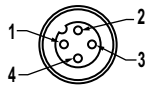


Current Sourcing (PNP) Plus Current Sourcing Alarm

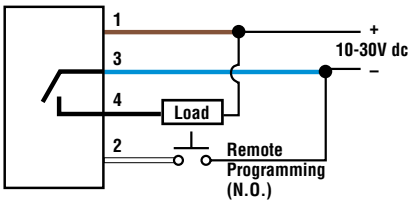


Key

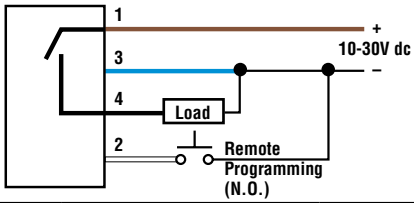
1 = Brown
2 = White
3 = Blue
4 = Black

4-Pin Pico	4-Pin Euro
	

DC07 Current Sinking (NPN)

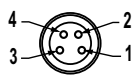
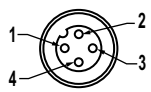


Current Sourcing (PNP)

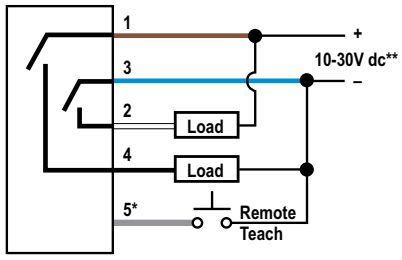


Key

1 = Brown
2 = White
3 = Blue
4 = Black

4-Pin Pico	4-Pin Euro
	

DC08 Bipolar (NPN + PNP)

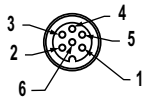
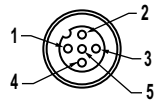


*NOTE: For some QS30 models, gray wire is used for LO/DO Select. See data sheet.
** Bussable Power models are 12-30V dc

Key

1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray
6 = Pink †

† Not Used

6-Pin Pico	5-Pin Euro
	

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