



Features

- Bright, visible red (640 nm) light source
- 10 to 30V dc operation
- Solid-state, bipolar outputs: one current sourcing (PNP) and one current sinking (NPN)
- Light Operate (L.O.) or Dark Operate (D.O.), depending on model
- Models available with PFA chemical-resistant jacket (1200 psi washdown rated) for use in harsh environments (see page 2).
- Standard models available with 4-wire, 2 m (6.5') or 9 m (30') cable or 150 mm (6") pigtail with Pico-style M8 threaded connector
- Compact 8 mm (0.31") housing mounts almost anywhere
- Crosstalk-avoidance circuitry for multiple-sensor applications
- LED status indicators for Power ON, Output Overload, Signal Received, and Marginal Signal

Standard Models

Sensing Mode		Model*	Range	Output	Sensing Mode		Model*	Range	Output
Opposed	640 nm Visible Red	Q126E	2 m (6.5')	N/A	Fixed-Field	Performance based on use of 90% reflectance white test card.			
	Effective Beam: 5.7 mm (0.22")	Q12AB6R		Bipolar L.O.		640 nm Visible Red	Q12AB6FF15	15 mm (0.6") cutoff;	Bipolar L.O.
		Q12RB6R		Bipolar D.O.			Q12RB6FF15	10 mm (0.4") focus	Bipolar D.O.
Polarized Retro	640 nm Visible Red	Q12AB6LP	1 m† (40")	Bipolar L.O.			Q12AB6FF30	30 mm (1.2") cutoff;	Bipolar L.O.
		Q12RB6LP		Bipolar D.O.			Q12RB6FF30	16 mm (0.63") focus	Bipolar D.O.
Retro	640 nm Visible Red	Q12AB6LV	1.5 m† (59")	Bipolar L.O.			Q12AB6FF50	50 mm (2") cutoff;	Bipolar L.O.
		Q12RB6LV		Bipolar D.O.			Q12RB6FF50	16 mm (0.63") focus	Bipolar D.O.

*Only standard 2 m (6.5') cable models are listed. For 9 m (30') cable, add suffix "W/30" to the model number (e.g., Q126E W/30).

QD models: For 4-pin 150 mm (6") pigtail with threaded Pico-style M8 connector, add suffix "Q" (e.g. Q126EQ).

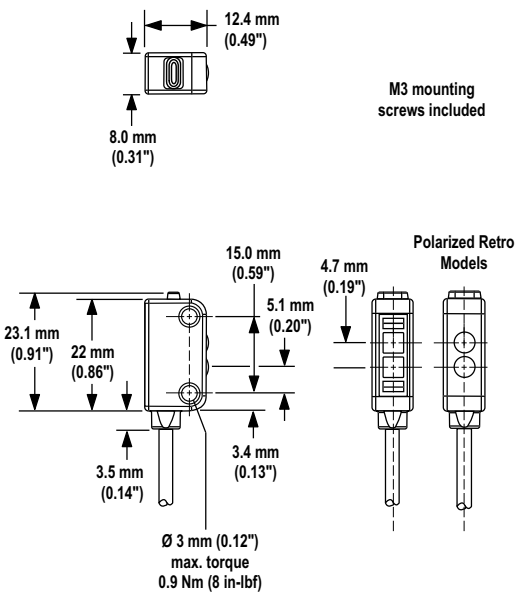
†Retroreflective range is specified using one model **BRT-60X40C** retroreflector. Actual sensing range may be more or less than specified, depending upon efficiency and reflective area of the retroreflector(s) used.

Specifications

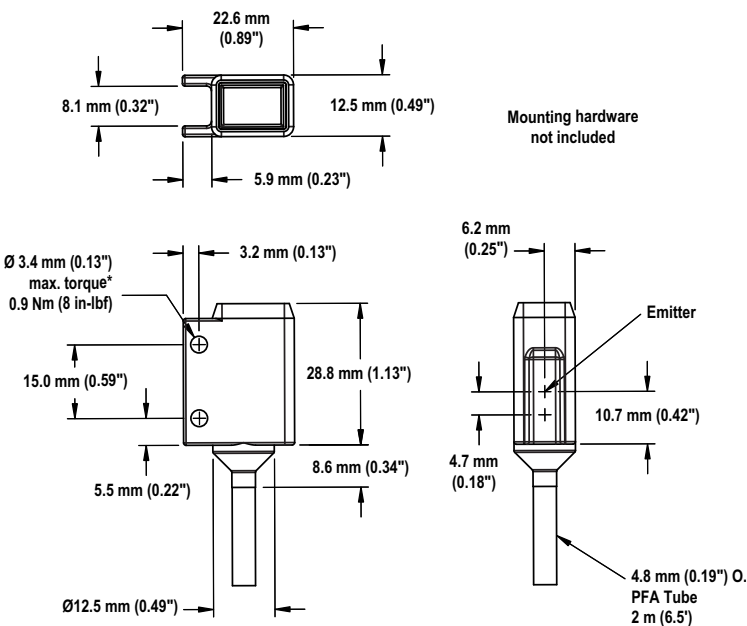
Sensing Beam	640 nm visible red
Supply Voltage and Current	10 to 30V dc (10% max. ripple) @ 20 mA max current
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	Bipolar (1 NPN and 1 PNP) solid-state, L.O. or D.O. depending on model
Output Ratings	50 mA total across both outputs with overload and short circuit protection OFF-state leakage current: ON-state saturation voltage: NPN: 200 μ A NPN: 1.25V @ 50 mA PNP: 10 μ A PNP: 1.45V @ 50 mA
Output Protection Circuitry	Protected against false pulse on power-up, short-circuit protected
Output Response Time	Opposed Mode: 1.3 ms ON; 900 μ s OFF All Other Modes: 700 μ s ON/OFF NOTE: 120 ms delay on power-up; outputs do not conduct during this time.
Repeatability	175 microseconds
Switching Frequency	Opposed Mode: 385 Hz All Other Modes: 715 Hz
Indicators	One Yellow and one Green LED (see Figure 1)
Construction	Polarized Retro Models: Thermoplastic elastomer housing with glass lens All Other Standard Models: Thermoplastic elastomer housing with polycarbonate lens Chemical-Resistant Models: Housing encased in PFA jacket; cable encased in 3/16" O.D. PFA tubing
Environmental Rating	Standard Models: IEC IP67 Chemical-Resistant Models: IEC IP67 and 1200 PSI Washdown NEMA ICS 5, Annex F-2002
Connections	Standard Models: 2 m (6.5') or 9 m (30') attached PVC cable, or 150 mm (6") pigtail with M8 threaded connection Chemical-Resistant Models: 2 m (6.5') cable encased in 3/16" O.D. PFA tubing
Operating Conditions	Operating temperature: -20° to +55° C (-4° to +131° F) Storage temperature: -30° to +75° C (-22° to +167° F) Relative humidity: 90% max @ +50° C (+122° F) non-condensing
Certifications	 

Dimensions

Standard Models



Chemical-Resistant Models



* When mounting by running a screw through both flanges without support between the flanges, the max. torque applied should be 0.1 Nm (1 in-lbf).