



Photo Interrupters Mini Reflective Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	Tolerance: ± 0.25					
BPR-105	Max.1.5V	Max.100uA	Max.200nA	Max.0.4V	Min.80uA	Typ.20/20


	Tolerance: ± 0.25					
BPR-105F	Max.1.5V	Max.100uA	Max.200nA	Max.0.4V	Min.80uA	Typ.20/20



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Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$ $D=1\text{mm}$	T_r/T_f @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	Tolerance: ± 0.25					
BPR-105S*	Max.1.5V	Max.100uA	Max.200nA	Max.0.4V	Min.80uA	Typ.20/20

						
	Tolerance: ± 0.25					
BPR-205F	Max.1.5V	Max.100uA	Max.200nA	Max.0.4V	Min.500uA @ $I_F=5\text{mA}$	Typ.20/20

* Preliminary Drawings



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Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=20\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=20\text{mA}$ $D=3.81\text{mm}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	<p style="text-align: right;">Tolerance: ± 0.25</p>						
BPR-301	Max.1.5V	Max.100uA	Max.200nA	Max.0.4V	Min.160uA	Typ.20/20	



Photo Interrupters Actuator Type (Opic)

Part No.	Package (mm [Inch])	V_{OL} @Light beam interrupted $I_{OL}=16mA$	V_{OH} @Light beam interrupted $R_L=47K$	I_{CCH} @Light beam interrupted
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	<p style="text-align: right;">Tolerance: ±0.25</p>		
BPI-3C2A-03W1*	Max.0.35V	Min.V _{CC} 0.9V	Max.30mA

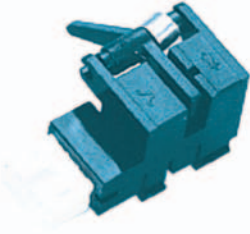
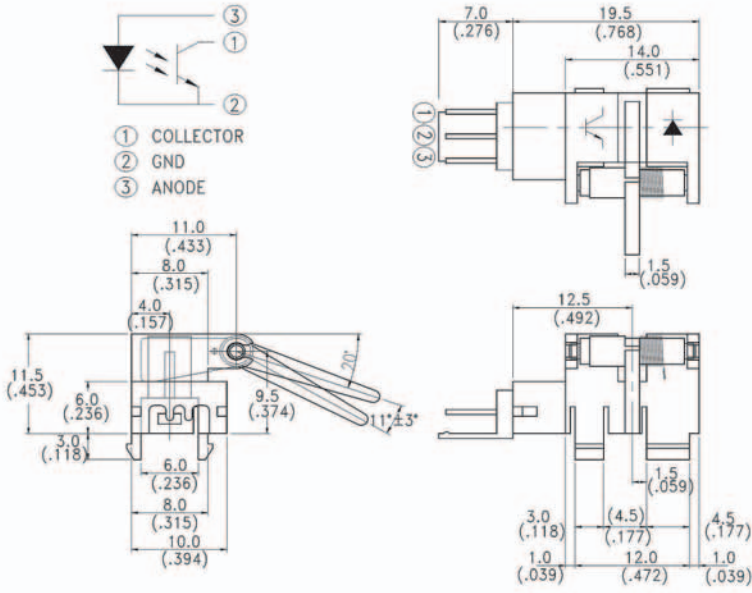
	<p style="text-align: right;">Tolerance: ±0.25</p>		
BPI-3C2A-05W2*	Max.0.35V	Min.V _{CC} 0.9V	Max.30mA

* Preliminary Drawings



Photo Interrupters Actuator Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	Tolerance: ± 0.25					
BPI-3C1-26C1	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20


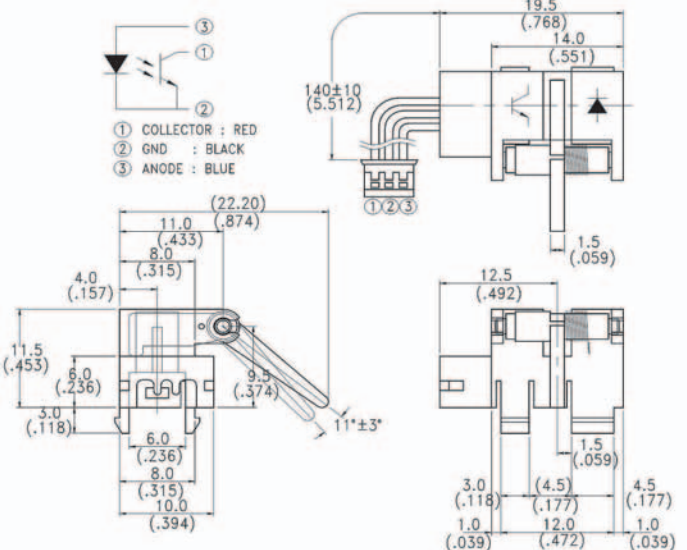

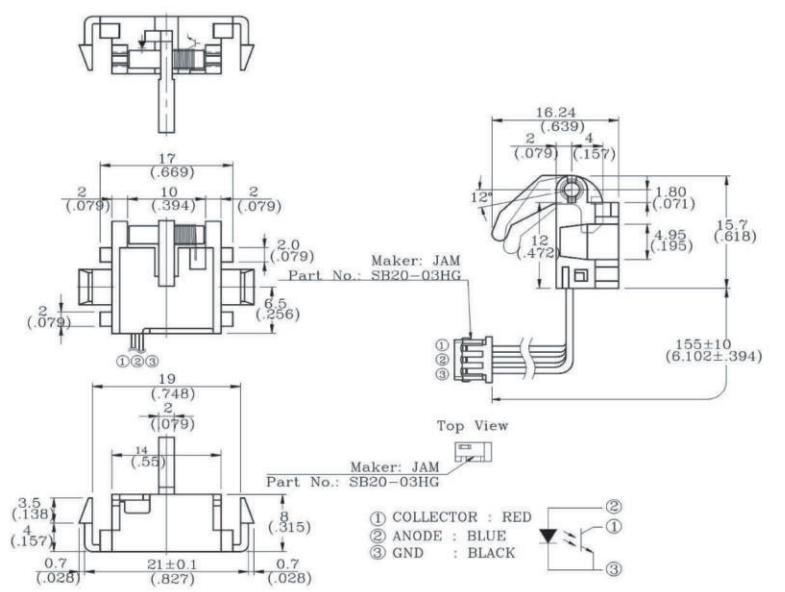
						
	Tolerance: ± 0.25					
BPI-3C1-26W1	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20



Photo Interrupters Actuator Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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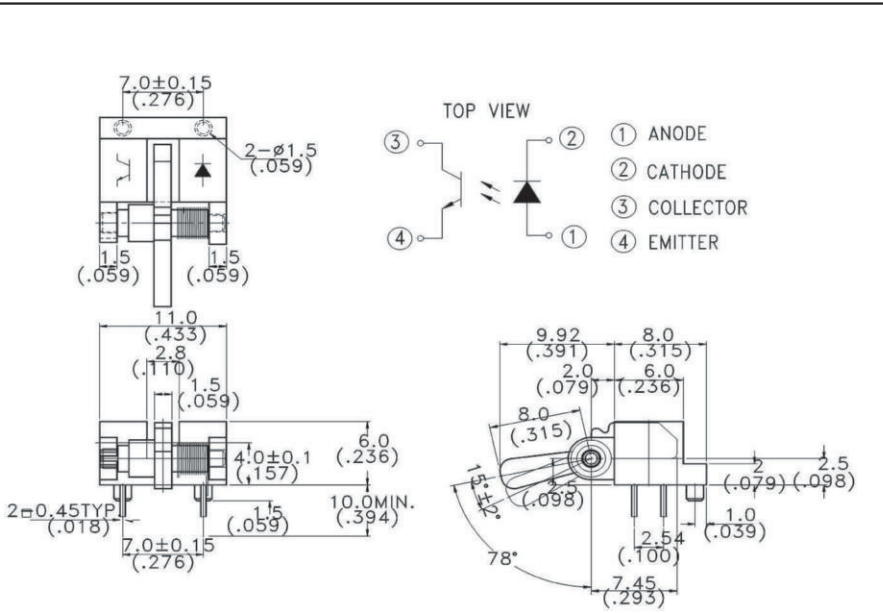
Maker: JAM
Part No.: SB20-03HG

① COLLECTOR : RED
② ANODE : BLUE
③ GND : BLACK

Tolerance: ± 0.25

BPI-3C2-07W1	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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TOP VIEW

① ANODE
② CATHODE
③ COLLECTOR
④ EMITTER

Tolerance: ± 0.25

BPI-3C2-08	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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Photo Interrupters Actuator Type


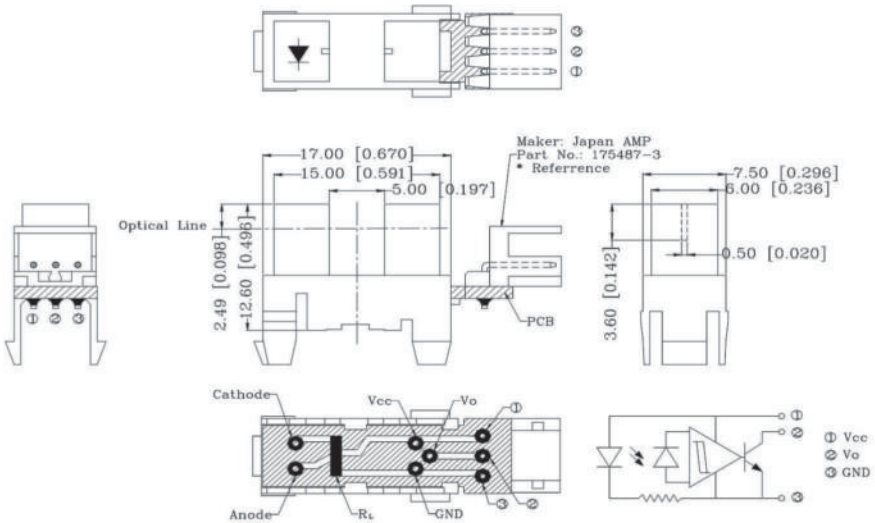
Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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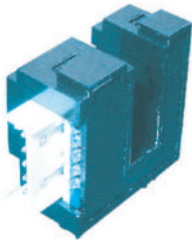
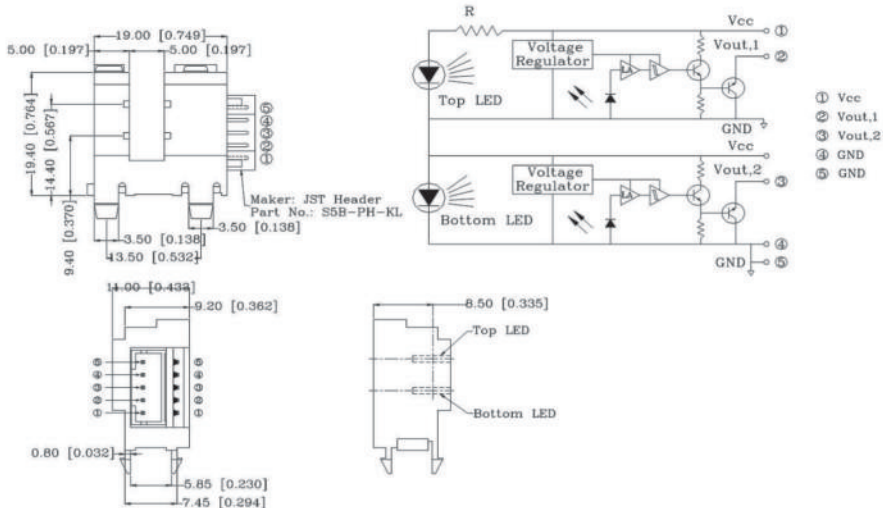
	<p>Technical drawing showing dimensions and a top view of the JST connector. Dimensions are provided in millimeters and inches. The top view shows a 3-pin JST connector with the following pinout: ① GND:Black, ② Vo:Red, ③ Vcc:Blue. The drawing also includes a schematic of the internal transistor and photodiode.</p> <p>Maker: JST Part No.: PHR-3</p> <p>Maker: JST Part No.: PHR-3</p> <p>Top View</p>						
Tolerance: ± 0.25							
BPI-3C2-10W1	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20	



Photo Interrupters Slotted Type (Opic)

Part No.	Package (mm [Inch])	V_{OL} @Light beam interrupted $I_{OL}=16mA$	V_{OH} @Light beam interrupted $R_L=47K$	I_{CCH} @Light beam interrupted
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	Tolerance: ± 0.25					
BPI-3C2A-01C1	Max.0.35V	Min. $V_{CC}0.9V$	Max.30mA			

					
	Tolerance: ± 0.25				
BPI-3C2A-02C1*	Max.0.35V	Min. $V_{CC}0.9V$	Max.30mA		

* Preliminary Drawings

AMERICAN BRIGHT

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Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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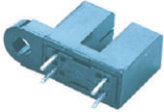
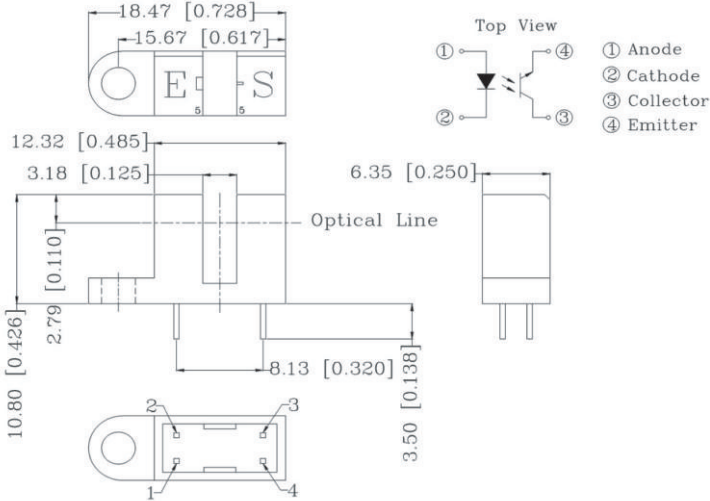
	<p>Top View</p> <p>① Anode ② Cathode ③ Collector ④ Emitter</p> <p>Optical Line</p> <p>Tolerance: ± 0.25</p>					
	BPI-470-T51	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA

	<p>Top View</p> <p>① Anode ② Cathode ③ Collector ④ Emitter</p> <p>Optical Line</p> <p>Tolerance: ± 0.25</p>					
	BPI-470-P51	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA



Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	T_r/T_f @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	 <p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-470-L51	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA

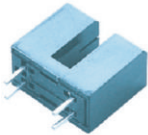
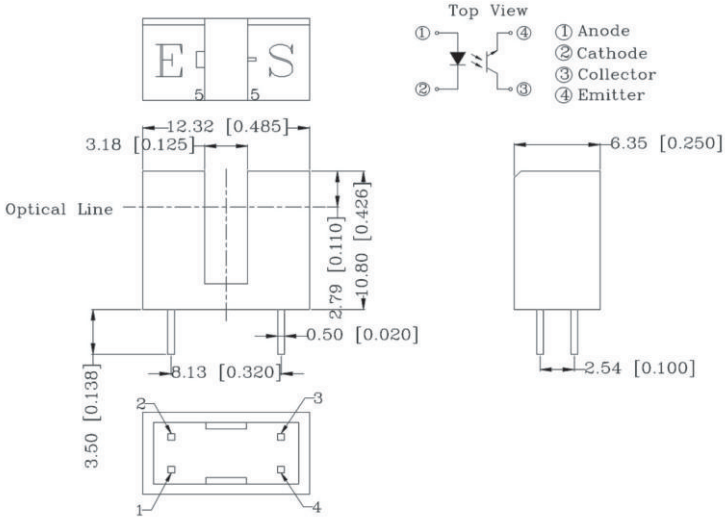
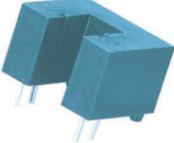
	 <p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-470-N51	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA



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Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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							<p style="text-align: right;">Tolerance: ± 0.25</p>
	BPI-3C1-01	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	



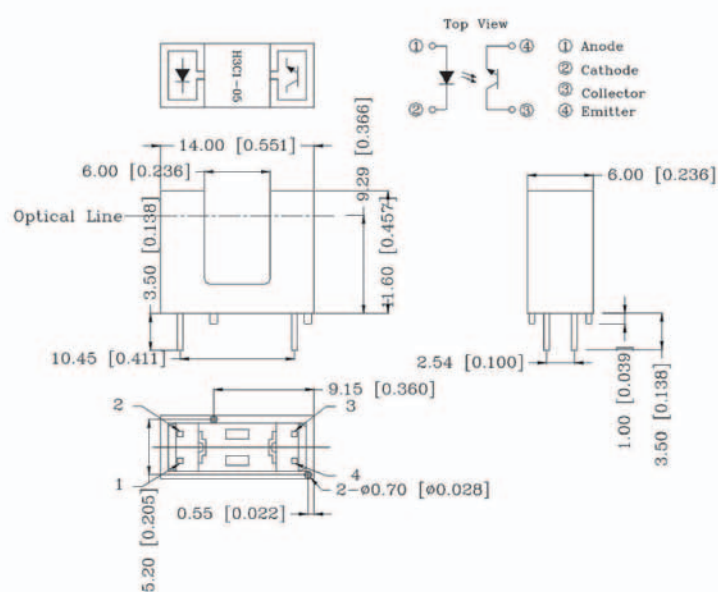
							<p style="text-align: right;">Tolerance: ± 0.25</p>
	BPI-3C1-03	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	



Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20mA$	I_R @ $V_R=5V$	I_D @ $V_{CE}=10V$	$V_{CE(sat)}$ @ $I_C=0.25mA$ $I_F=10mA$	I_L @ $V_{CE}=5V$ $I_F=10mA$	Tr/Tf @ $I_{FP}=20mA$ $V_{CE}=5V$ $R_L=1K$
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	 <p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-3C1-05	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA


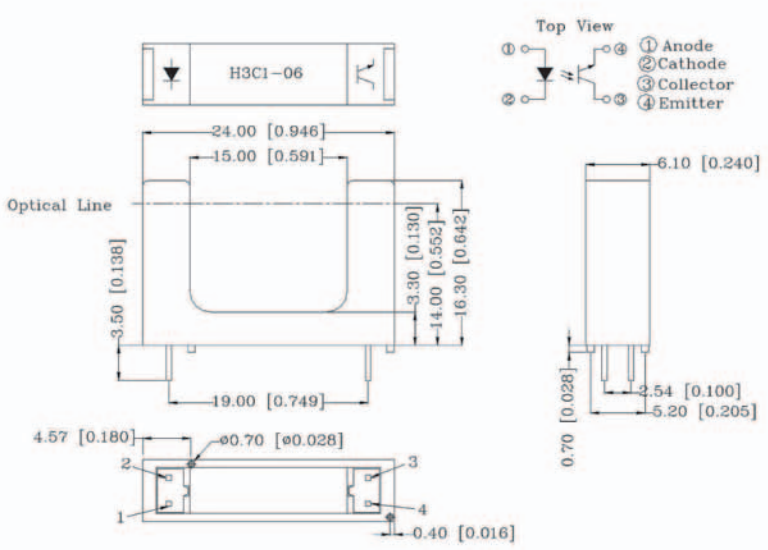
	 <p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-3C1-06	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA



Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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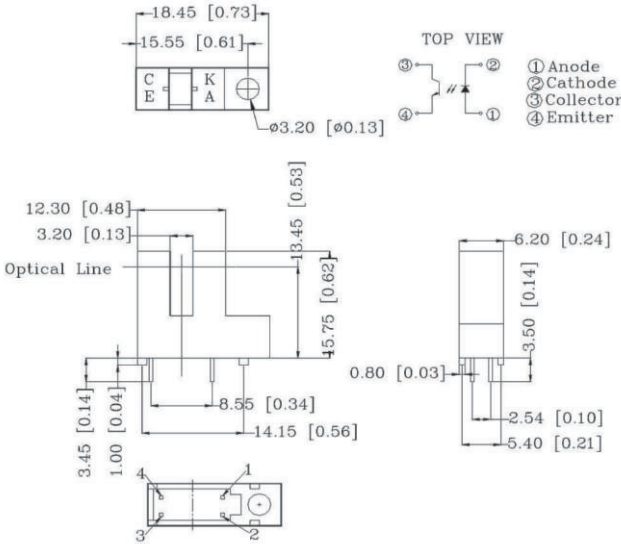
							Tolerance: ± 0.25
	BPI-3C1-07	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	

							Tolerance: ± 0.25
	BPI-3C1-08	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	



Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	BPI-3C1-09	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA

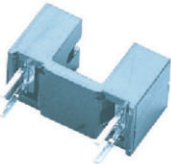
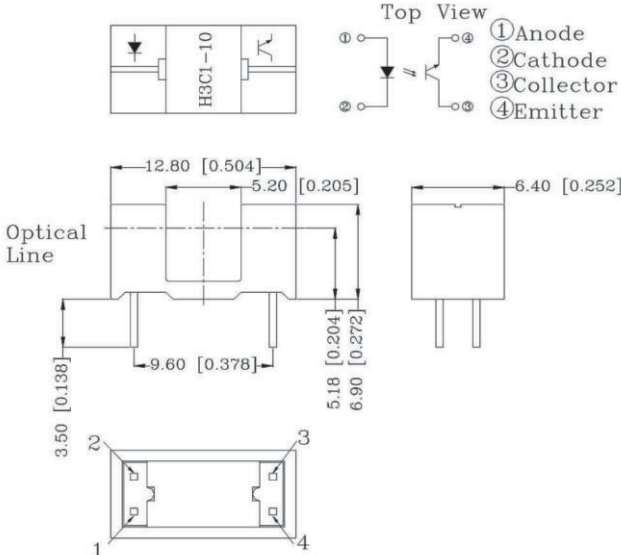

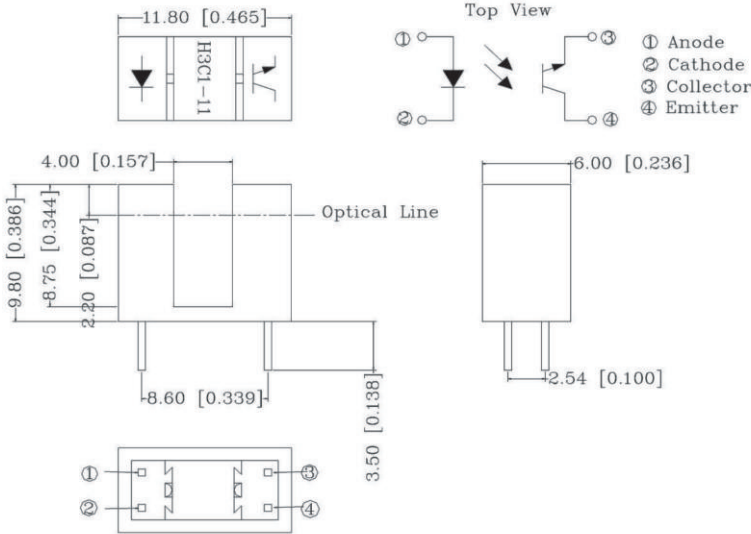
						
	BPI-3C1-10	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA



Photo Interrupters Slotted Type


Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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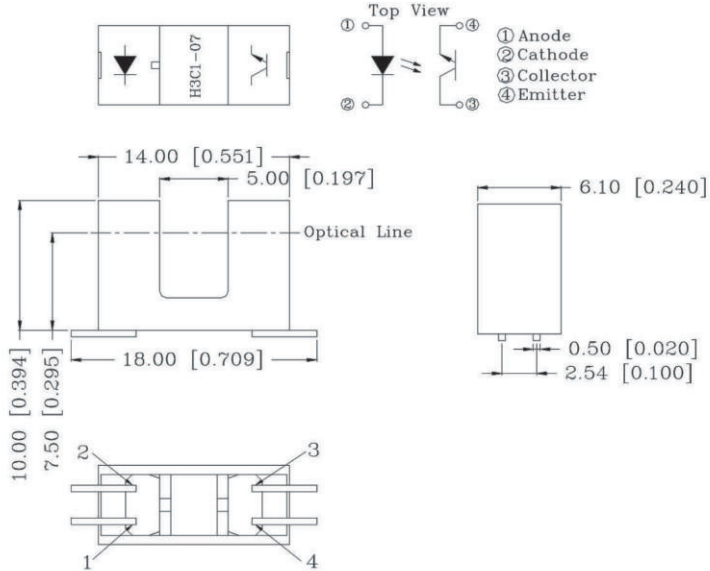




Tolerance: ± 0.25

BPI-3C1-11	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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Tolerance: ± 0.25

BPI-3C1-12	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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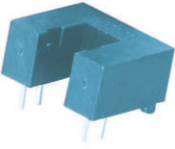
	<p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-3C1-13	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA

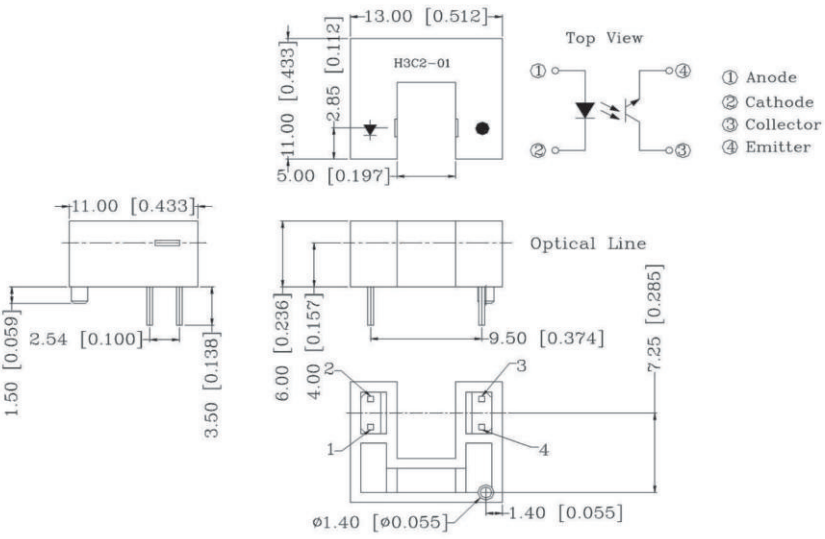
	<p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-3C1-18	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA



Photo Interrupters Slotted Type

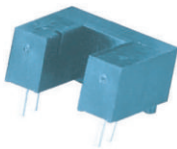
Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	T_r/T_f @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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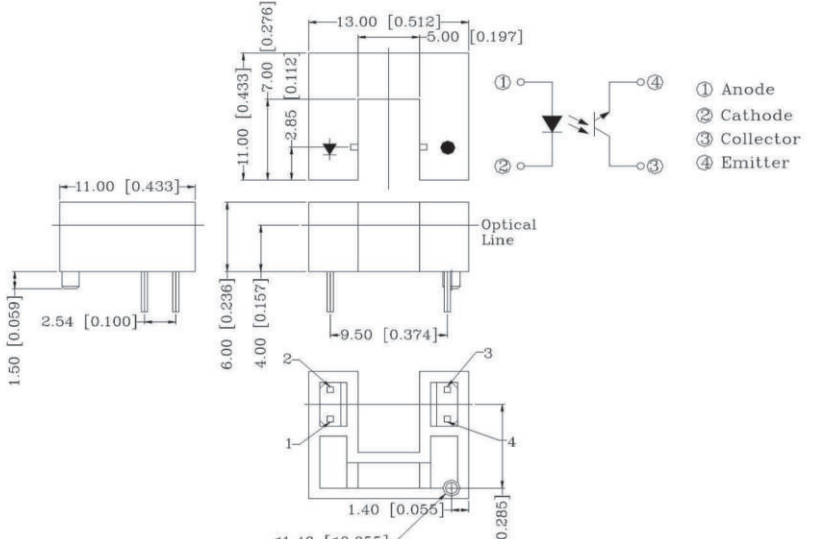




Tolerance: ± 0.25

BPI-3C2-01	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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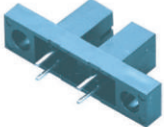
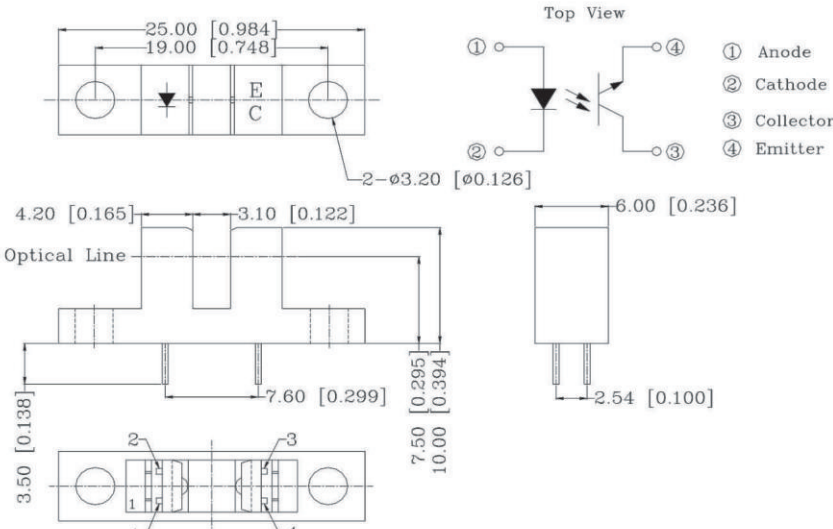
Tolerance: ± 0.25

BPI-3C2-03	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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Photo Interrupters Slotted Type

Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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	 <p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-3C2-05	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA


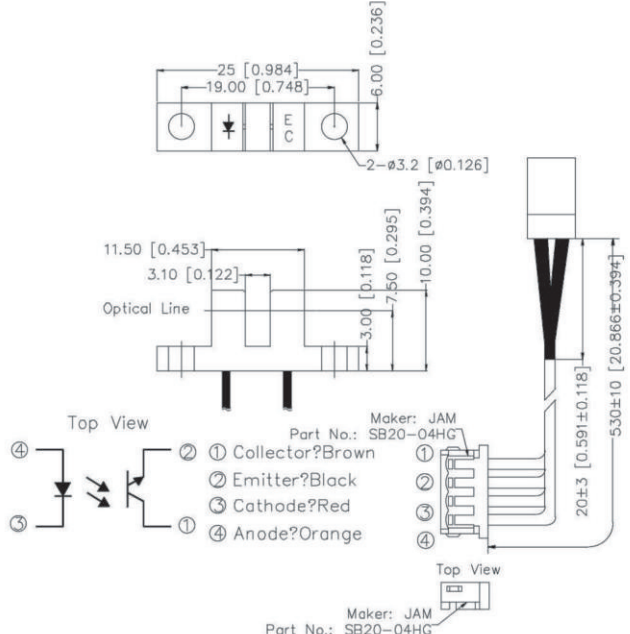

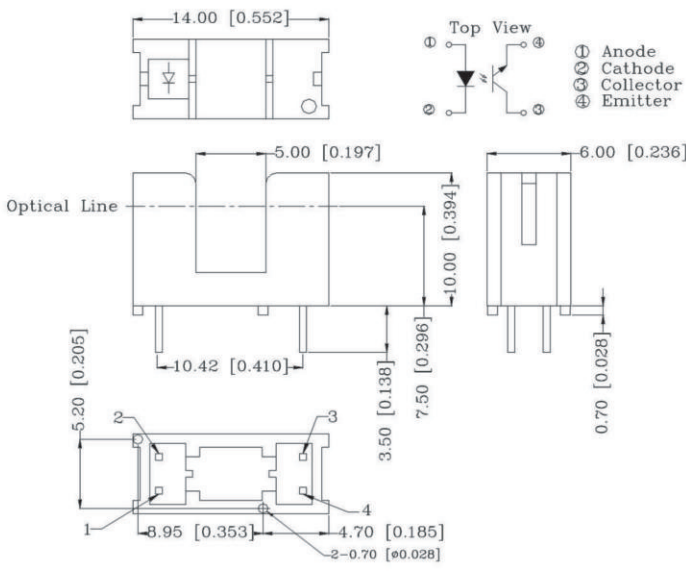
	 <p style="text-align: right;">Tolerance: ± 0.25</p>					
	BPI-3C2-05W6	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA



Photo Interrupters Slotted Type

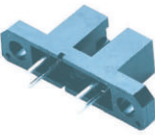
Part No.	Package (mm [Inch])	V_F @ $I_F=20\text{mA}$	I_R @ $V_R=5\text{V}$	I_D @ $V_{CE}=10\text{V}$	$V_{CE(sat)}$ @ $I_C=0.25\text{mA}$ $I_F=10\text{mA}$	I_L @ $V_{CE}=5\text{V}$ $I_F=10\text{mA}$	Tr/Tf @ $I_{FP}=20\text{mA}$ $V_{CE}=5\text{V}$ $R_L=1\text{K}$
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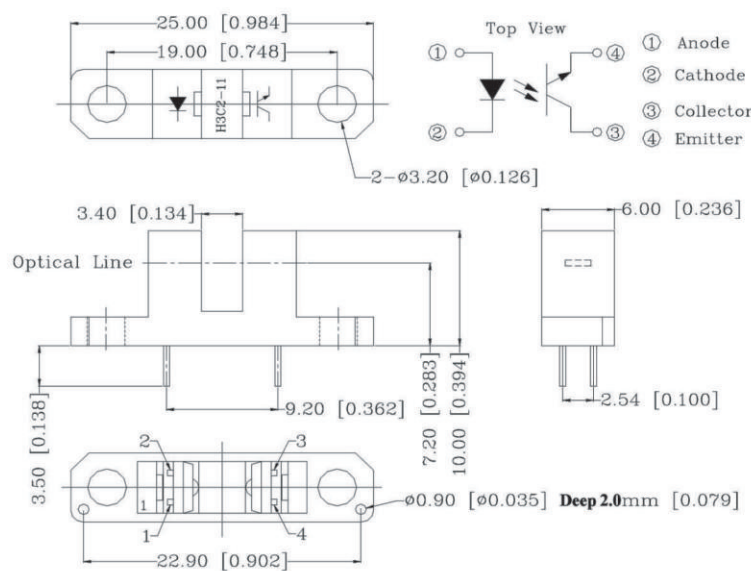




Tolerance: ± 0.25

BPI-3C2-09	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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Tolerance: ± 0.25

BPI-3C2-11	Max.1.5V	Max.100uA	Max.100nA	Max.0.4V	Min.0.5mA	Typ.20/20
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