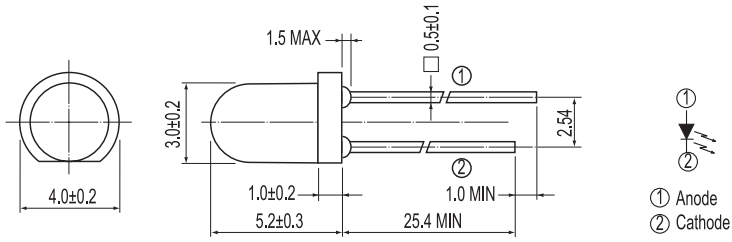


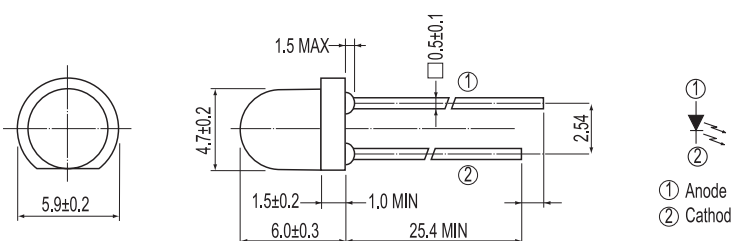
Part Number EL-xxxx	Chip		Lens Color	V _F (V)		Power (mW/sr)			Viewing Angle 2θ 1/2
	Material	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.	Typ.	

3mm Infrared LED, T-1

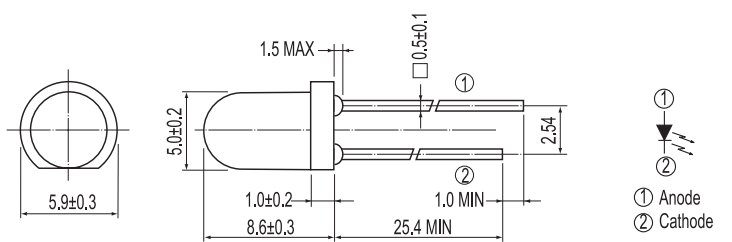
UNIT: mm

									
IR204-A	GaAlAs	940	Blue	1.2	1.5	20	4.0	5.6	35
IR204/H16/L10	GaAlAs	940	Blue	1.2	1.5		2.8	4.0	50
SIR204-A	GaAlAs	875	Blue	1.3	1.6		4.0	6.4	30
HIR204	GaAlAs	850	Yellow	1.45	1.65		7.8	17.6	25
HIR204/H0	GaAlAs	850	Yellow	1.45	1.65		4.0	8.9	40

5mm Infrared LED, T-1 3/4

									
IR323	GaAlAs	940	Blue	1.2	1.5	20	4.0	6.4	30
IR323/H0-A	GaAlAs	940	Blue	1.2	1.5		2.0	3.5	60
SIR323-5	GaAlAs	875	Blue	1.3	1.6		4.0	7.8	35

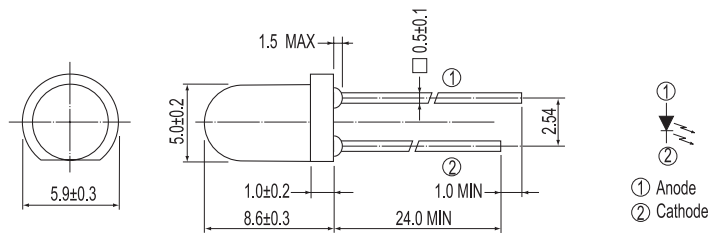
5mm Infrared LED, T-1 3/4

									
IR333-A	GaAlAs	940	Blue	1.2	1.5	20	7.8	20	20
SIR333-A	GaAlAs	875	Blue	1.3	1.6		7.8	20	20
HIR333	GaAlAs	850	Yellow	1.45	1.65		7.8	15	17

Part Number EL-xxxx	Chip		Lens Color	V _F (V)		Power (mW/sr)			Viewing Angle 2θ 1/2
	Material	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.	Typ.	

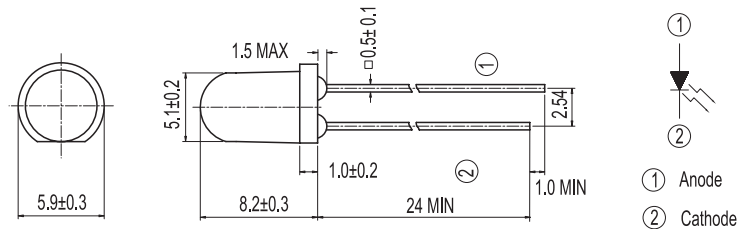
5mm Infrared LED, T-1 3/4

UNIT: mm



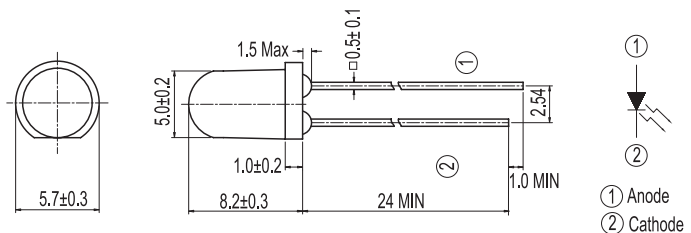
IR333C/H0/L10	GaAlAs	940	Water Clear	1.2	1.5	20	7.8	10	40
HIR333/H0-A	GaAlAs	850	Yellow	1.45	1.65		7.8	15	30
HIR333C/H0	GaAlAs	850	Water Clear	1.45	1.65		7.8	15	30

5mm Infrared LED, T-1 3/4



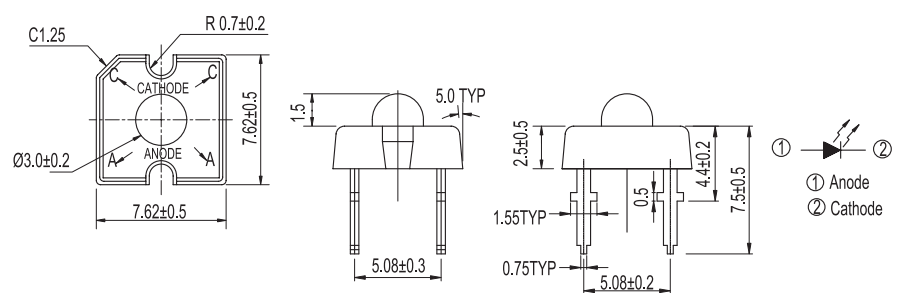
IR7373C	GaAlAs	940	Water Clear	1.2	1.5	20	5.6	8.0	50
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5mm Infrared LED, T-1 3/4



IR7393C	GaAlAs	940	Water Clear	1.2	1.5	20	4.0	6.5	60
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Power LED

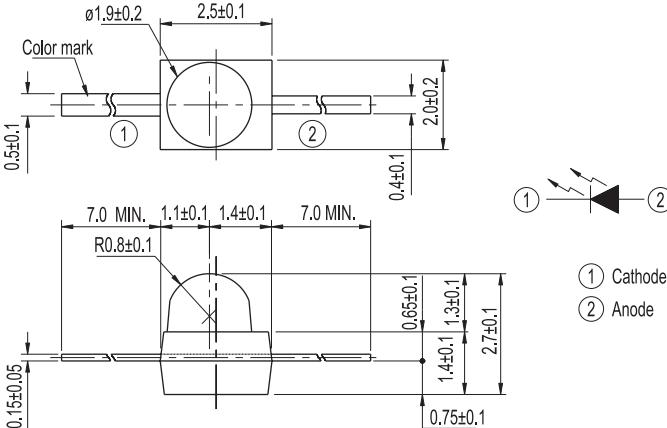


HIR30-01C/S16	GaAlAs	850	Water Clear	1.45	1.65	20	5.6	10	35
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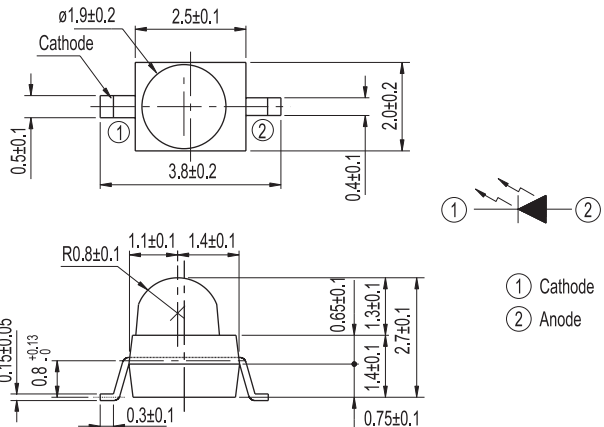
Part Number EL-xxxx	Chip		Lens Color	V _F (V)		Power (mW/sr)		Viewing Angle 2θ 1/2
	Material	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.	

1.9mm Round Subminiature Axial Infrared LED

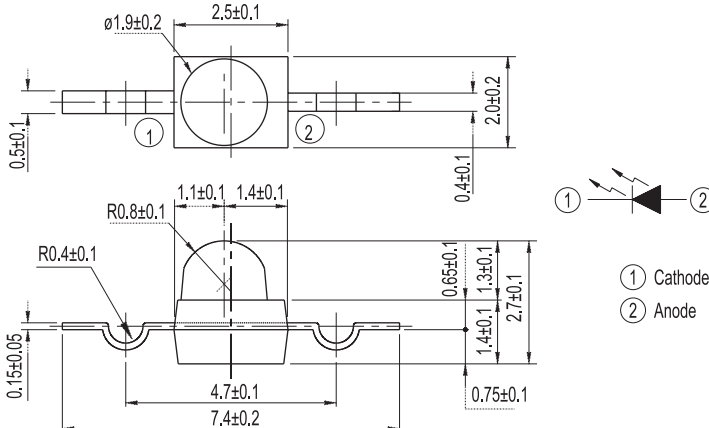
UNIT: mm

  RoHS									
IR91-21C	GaAlAs	940	Water Clear	1.2	1.5	20	3.0	25	

1.9mm Round Subminiature "Gull Wing" Lead Infrared LED

  RoHS	 ① Cathode ② Anode								
IR91-21C/F7	GaAlAs	940	Water Clear	1.2	1.5	20	3.0	25	

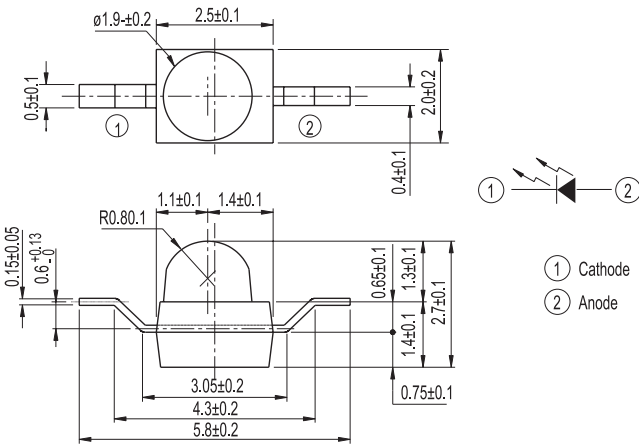
1.9mm Round Subminiature "Yoke" Lead Infrared LED

  RoHS	 ① Cathode ② Anode								
IR91-21C/F9	GaAlAs	940	Water Clear	1.2	1.5	20	3.0	25	

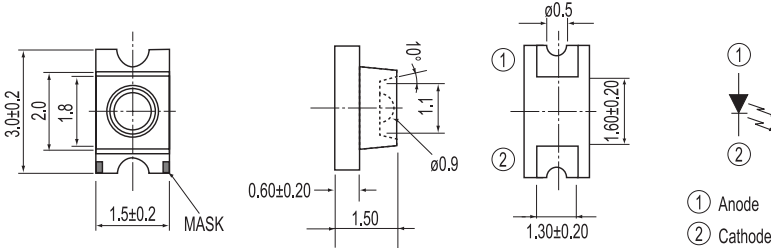
Part Number EL-xxxx	Chip		Lens Color	V _F (V)		Power (mW/sr)		Viewing Angle 2θ 1/2
	Material	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.	

1.9mm Round Subminiature "Z-Bend" Lead Infrared LED

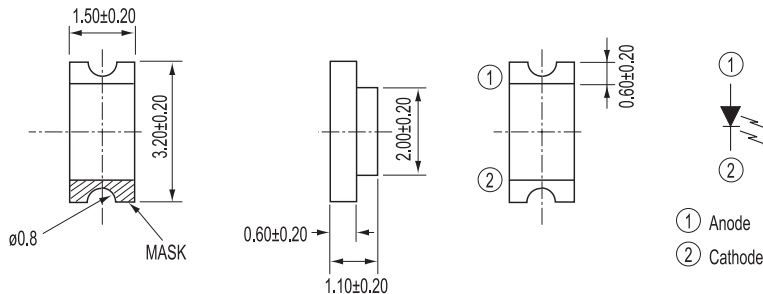
UNIT: mm

  RoHS									
IR91-21C/F10	GaAlAs	940	Water Clear	1.2	1.5	20	3.0	25	

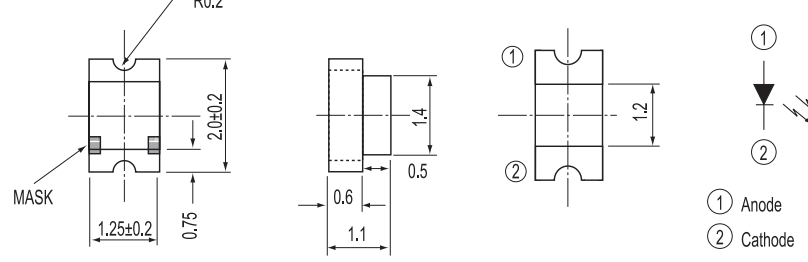
1206 Package Infrared Chip LED with Inner Lens

 Pb RoHS								
IR11-21C	GaAlAs	940	Water Clear	1.2	1.5	20	0.5	100

1206 Package Infrared Chip LED

  RoHS									
	IR15-21C/L10	GaAlAs	940	Water Clear	1.2	1.5	20	0.2	160

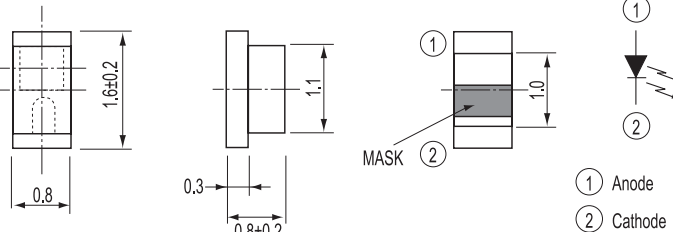
0805 Package Infrared Chip LED

  RoHS									
IR17-21C	GaAlAs	870	Water Clear	1.2	1.5	20	0.2	120	

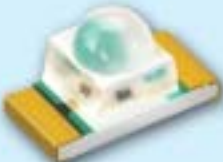
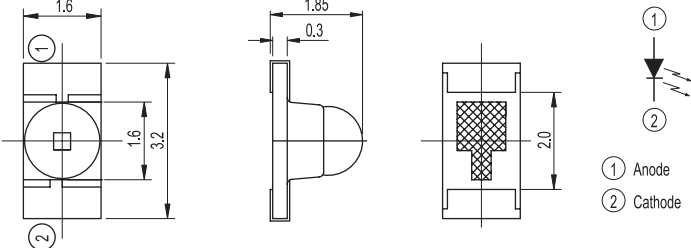
Part Number EL-xxxx	Chip		Lens Color	V _F (V)		Power (mW/sr)		Viewing Angle 2θ 1/2
	Material	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.	

0.8mm Height Flat Top Infrared LED

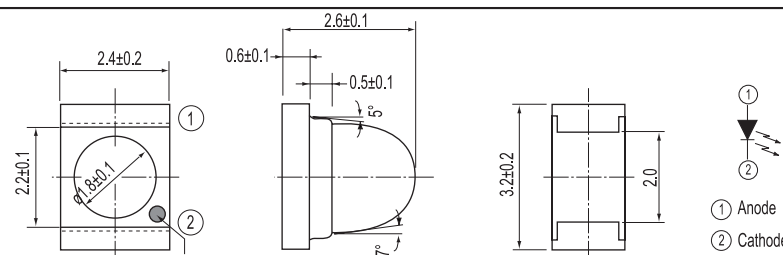
UNIT: mm

 Pb RoHS								
HIR19-21C/L11	GaAlAs	850	Water Clear	1.45	1.65	20	0.2	145

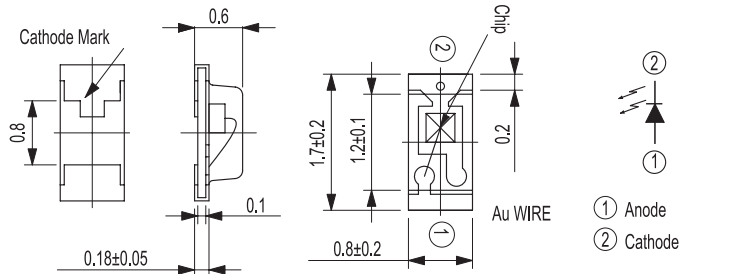
1.6mm Round Subminiature Infrared LED

 RoHS									
IR26-21C/L110	GaAlAs	940	Water Clear	1.2	1.5	20	3.5	20	

1.8mm Round Subminiature Infrared LED

 Pb RoHS									
IR42-21C	GaAlAs	940	Water Clear	1.2	1.5	20	1.0	30	

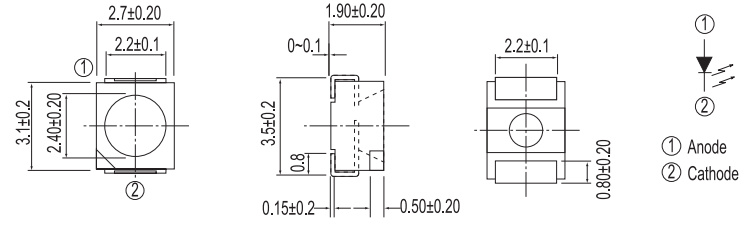
0603 Round Subminiature Infrared LED

 RoHS		 Technical drawing of the SIR19-315C LED package showing dimensions and pinout. Dimensions: - Top view: Cathode Mark, 0.8, 0.18±0.05, 0.6 - Side view: 0.1 - Front view: 1.7±0.2, 1.2±0.1, 0.8±0.2, 2.0, Au WIRE, Chip Pinout: ① Anode ② Cathode							
SIR19-315C	GaAlAs	870	Water Clear	1.35	—	20	1.0	140	

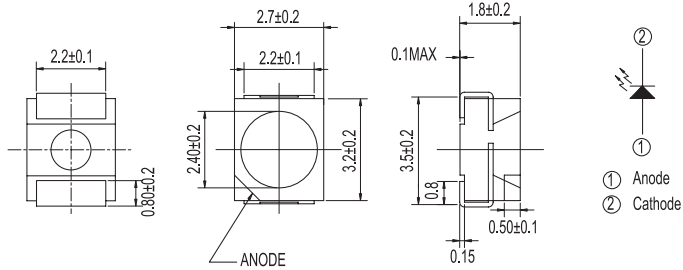
Part Number EL-xxxx	Chip		Lens Color	V _F (V)		Power (mW/sr)		Viewing Angle 2θ 1/2
	Material	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.	

Top Infrared LED

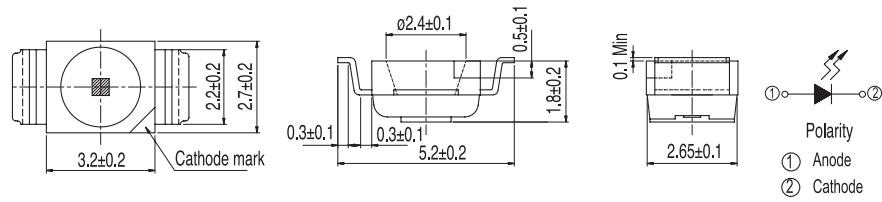
UNIT: mm

 								
IR67-21C	GaAlAs	940	Water Clear	1.2	1.5	20	1.0	120
SIR67-21C/TR8	GaAlAs	875	Water Clear	1.3	1.6	20	0.5	120

TOP Infrared LED

 								
SIR67-21C/B/TR8	GaAlAs	875	Water Clear	1.3	1.6	20	0.25	120

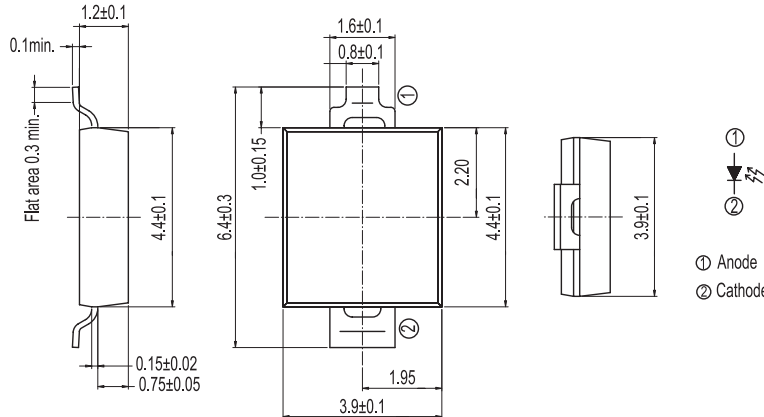
TOP Infrared LED

 								
SIR67-21C/L9/TR10	GaAlAs	875	Water Clear	1.3	1.4	20	0.5	120

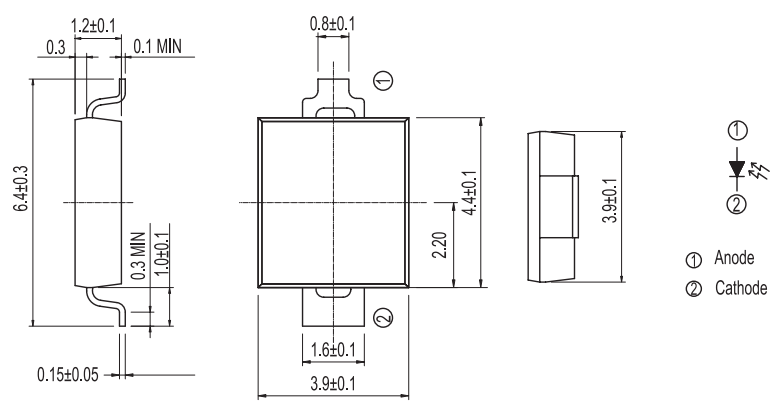
Part Number EL-xxxx	Chip		Rise & Fall Time (nS)	$V_{(BR)}$ R Min.(V)	I_L		I_D	
	Material	Lens Color			Ee=mW/cm ²	Typ.(uA)	Ee=mW/cm ²	Max (mA)

Silicon Planar PIN Photodiode

UNIT: mm

  RoHS								
PD70-01B/TR7	Silicon	Black	50/50	32	1	25	0	30
PD70-01C/TR7	Silicon	Water Clear	50/50	32	1	25	0	30

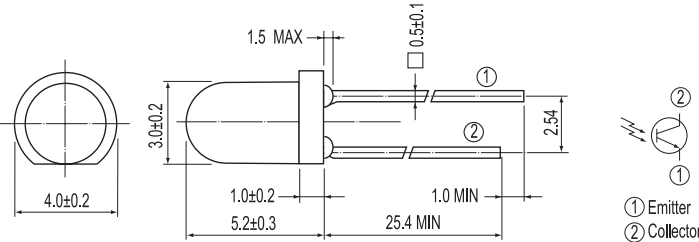
Silicon Planar PIN Photodiode

  RoHS								
PD70-01B/TR10	Silicon	Black	50/50	32	1	25	0	30
PD70-01C/TR10	Silicon	Water Clear	50/50	32	1	25	0	30

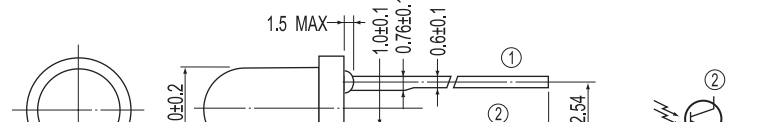
Part Number EL-xxxx	Chip		Rise & Fall Time (μs)	BV _{CEO} Min.(V)	V _{CE} (SAT)		I _C (ON)	
	Material	Lens Color			Ee=mW/cm ²	Max.(V)	Ee=mW/cm ²	Min.(mA)

3mm Phototransistor, T-1

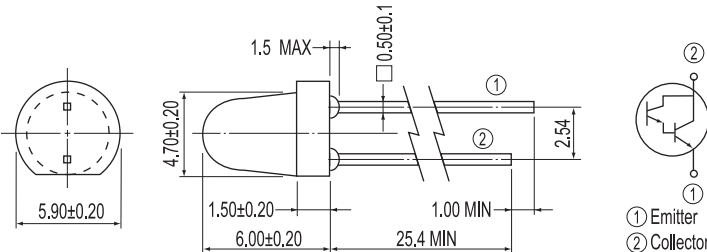
UNIT: mm

 Pb RoHS								
PT204-6B	Silicon	Black	15/15	30	1	0.4	1	0.7
PT204-6C	Silicon	Water Clear	15/15	30	1	0.4	1	0.7

5mm Phototransistor, T-1 3/4

 Pb RoHS		 ① Emitter ② Collector						
PT331C	Silicon	Water Clear	15/15	30	1	0.4	1	0.7

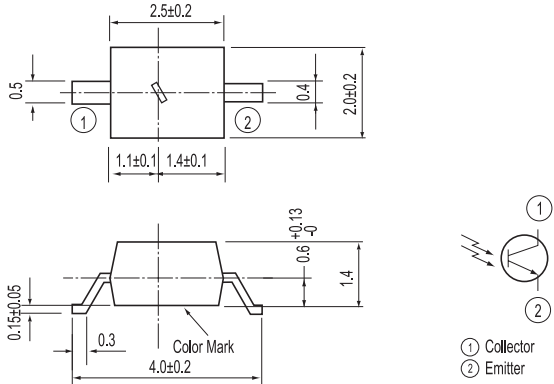
5mm Low Profile PhotoDarlington-Transistor

 Pb RoHS		 ① Emitter ② Collector						
PDT323B-5	Silicon	Black	40/60	15	1	1.0	1	3.3

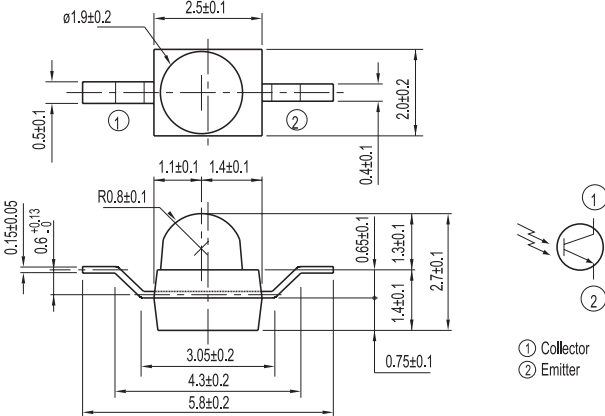
Part Number EL-xxxx	Chip		Rise & Fall Time (μs)	BV _{CEO} Min.(V)	V _{CE} (SAT)		I _C (ON)	
	Material	Lens Color			Ee=mW/cm ²	Max.(V)	Ee=mW/cm ²	Min.(mA)

1.3mm Axial Flat Phototransistor

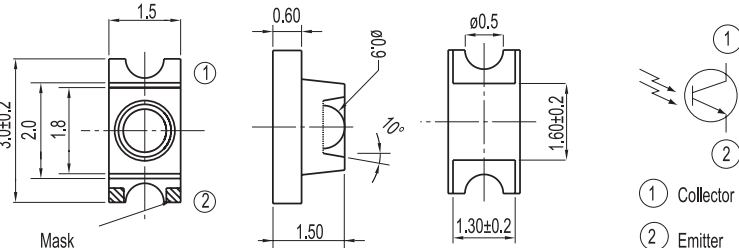
UNIT: mm

  RoHS								
PT28-21B/F8	Silicon	Black	15/15	30	1	0.4	1	0.1

1.9mm "z-Bend" Lead Phototransistor

  RoHS								
PT91-21B/F10	Silicon	Black	15/15	30	1	0.4	1	1.0

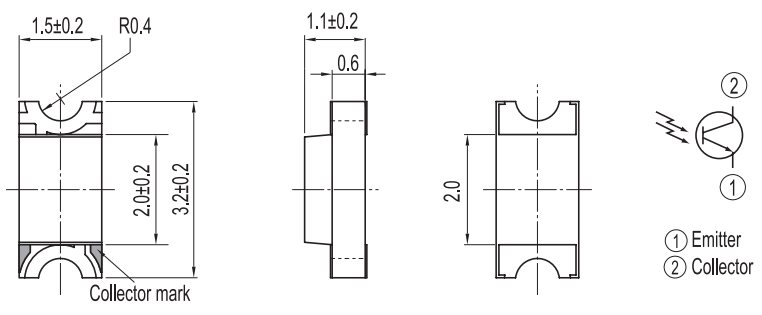
1206 Package Phototransistor With Inner Lens

  RoHS								
PT11-21C/L41/TR8	Silicon	Water Clear	15/15	30	1	0.4	1	0.3

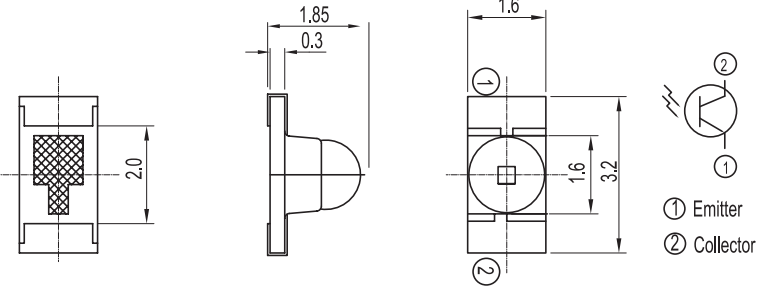
Part Number EL-xxxx	Chip		Rise & Fall Time (μs)	BV _{CEO} Min.(V)	V _{CE} (SAT)		I _C (ON)	
	Material	Lens Color			Ee=mW/cm ²	Max.(V)	Ee=mW/cm ²	Min.(mA)

1206 Package Chip Phototransistor

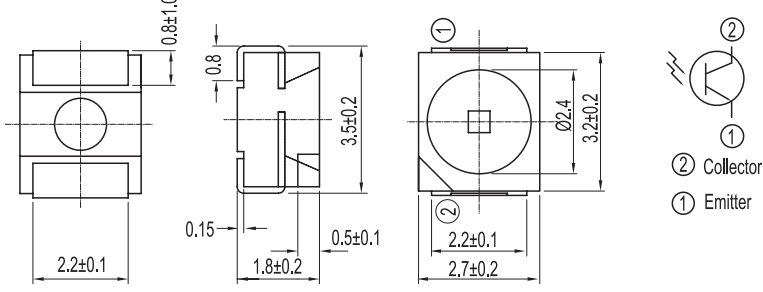
UNIT: mm

  RoHS								
PT15-21C	Silicon	Water Clear	15/15	30	1	0.4	1	0.1
PT15-21B	Silicon	Black	15/15	30	1	0.4	1	0.1

TOP Phototransistor

  RoHS								
PT26-21B/TR8	Silicon	Black	15/15	60	1	0.4	1	0.1

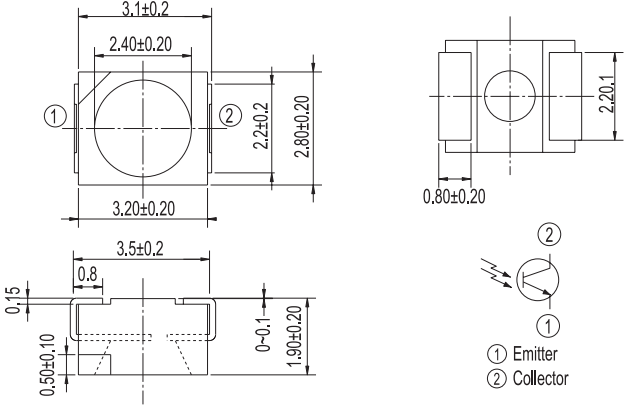
Top Phototransistor

  RoHS								
PT67-21B/C14	Silicon	Black	15/15	30	1	0.4	0.1	25 μA

Part Number EL-xxxx	Chip		Rise & Fall Time (μs)	BV _{CEO} Min.(V)	V _{CE} (SAT)		I _C (ON)	
	Material	Lens Color			Ee=mW/cm ²	Max.(V)	Ee=mW/cm ²	Min.(mA)

Top Phototransistor

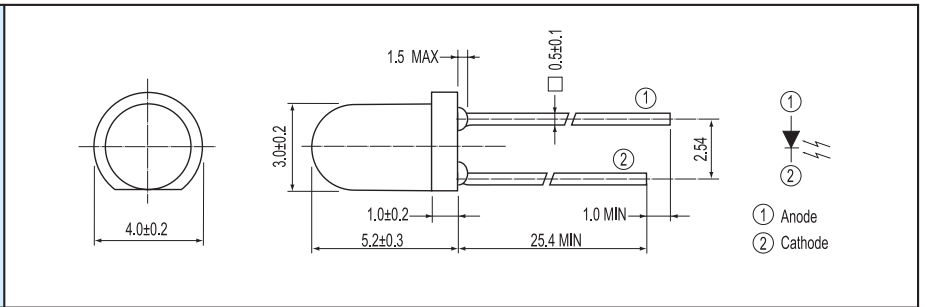
UNIT: mm

  RoHS		 ① Emitter ② Collector						
PT67-21C/L41	Silicon	Water Clear	15/15	30	1	0.4	1	0.3

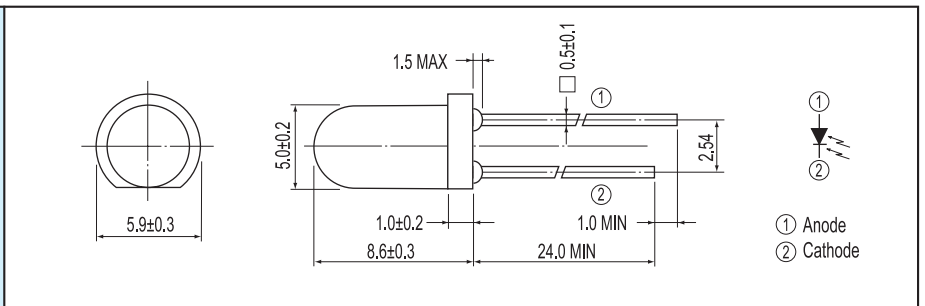
Part Number EL-xxxx	Chip		Rise & Fall Time (ns)	$V_{(BR)R}$ Min.(V)	I_L		I_o	
	Material	Lens Color			Ee=mW/cm ²	Typ.(μA)	Ee=mW/cm ²	Max.(nA)

3mm Silicon PIN Photodiode, T-1

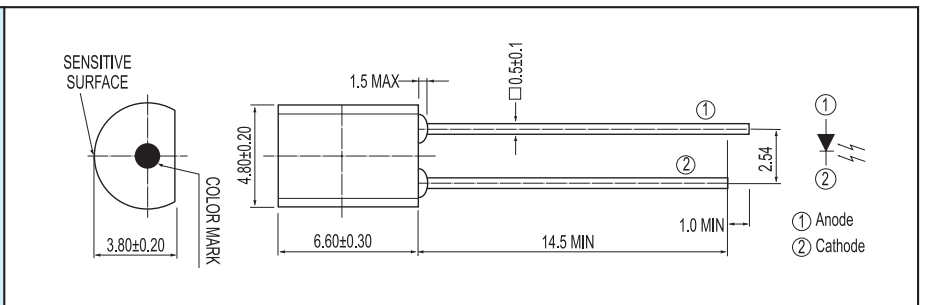
UNIT: mm

								
PD204-6C/L3	Silicon	Water Clear	10/10	32	1	5	0	10
PD204-6B	Silicon	Black	6/6	32	1	3	0	10

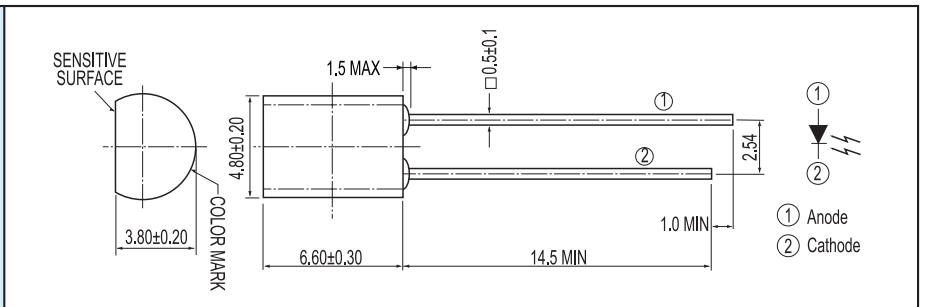
5mm Silicon PIN Photodiode, T-1 3/4

								
PD333-3C/H0/L2	Silicon	Water Clear	45/45	32	1	40	0	30

4.8mm Semi-Lens Silicon PIN Photodiode

								
PD438B	Silicon	Black	50/50	32	1	18	0	30
PD438B/L1	Silicon	Black	10/10	32	1	4.0	0	10

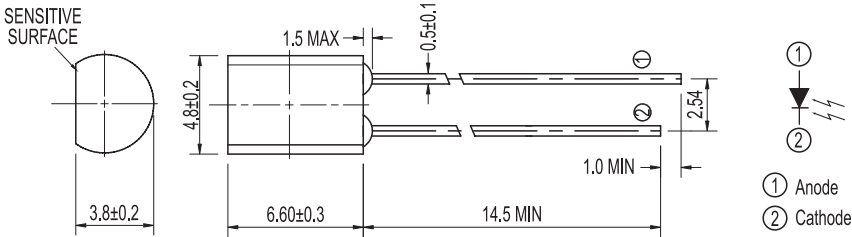
4.8mm Semi-Lens Silicon PIN Photodiode

								
PD438B/S46	Silicon	Black	50/50	32	1	18	0	30

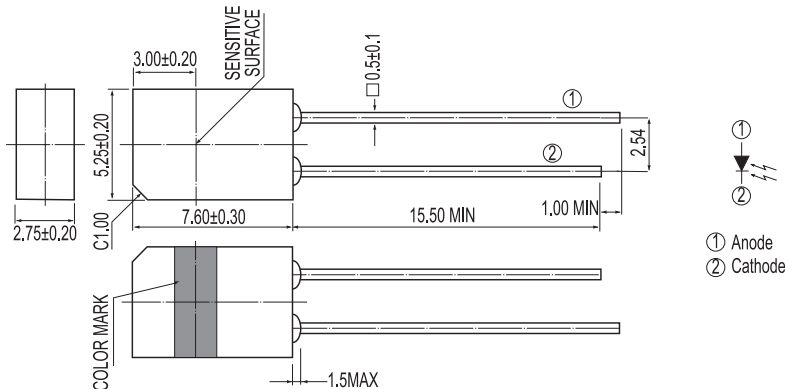
Part Number EL-xxxx	Chip		Rise & Fall Time (ns)	$V_{(BR)R}$ Min.(V)	I_L		I_D	
	Material	Lens Color			Ee=mW/cm ²	Typ.(μA)	Ee=mW/cm ²	Max.(nA)

4.8 Semi-Lens Silicon PIN Photodiode

UNIT: mm

  RoHS								
PD438C	Silicon	Water Clear	50/50	32	1	18	0	30

2.75x5.25mm Silicon PIN Photodiode

  RoHS									
PD638B	Silicon	Black	50/50	32	1	18	0	30	
PD638C	Silicon	Water Clear	50/50	32	1	18	0	30	

Part Number EL-xxxx	Chip		Rise & Fall Time (ns)	$V_{(BR)R}$ Min.(V)	I_L		I_D	
	Material	Lens Color			Ee=mW/cm ²	Typ.(μA)	Ee=mW/cm ²	Max.(nA)

1206 Package Silicon PIN Photodiode

UNIT: mm

PD15-22C	Silicon	Water Clear	10/10	32	1	6.5	0	10

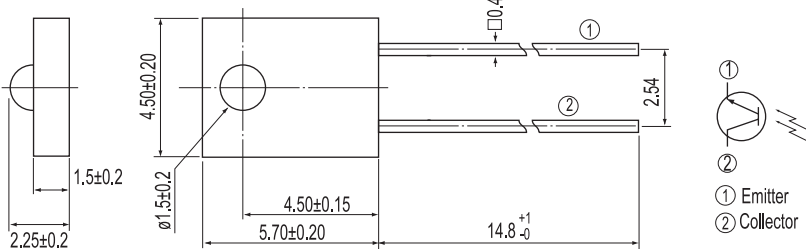
Top Silicon PIN Photodiode

PD93-21C	Silicon	Water Clear	6/6	32	1	1.2	0	10

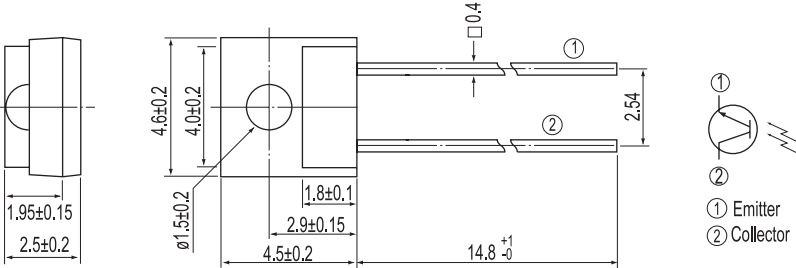
Part Number EL-xxxx	Chip		Rise & Fall Time (μs)	BV _{CEO} Min.(V)	V _{CE} (SAT)		I _C (ON)	
	Material	Lens Color			Ee=mW/cm ²	Max.(V)	Ee=mW/cm ²	Min.(mA)

1.5mm Side Looking Phototransistor

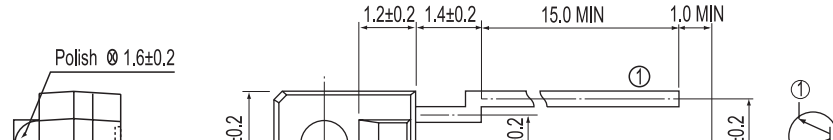
UNIT: mm

 Pb RoHS								
PT908-7C	Silicon	Water Clear	15/15	30	1	0.4	0.555	0.8

1.5mm Side Looking Phototransistor

  RoHS								
PT928-6C	Silicon	Water Clear	15/15	30	1	0.4	0.555	0.52
PT928-6B	Silicon	Black	15/15	30	1	0.4	0.555	0.52

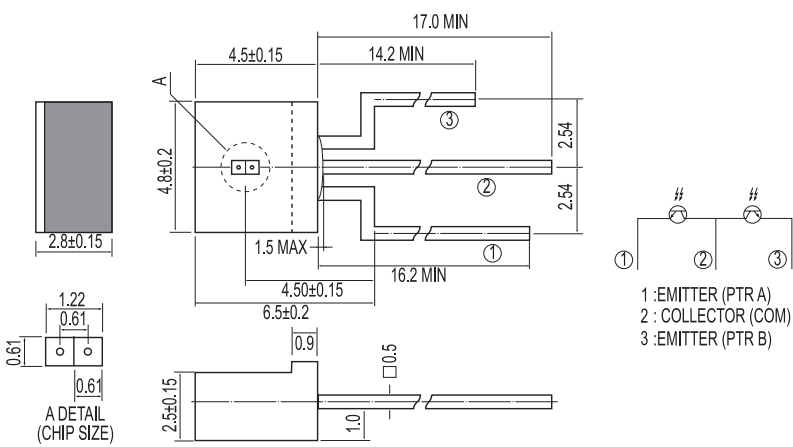
1.6mm Side Looking Phototransistor

  RoHS								
PT958-8C	Silicon	Water Clear	15/15	30	1	0.4	0.555	0.52

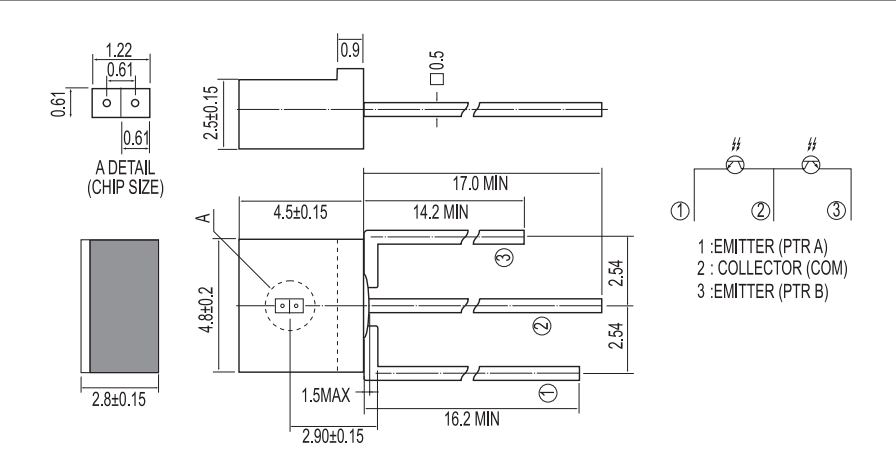
Part Number EL-xxxx	Chip		Rise & Fall Time (μs)	BV _{CEO} Min.(V)	V _{CE} (SAT)		I _C (ON)	
	Material	Lens Color			Ee=mW/cm ²	Max.(V)	Ee=mW/cm ²	Min.(mA)

Side Looking Dual Phototransistor

UNIT: mm

	 1:EMITTER (PTR A) 2:COLLECTOR (COM) 3:EMITTER (PTR B)							
PT5529B/L2	Silicon	Black	15/15	30	1	0.4	0.555	0.129

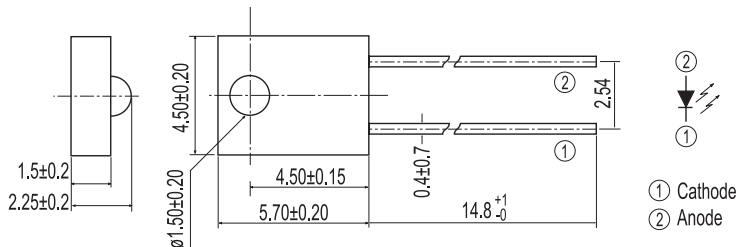
Side Looking Dual Phototransistor

  Pb RoHS								
PT5529B/L2/S3	Silicon	Black	15/15	30	1	0.4	0.555	0.129

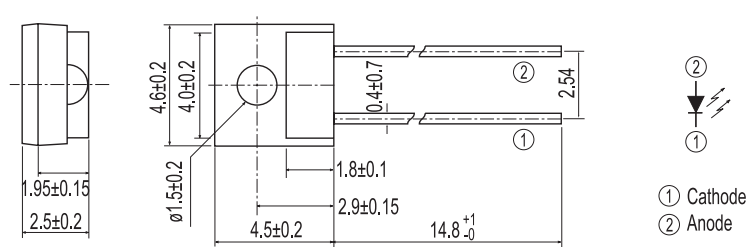
Part Number EL-xxxx	Chip	Lens Color	V _F (V) at I _F = 20mA		Light Power		Viewing Angle 2θ 1/2
	Wavelength (nm)		Typ.	Max.	at I _F = mA	Min.(μA)	

1.5mm Side Looking Infrared Emitting Diode

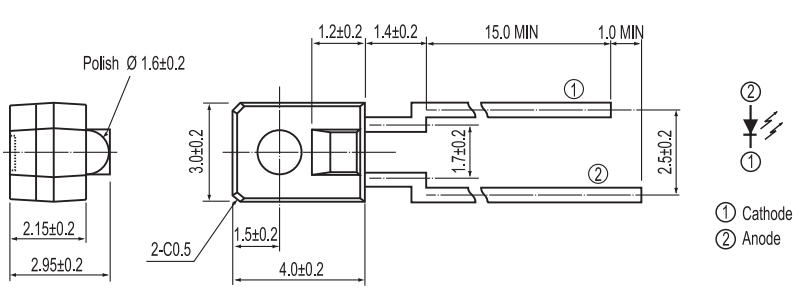
UNIT: mm

								
IR908-7C	940	Water Clear	1.2	1.6	4	140	60	

1.5mm Side Looking Infrared Emitting Diode

  RoHS								
IR928-6C	940	Water Clear	1.2	1.6	4	140	40	

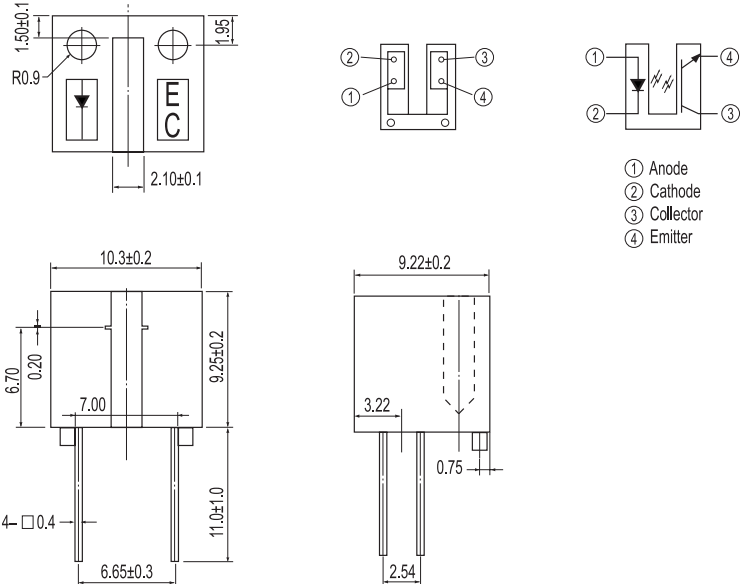
1.6mm Side Looking Infrared Emitting Diode

  RoHS							
IR958-8P	940	Water Clear	1.2	1.5	4	300	22

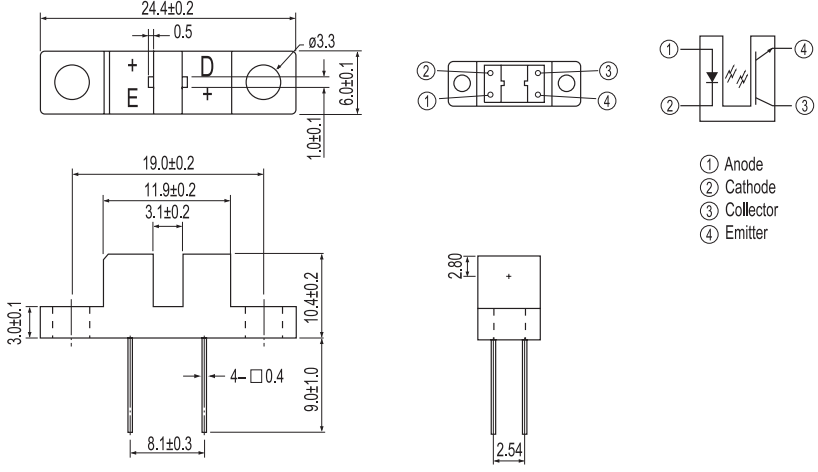
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

						
		IR: IR 928-6C PT: PT928-6C				
ITR-8010	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max. 10	Max. 100	Min. 0.9	Max. 0.4	Typ. 20

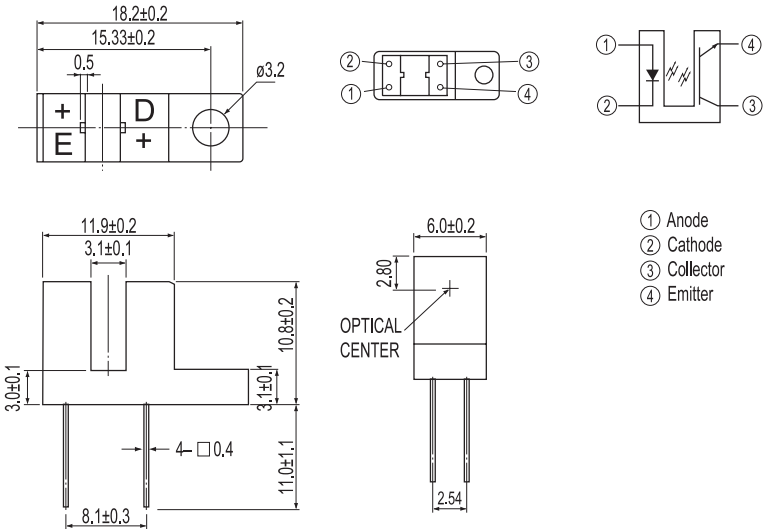
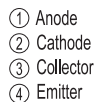
Opto Interrupter

						
		IR: IR928-6C PT: PT928-6C				
ITR-8102	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max. 10	Max. 100	Min. 0.9	Max. 0.4	Typ. 20

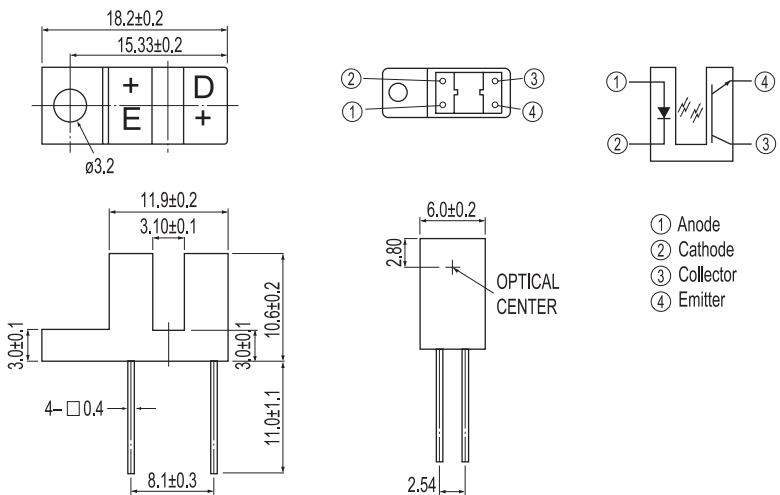
Part Number EL-xxxx	V _F (V)	I _R (μA)	I _{CEO} (nA)	I _C (ON) (mA)	V _{CE} (SAT) (V)	T _R (μ sec)
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Opto Interrupter

UNIT: mm

						
 IR: IR 908-7C PT: PT908-7C						
ITR-8103	I _F =20mA	V _R =5V	V _{CE} =10V	I _F =10mA, V _{CE} =5V	I _C =2mA, E _e =1mw/cm ²	V _{CE} =5V, I _C =1mA, R _L =1kΩ
	Max. 1.6	Max.10	Max.100	Min. 0.9	Max. 0.4	Typ. 20

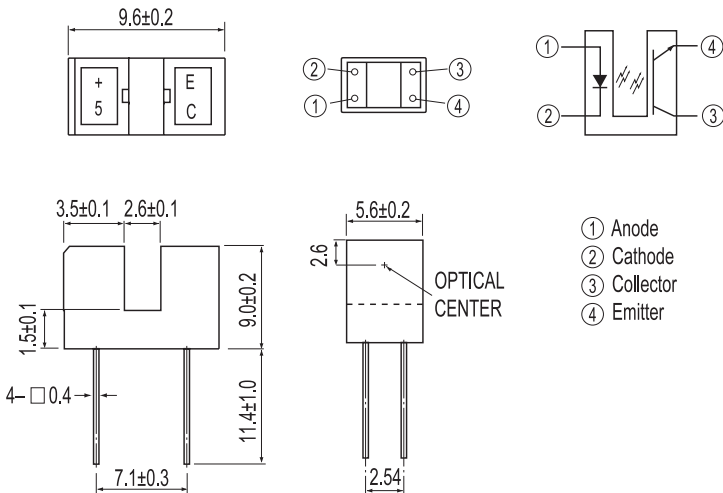
Opto Interrupter

						
 IR: IR 908-7C PT: PT908-7C						
ITR-8104	I _F =20mA	V _R =5V	V _{CE} =10V	I _F =10mA, V _{CE} =5V	I _C =2mA, E _e =1mw/cm ²	V _{CE} =5V, I _C =1mA, R _L =1kΩ
	Max. 1.6	Max.10	Max.100	Min. 0.9	Max. 0.4	Typ. 20

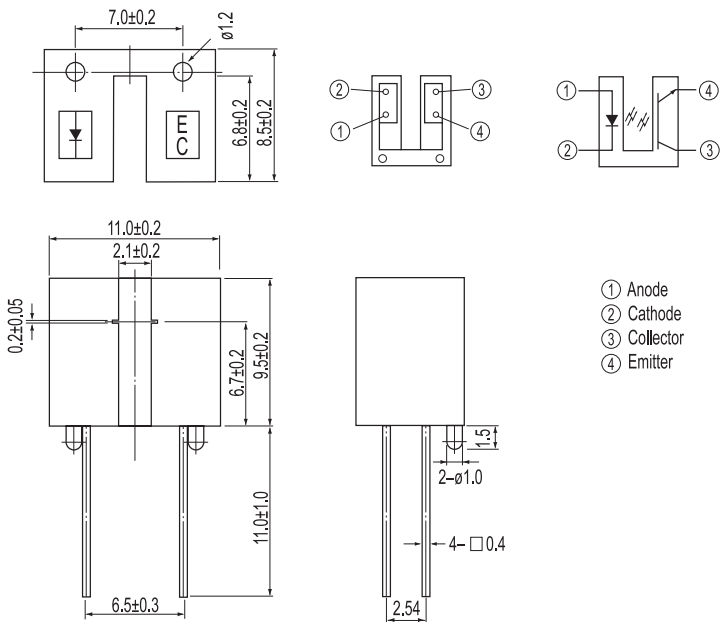
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

		 ① Anode ② Cathode ③ Collector ④ Emitter				
ITR-8105	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=10mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max. 10	Max. 100	Min. 1	Max. 0.4	Typ. 20

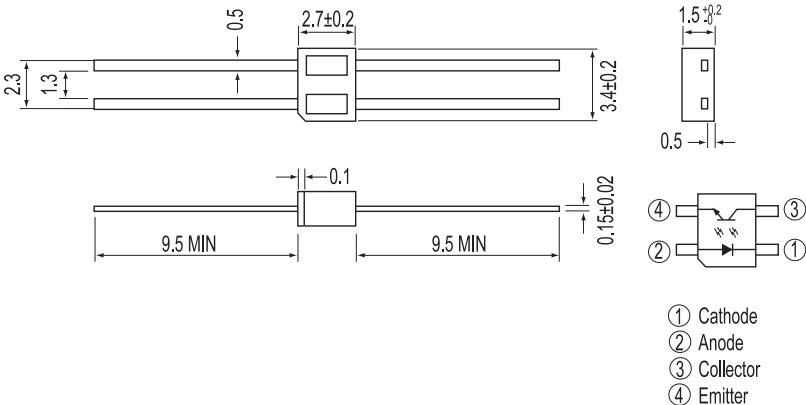
Opto Interrupter

		 ① Anode ② Cathode ③ Collector ④ Emitter				
ITR-8117	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max. 10	Max. 100	Min. 0.5	Max. 0.4	Typ. 20

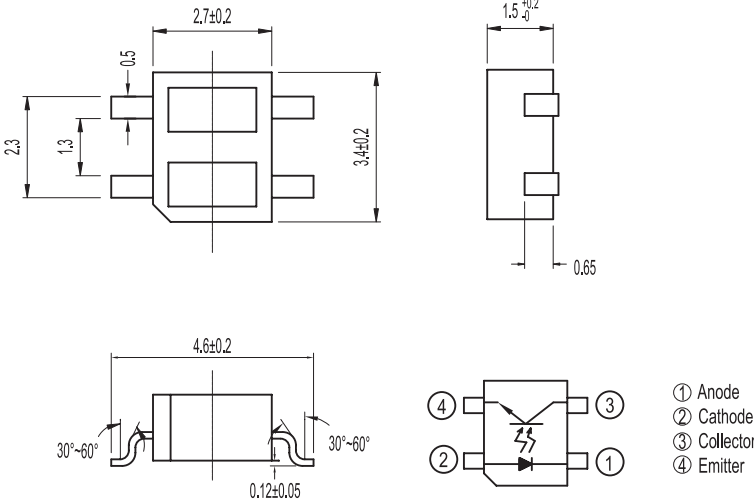
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	V_{CE} (SAT) (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

						
ITR-8307	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max. 10	Max. 100	Min. 0.1	Max. 0.4	Typ. 20

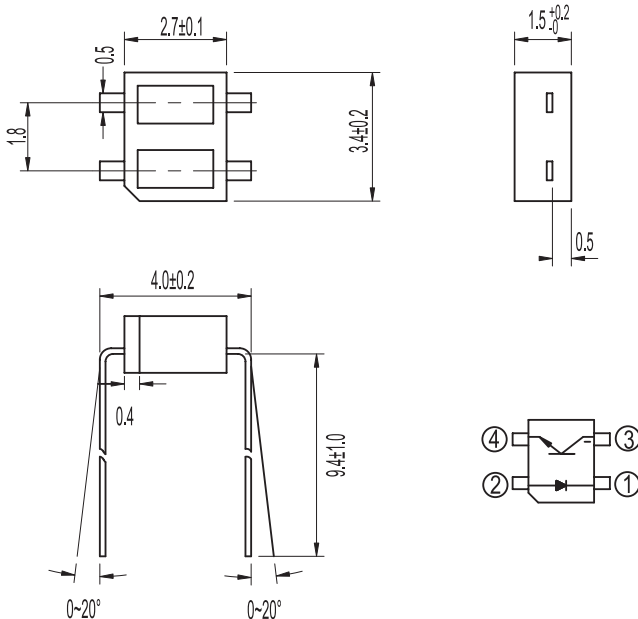
Opto Interrupter

						
ITR-8307/TR8	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max. 10	Max. 100	Min. 0.1	Max. 0.4	Typ. 20

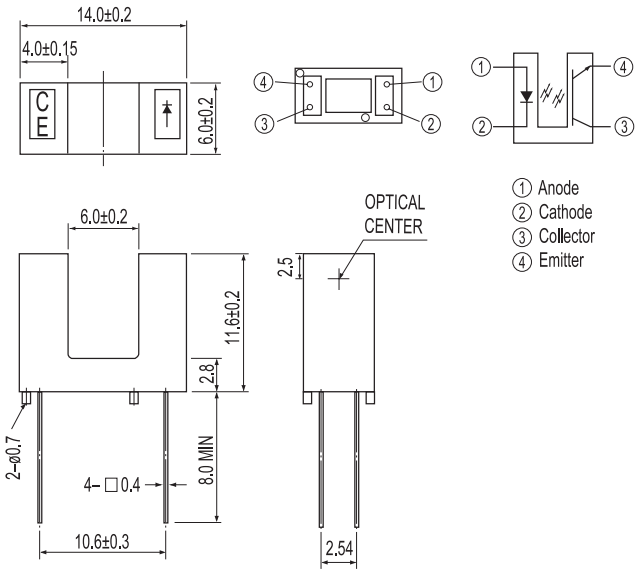
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

						
  IR: IR928-6C PT: PT928-6C						
ITR-8307/F43	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max.10	Max.100	Min. 0.1	Max. 0.4	Typ. 20

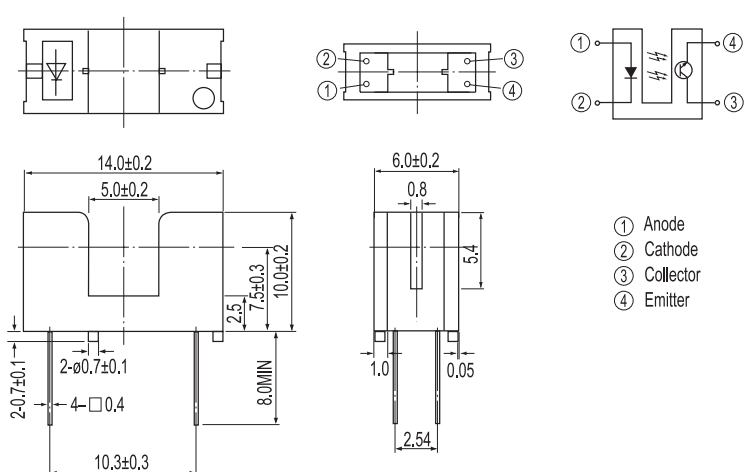
Opto Interrupter

						
  IR: IR928-6C PT: PT928-6C						
ITR-8402-A	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 15

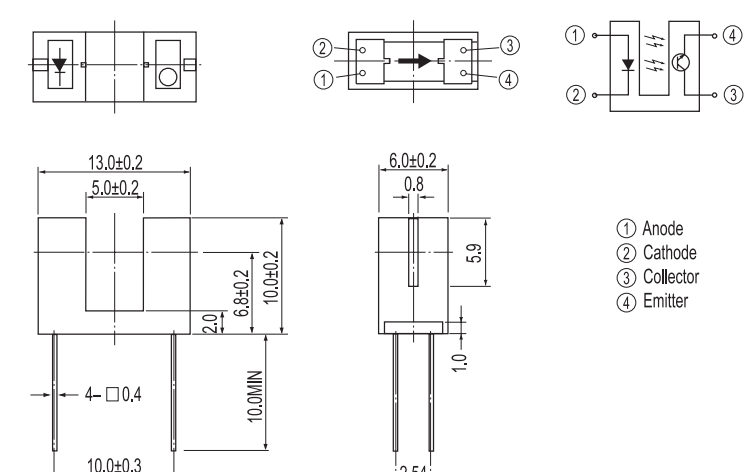
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	V_{CE} (SAT) (V)	T_R (μ sec)
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Opto Interrupter

UNIT: mm

		 ① Anode ② Cathode ③ Collector ④ Emitter				
 RoHS IR: IR928-6C PT: PT928-6C						
ITR-9606	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 15

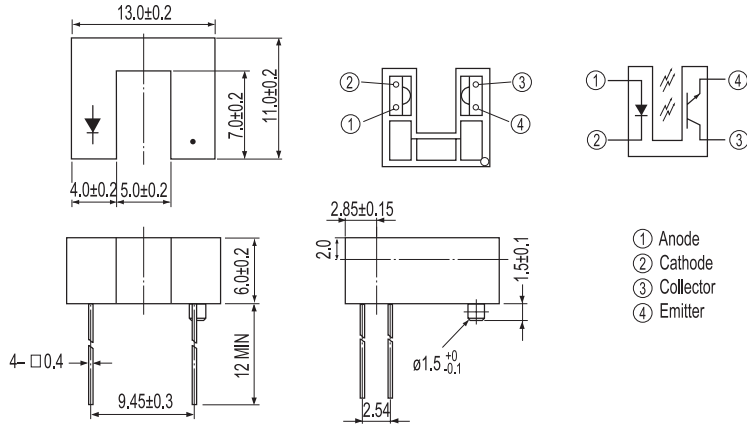
Opto Interrupter

		 ① Anode ② Cathode ③ Collector ④ Emitter				
 RoHS IR: IR928-6C PT: PT928-6C						
ITR-9608	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 15

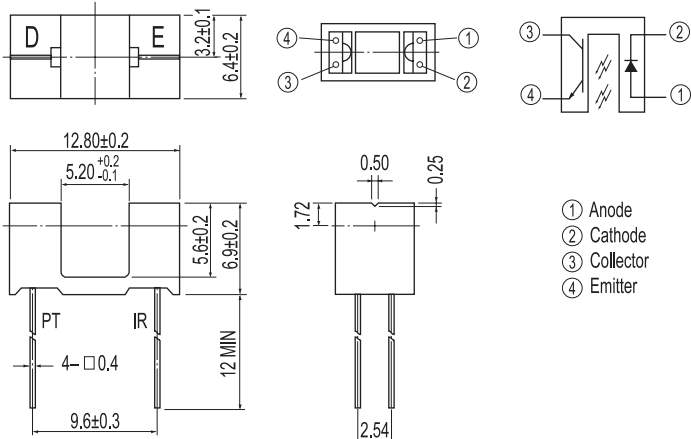
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

						
 RoHS IR: IR928-6C PT: PT928-6C						
ITR-9702	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 20

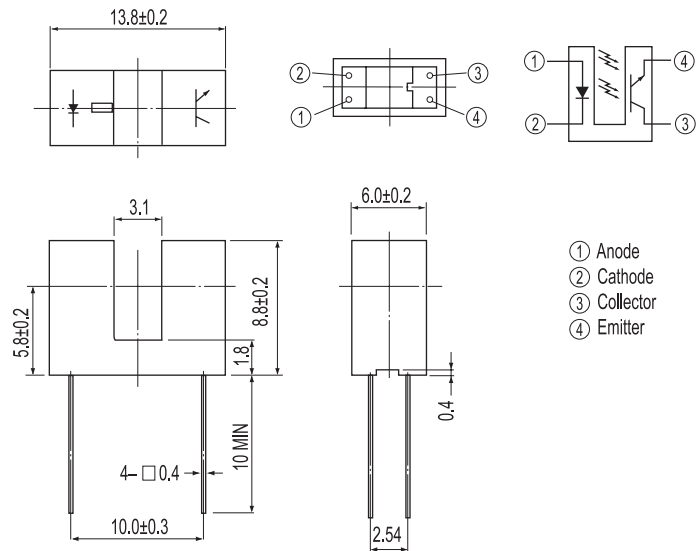
Opto Interrupter

						
 RoHS IR: IR908-7C PT: PT908-7C						
ITR-9707	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 20

Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	V_{CE} (SAT) (V)	T_R (μ sec)
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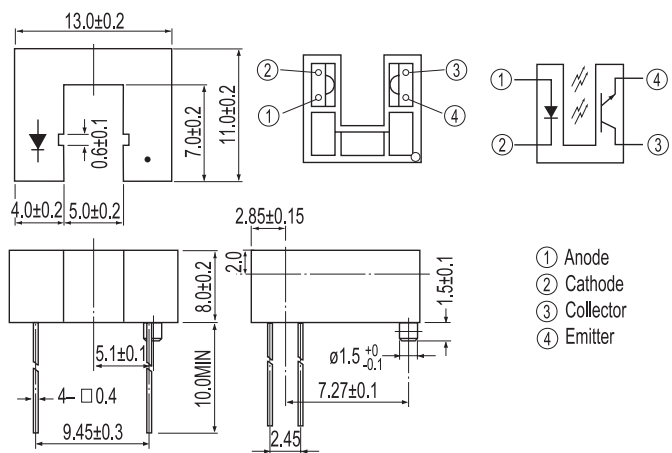
Opto Interrupter

 IR: IR928-6C PT: PT928-6C						
ITR-9803	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 20



Opto Interrupter

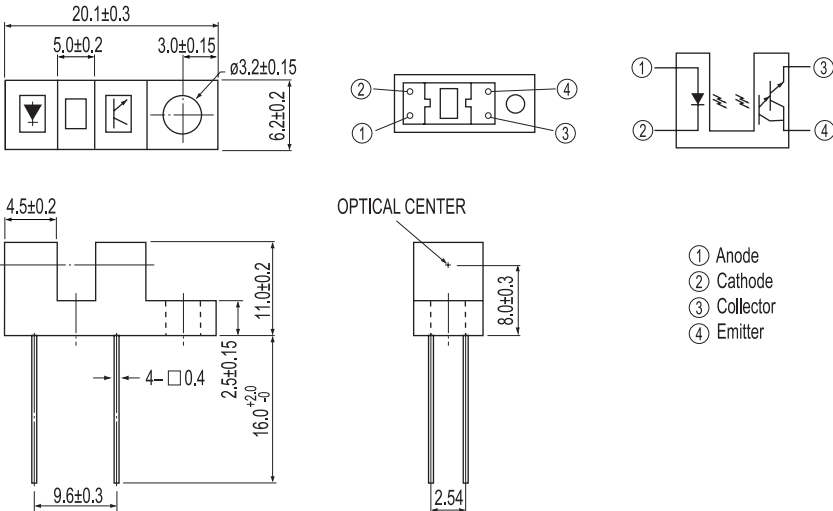
 IR: IR928-6C PT: PT928-6C						
ITR-9809/T	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max.10	Max.100	Min. 1.0	Max. 0.4	Typ. 20



Part Number EL-xxxx	V _F (V)	I _R (μA)	I _{CEO} (nA)	I _{C (ON)} (mA)	V _{CE (SAT)} (V)	T _R (μ sec)
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Opto Interrupter

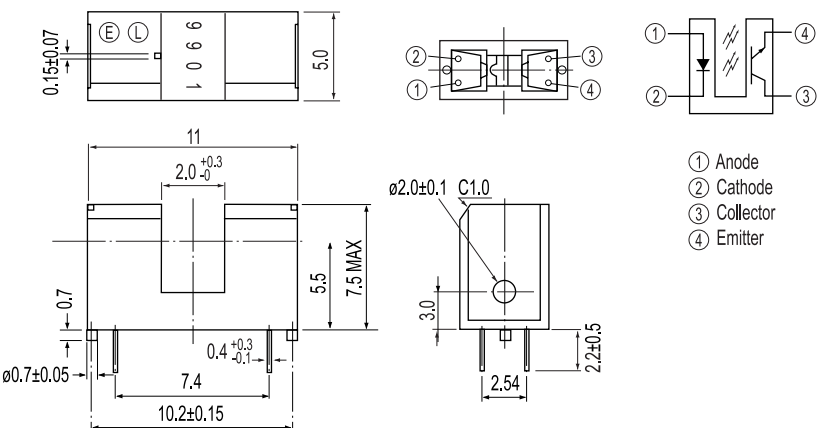
UNIT: mm

		 ① Anode ② Cathode ③ Collector ④ Emitter				
ITR-9813	I _F =10mA	V _R =5V	V _{CE} =10V	I _F =10mA, V _{CE} =2V	I _C =15mA, E _e =1mw/cm ²	V _{CE} =5V, I _C =1mA, R _L =1kΩ
	Max. 1.6	Max.10	Max.1000	Min. 4.0	Max. 1.0	Typ. 50

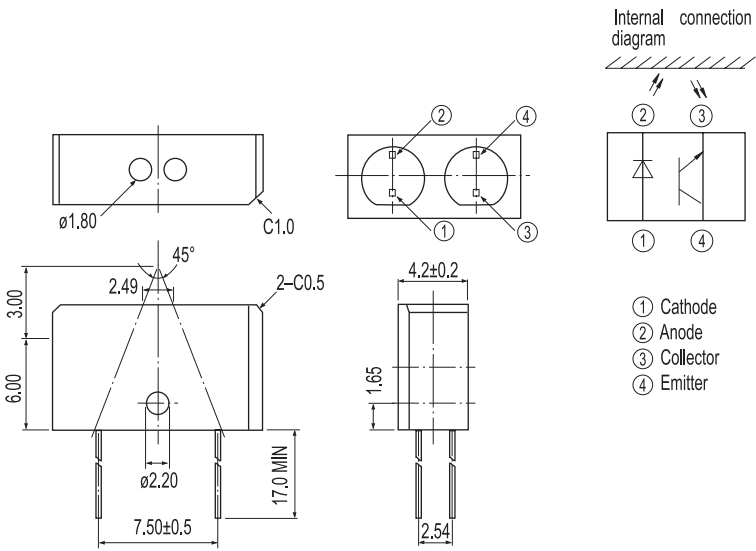
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

						
 RoHS IR: IR958-8C PT: PT958-8C						
ITR-9901	$I_F=20mA$	$V_R=3V$	$V_{CE}=20V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=4.4V, I_C=13mA, R_L=47k\Omega$
	Max. 1.5	Max. 10	Max. 100	Min. 0.4	Max. 0.4	Typ. 80

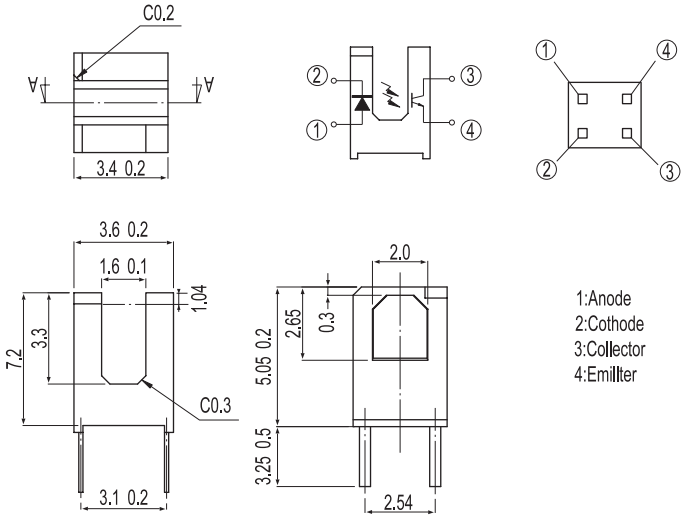
Opto Interrupter

						
 RoHS IR: IR1254-R8 PT: PT1254-6B						
ITR-9904	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max. 10	Max. 100	Min. 0.4	Max. 0.4	Typ. 15

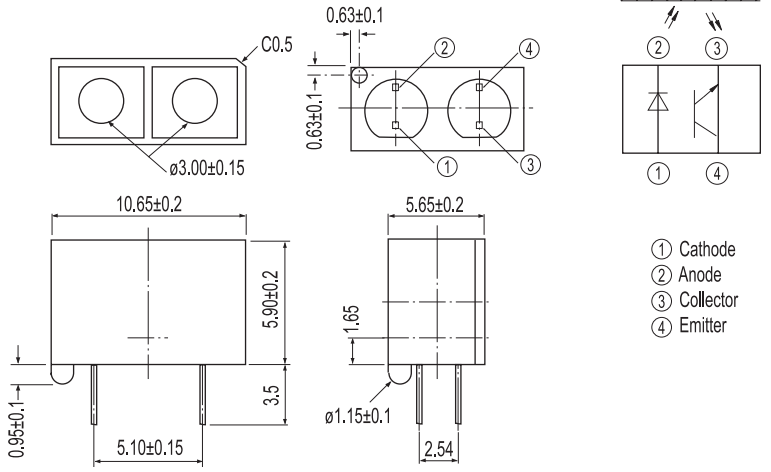
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

		 1:Anode 2:Cothode 3:Collector 4:Emitter				
 IR: IR1918 PT: PT1918						
ITR-9907	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=5mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max10	Max100	Min0.05	Max0.4	15

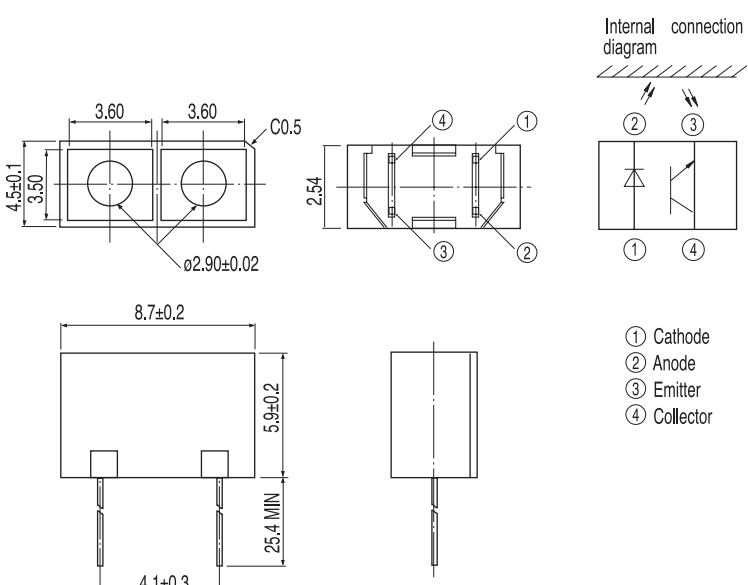
Opto Interrupter

		 Internal connection diagram ① Cathode ② Anode ③ Collector ④ Emitter				
 IR: IR204/L10 PT: PT204-6B						
ITR-9908	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=40mA, V_{CE}=3V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1K\Omega$
	Max. 1.5	Max.10	Max.100	Min. 0.5	Max. 0.4	Typ. 25

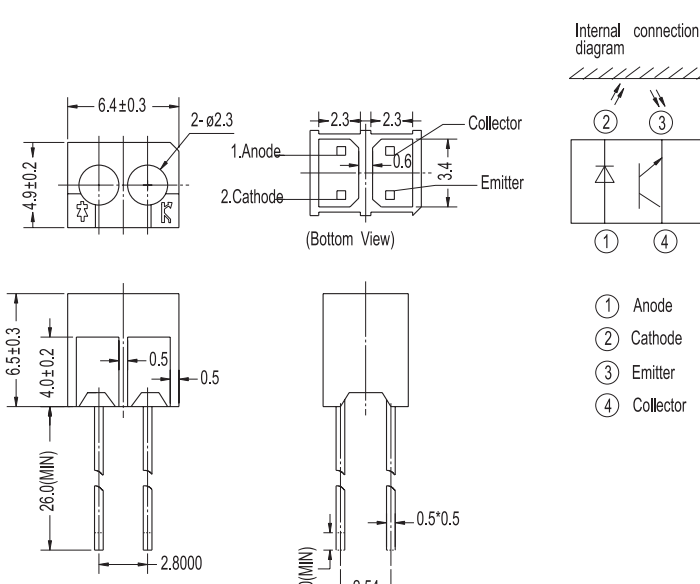
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	V_{CE} (SAT) (V)	T_R (μsec)
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Opto Interrupter(Developing)

UNIT: mm

 Pb RoHS IR: IR264 PT: PT264-6B		 ① Cathode ② Anode ③ Emitter ④ Collector				
ITR-9909	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max.10	Max.100	Min. 0.2	Max. 0.4	Typ. 15

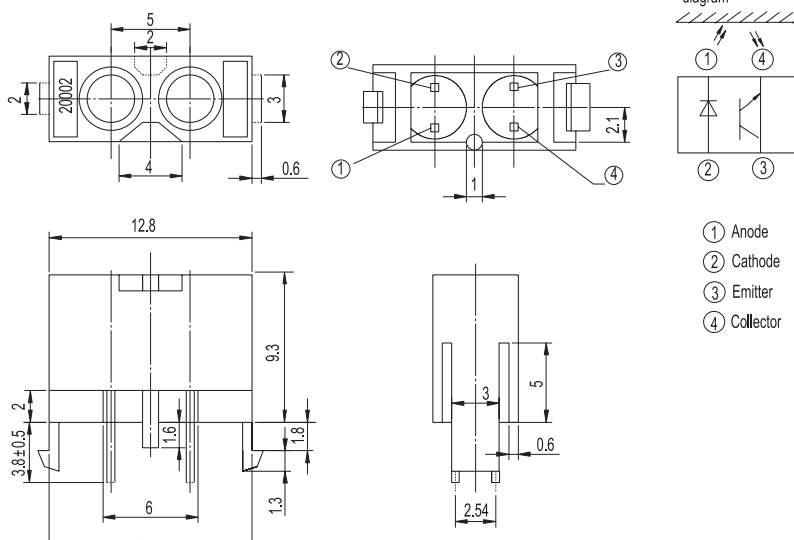
Opto Interrupter

 Pb RoHS IR: IR2424-3C PT: PT2424-6B		 ① Anode ② Cathode ③ Emitter ④ Collector				
ITR-20001/T	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max10	Max100	Min0.2	Max0.4	25

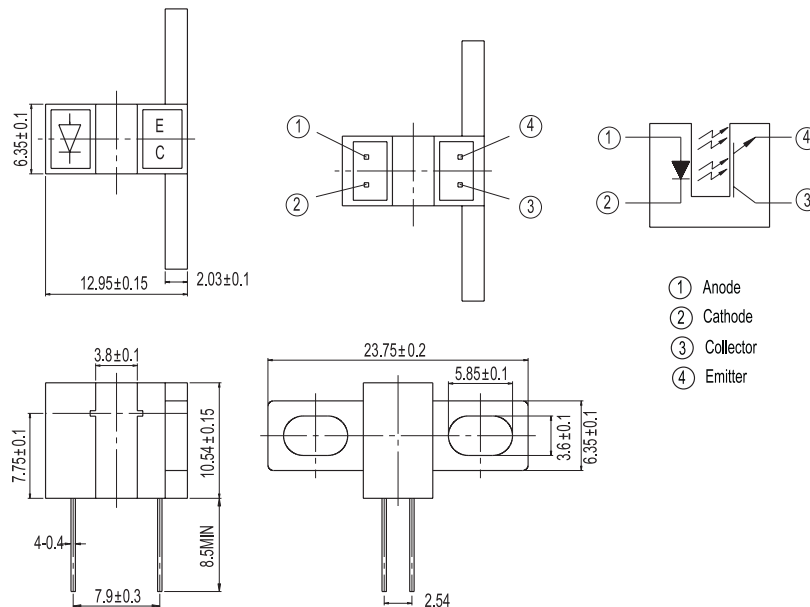
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	$V_{CE(SAT)}$ (V)	T_R (μsec)
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Opto Interrupter

UNIT: mm

		 Internal connection diagram ① Anode ② Cathode ③ Emitter ④ Collector				
Pb RoHS IR: IR4204-10 PT: PT4204-6B/H26						
ITR-20002	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max10	Max100	Min0.04	Max0.4	20

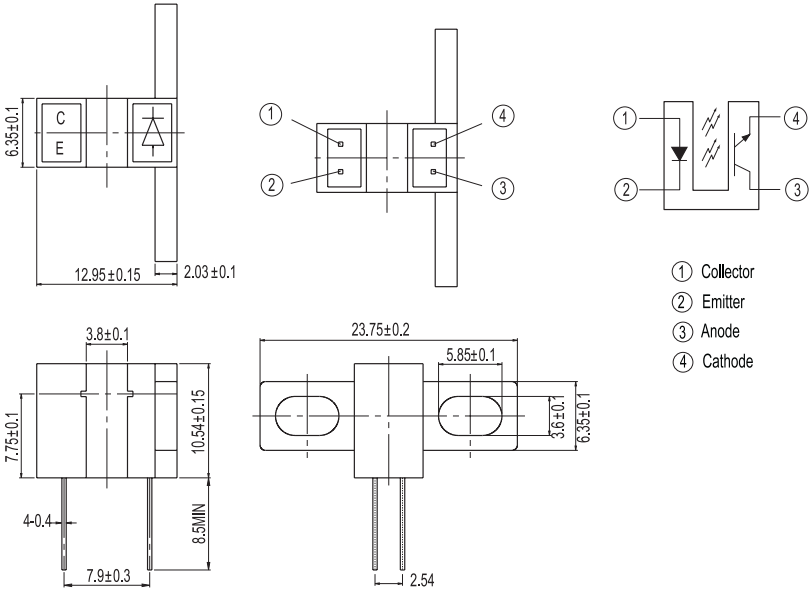
Opto Interrupter

		 ① Anode ② Cathode ③ Collector ④ Emitter				
Pb RoHS IR: IR928-6C PT: PT928-6C						
ITR-20005	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max10	Max100	Min0.5	Max0.4	20

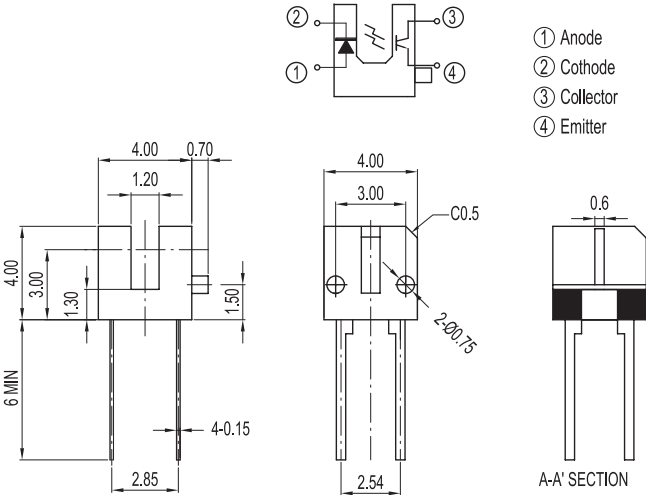
Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	V_{CE} (SAT) (V)	T_R (μ sec)
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Opto Interrupter

UNIT: mm

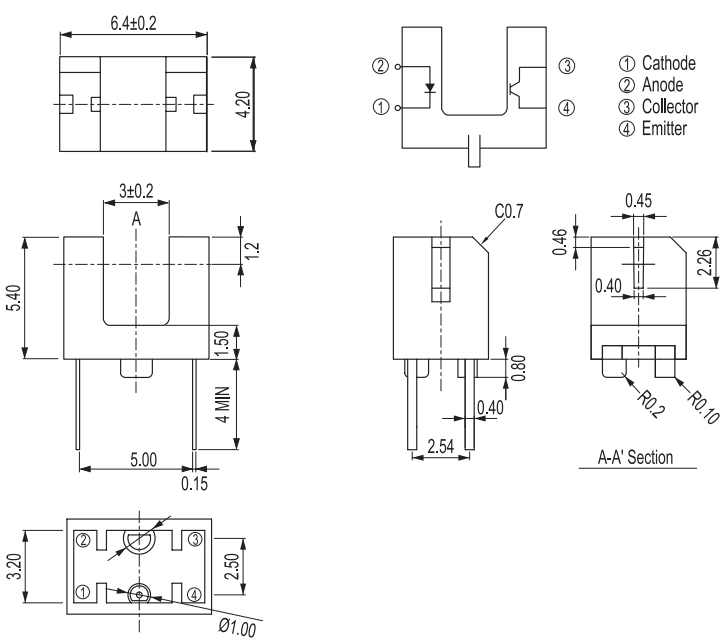
						
 RoHS IR: IR928-6C PT: PT928-6C						
ITR-20006	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max10	Max100	Min0.5	Max0.4	20

Opto Interrupter

						
 RoHS						
ITR-20402	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.5	Max.10	Max.100	Min.0.3	Max.0.4	Typ.15

Part Number EL-xxxx	V_F (V)	I_R (μA)	I_{CEO} (nA)	I_C (ON) (mA)	V_{CE} (SAT) (V)	T_R (μ sec)
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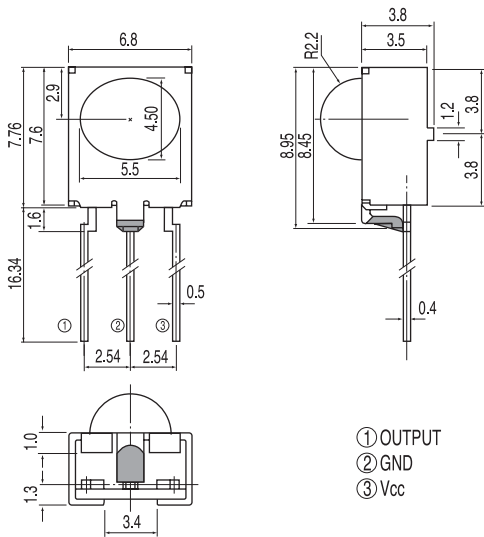
Opto Interrupter

   IR: IR2424-3C PT: PT2424-6B						
ITR-20403	$I_F=20mA$	$V_R=5V$	$V_{CE}=10V$	$I_F=20mA, V_{CE}=5V$	$I_C=2mA, E_e=1mw/cm^2$	$V_{CE}=5V, I_C=1mA, R_L=1k\Omega$
	Max. 1.6	Max.10	Max.100	Min.0.2	Max.0.4	Typ.15

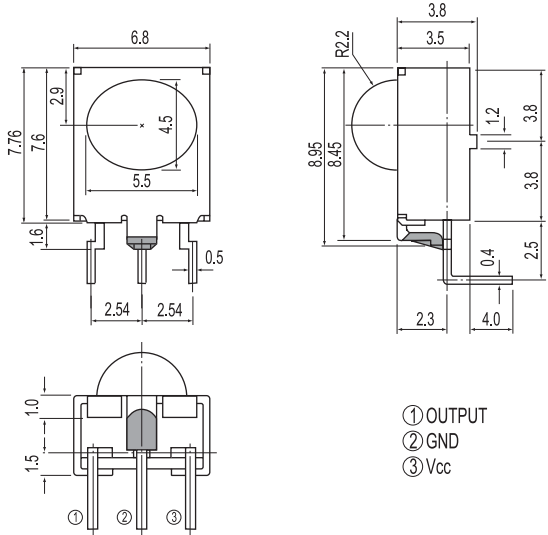
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Max.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

UNIT: mm

					
IRM-8601S	38	5	3	8	± 45
IRM-8601S-1	32.75	5	3	8	± 45
IRM-8601S-2	36	5	3	8	± 45
IRM-8601S-5	56.8	5	3	8	± 45

Infrared Remote Control Receiver Module

					
IRM-8602S	38	5	3	8	± 45
IRM-8602S-1	32.75	5	3	8	± 45
IRM-8602S-2	36	5	3	8	± 45
IRM-8602S-5	56.8	5	3	8	± 45

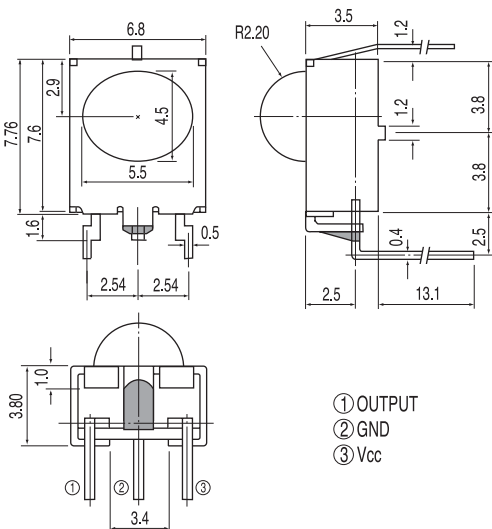
The association with shield of IRM Dip type product which conformed with RoHS spec. was had "P" number.

Example: IRM-860IS-P

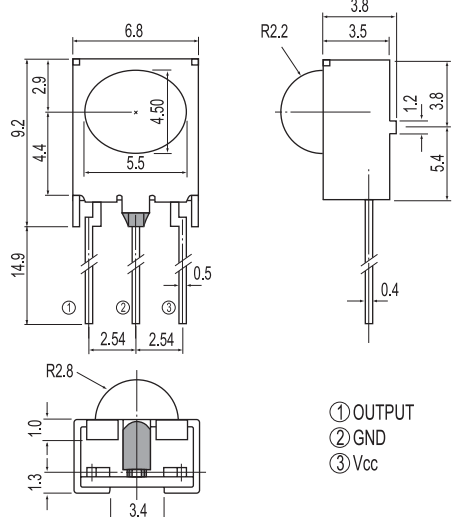
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Max.(mA)	Transmission Distance Min.(m)	Angle $\theta h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

UNIT: mm

					
IRM-8607S	38	5	3	8	± 45
IRM-8607S-1	32.75	5	3	8	± 45
IRM-8607S-2	36	5	3	8	± 45
IRM-8607S-5	56.8	5	3	8	± 45

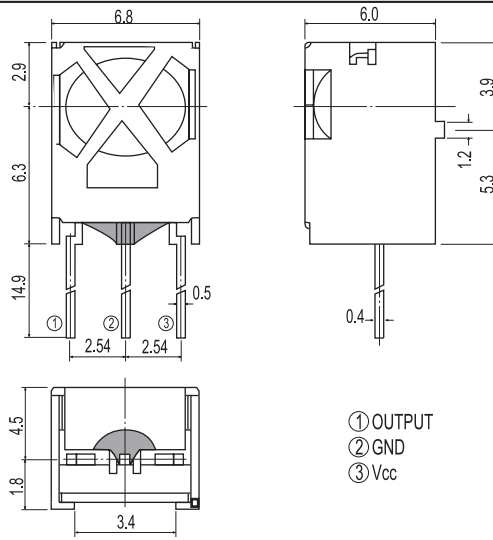
Infrared Remote Control Receiver Module

					
IRM-8608S	38	5	3	8	± 45
IRM-8608S-1	32.75	5	3	8	± 45
IRM-8608S-2	36	5	3	8	± 45
IRM-8608S-5	56.8	5	3	8	± 45

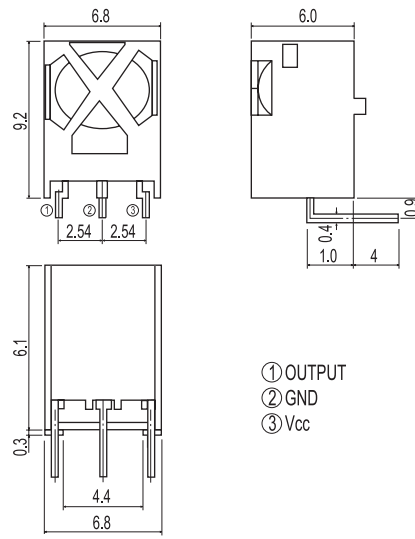
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Max.(mA)	Transmission Distance Min.(m)	Angle $\theta h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

UNIT: mm

					
IRM-8751	38	5	3	8	± 45
IRM-8751-1	32.75	5	3	8	± 45
IRM-8751-2	36	5	3	8	± 45
IRM-8751-5	56.8	5	3	8	± 45

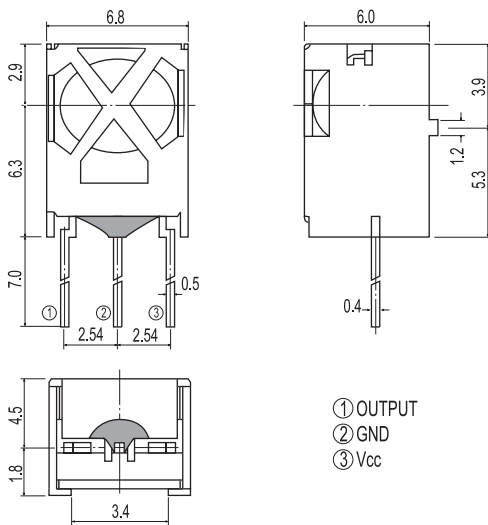
Infrared Remote Control Receiver Module

					
IRM-8752	38	5	3	8	± 45
IRM-8752-1	32.75	5	3	8	± 45
IRM-8752-2	36	5	3	8	± 45
IRM-8752-5	56.8	5	3	8	± 45

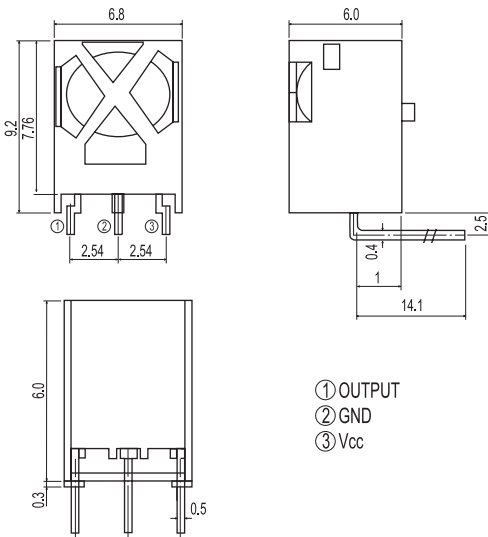
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Max.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

UNIT: mm

		 ① OUTPUT ② GND ③ Vcc			
IRM-8753	38	5	3	8	± 45
IRM-8753-1	32.75	3	3	8	± 45
IRM-8753-2	36	5	3	8	± 45
IRM-8753-5	56.8	3	3	8	± 45

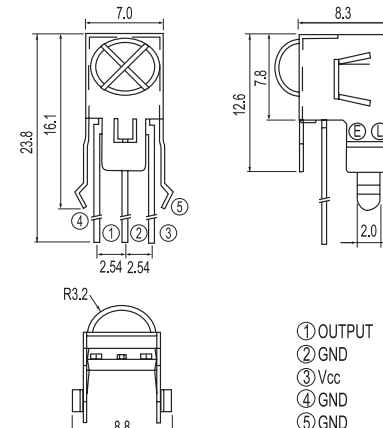
Infrared Remote Control Receiver Module

		 ① OUTPUT ② GND ③ Vcc			
IRM-8755	38	5	3	8	± 45
IRM-8755-1	32.75	3	3	8	± 45
IRM-8755-2	36	5	3	8	± 45
IRM-8755-5	56.8	3	3	8	± 45

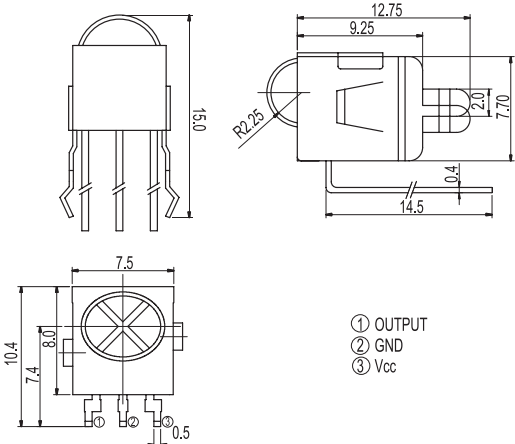
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Max.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

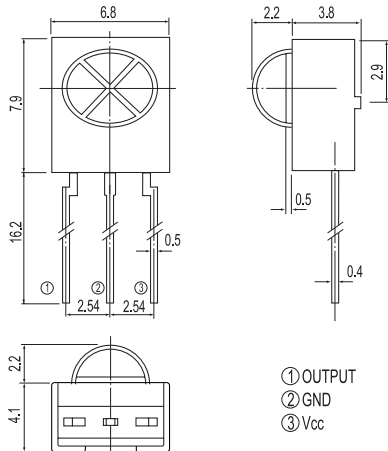
UNIT: mm

					
IRM-8861S	38	5	3	8	±45

Infrared Remote Control Receiver Module

	 ① OUTPUT ② GND ③ Vcc				
IRM-8871S	38	5	3	8	±45

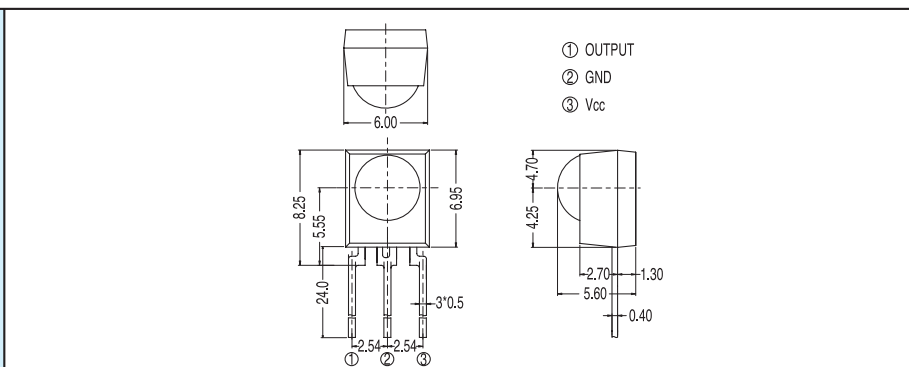
Infrared Remote Control Receiver Module

						
IRM-8881S	38	5	3	8	±45	

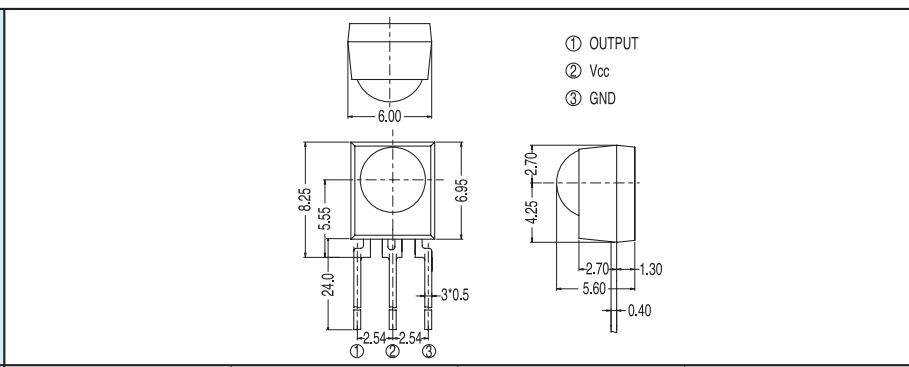
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Typ.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

UNIT: mm

  RoHS		 ① OUTPUT ② GND ③ Vcc			
IRM-26XXA	xx=33,36,38,40,56	5	1.3	12	± 45
IRM-26XXV	xx=33,36,38,40,56	5	1.3	20	± 45
IRM-36XXA	xx=33,36,38,40,56	3	1.3	12	± 45
IRM-36XXV	xx=33,36,38,40,56	3	1.3	20	± 45

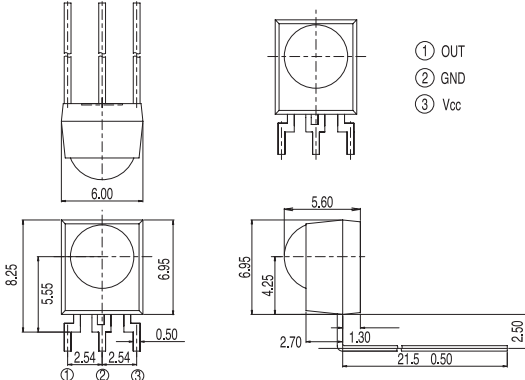
Infrared Remote Control Receiver Module

  RoHS		 ① OUTPUT ② Vcc ③ GND			
IRM-27XXA	xx=33,36,38,40,56	5	1.3	12	± 45
IRM-27XXV	xx=33,36,38,40,56	5	1.3	20	± 45
IRM-37XXA	xx=33,36,38,40,56	3	1.3	12	± 45
IRM-37XXV	xx=33,36,38,40,56	3	1.3	20	± 45

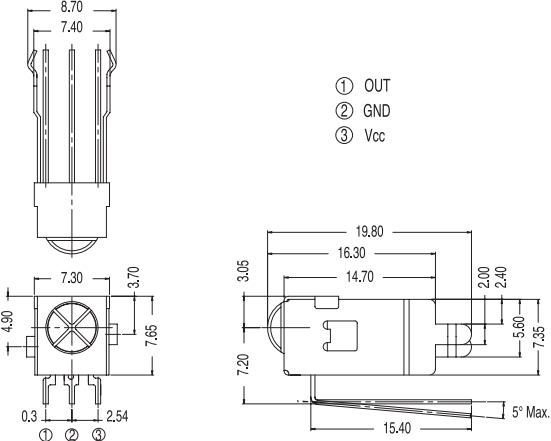
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Typ.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

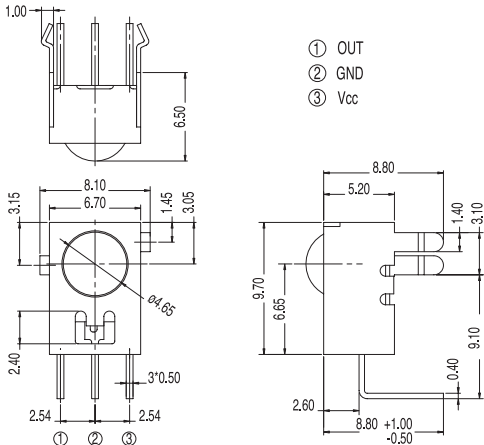
UNIT: mm

  RoHS	 ① OUT ② GND ③ Vcc				
IRM-2638VF4	38	5	1.3	20	±45

Infrared Remote Control Receiver Module

					
IRM-2638VS5F4	38	5	1.3	8	±45

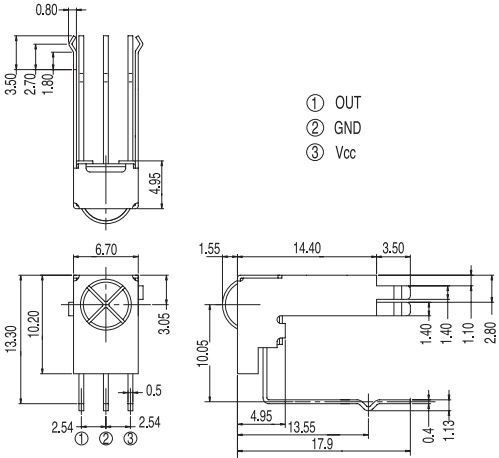
Infrared Remote Control Receiver Module

					
IRM-2638VS6F3	38	5	1.3	8	±45

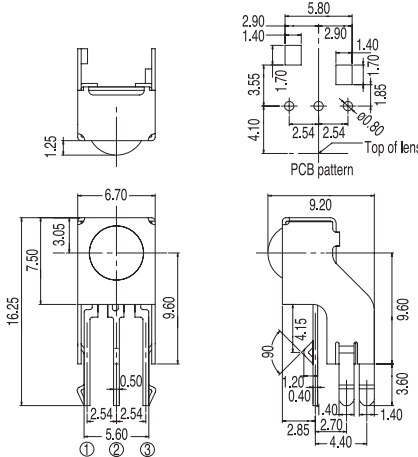
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Typ.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module

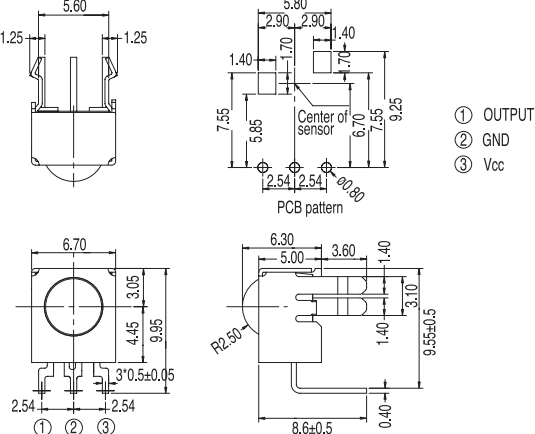
UNIT: mm

					
IRM-2638VS8F5	38	5	1.3	8	±45

Infrared Remote Control Receiver Module

	 ① OUTPUT ② GND ③ Vcc				
IRM-2638VS18	38	5	1.3	8	±45

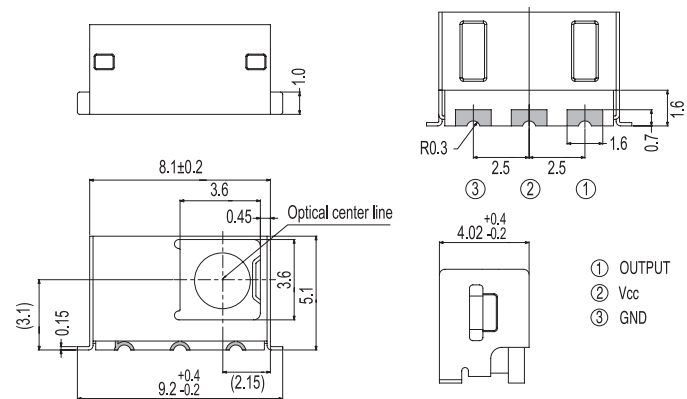
Infrared Remote Control Receiver Module

					
IRM-2638VS17	38	5	1.3	8	±45

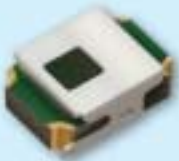
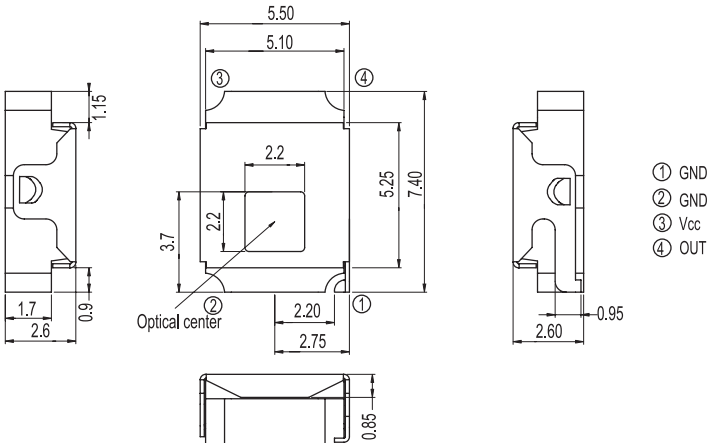
Part Number EL-xxxx	B.P.F.	Supply Voltage Typ.(V)	Supply Current Typ.(mA)	Transmission Distance Min.(m)	Angle $\theta_h(^{\circ})$
	Center Frequency (KHz)				

Infrared Remote Control Receiver Module (SMD Type)

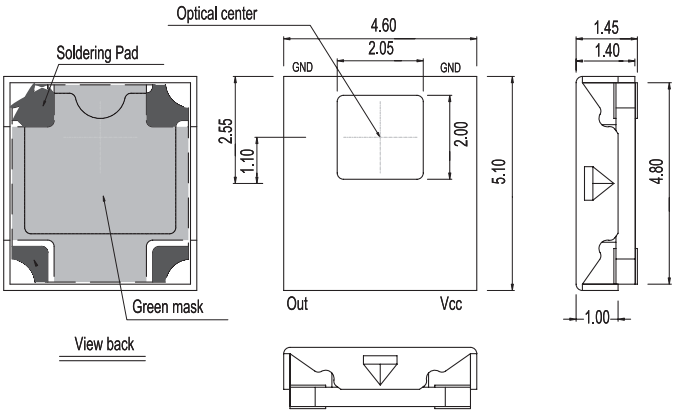
UNIT: mm

  RoHS	 ① OUTPUT ② Vcc ③ GND				
IRM-V0XX	x x=36,38,40	2.7~5.5	1.2	10	±45

Infrared Remote Control Receiver Module (SMD Type)

					
IRM-H1XX	x x=36,38,40	2.7~5.5	1.2	8	±45

Infrared Remote Control Receiver Module (SMD Type)

					
	RoHS				
IRM-H2XX	x x=36,38,40	2.7~5.5	1.2	8	±45

LED LAMPS/BRIGHTNESS
BIN SELECTION

Item	Intensity Iv (mcd)	
	Bin	Min. Max.
a6	6.0	8.0
a5	8.0	10.0
a4	10.0	12.5
a3	15.0	180.0
a2	18.0	22.0
a1	22.0	28.0
0	28.0	35.0
1	35.0	42.0
2	42.0	50.0
3	50.0	60.0
4	60.0	70.0
5	70.0	85.0
6	85.0	100
7	100	120
8	120	140
9	140	170
A	170	200
B	200	240
C	240	285
D	285	360
E	360	450
F	450	565
G	565	715
H	715	900
J	900	1,125
K	1,125	1,425
L	1,425	1,800
M	1,800	2,250
N	2,250	2,850
P	2,850	3,600
Q	3,600	4,500
R	4,500	5,650
S	5,650	7,150
T	7,150	9,000
U	9,000	11,250
V	11,250	14,250
W	14,250	18,000
X	18,000	22,500
Y	22,500	28,500
Z	28,500	36,000

SMD BRIGHTNESS BIN
SELECTION

IV Groups & Bin Code		Iv Spec.Range
B0	A0	0.12~0.18
	B1	0.18~0.22
	B2	0.22~0.28
C0	C1	0.28~0.36
	C2	0.36~0.45
D0	D1	0.45~0.57
	D2	0.57~0.70
E0	E1	0.70~0.90
	E2	0.90~1.10
F0	F1	1.10~1.40
	F2	1.40~1.80
G0	G1	1.80~2.30
	G2	2.30~2.80
H0	H1	2.80~3.60
	H2	3.60~4.50
J0	J1	4.50~5.80
	J2	5.80~7.20
K0	K1	7.20~9.00
	K2	9.00~11.5

IV Groups & Bin Code		Iv Spec.Range
	Z0	4500~7200
	Z1	7200~11500
	Z2	11500~18000
	Z3	18000~28800
	Z4	>28800
	Z5	-----

V_F (Forward voltage spec. setup)

Forward Voltage Group		Bin	Min.	Max
A	B	00	1.55	1.75
		0	1.75	1.95
		1	1.95	2.15
		2	2.15	2.35
		3	2.35	2.55
D	E	4	2.55	2.75
		5	2.75	3.05
		6	3.05	3.35
		7	3.35	3.65
		8	3.65	3.95
K	F	9	2.50	2.70
		10	2.70	2.90
		11	2.90	3.10
		12	3.10	3.30
		13	3.30	3.50
		14	3.50	3.70

IV Groups & Bin Code		Iv Spec.Range
L	L1	11.5~14.5
	L2	14.5~18.0
M	M1	18.0~22.5
	M2	22.5~28.5
N	N1	28.5~36.0
	N2	36.0~45.0
P	P1	45.0~57.0
	P2	57.0~72.0
Q	Q1	72.0~90.0
	Q2	90.0~112
R	R1	112~140
	R2	140~180
S	S1	180~225
	S2	225~285
T	T1	285~360
	T2	360~450
U	U1	450~565
	U2	565~715
V	V1	715~900
	V2	900~1120
W	W1	1120~1420
	W2	1420~1800
X	X1	1800~2250
	X2	2250~2850
Y	Y1	2850~3600
	Y2	3600~4500

※

The luminous intensity data did not including ±10% measuring tolerance.

※

The forward voltage data did not including ±0.1V measuring tolerance .