

Kingbright

Optoelectronic Components

PHOTOCOUPLERS	91
PHOTO INTERRUPTERS	95
PHOTO REFLECTIVE SENSOR	100

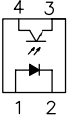
Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=±1mA, V _{CE} =5V	IF=±20mA, I _C =1mA	Typ.	Max.	Tr	Tf
Min.	Max.	Typ.	Max.	Tr	Tf						
KB814		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage AC input response	5000	35	20	300	0.1	0.2	4	3

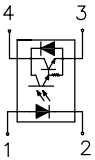
Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=±1mA, V _{CE} =2V	IF=±20mA, I _C =5mA	Typ.	Max.	Tr	Tf
Min.	Max.	Typ.	Max.	Tr	Tf						
KB8141		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage High sensitivity AC input response	5000	35	600	7500	0.8	1	60	53

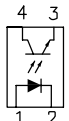
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				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=1mA, V _{CE} =2V	IF=20mA, I _C =5mA	Typ.	Max.	Tr	Tf
Min.	Max.	Typ.	Max.	Tr	Tf						
KB815		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage High sensitivity	5000	35	600	7500	0.8	1	60	53

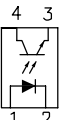
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				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=5mA, V _{CE} =5V	IF=20mA, I _C =1mA	Typ.	Max.	Tr	Tf
Min.	Max.	Typ.	Max.	Tr	Tf						
KB816		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage High collector-emitter voltage	5000	70	50	600	0.1	0.2	4	3

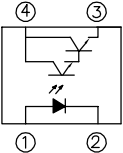
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				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=5mA, V _{CE} =5V	IF=20mA, I _C =1mA	Typ.	Max.	Tr	Tf
Min.	Max.	Typ.	Max.	Tr	Tf						
KB817		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage	5000	35	50	600	0.1	0.2	4	3

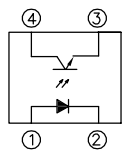
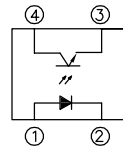
Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=5mA, V _{CE} =5V	IF=20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB851		VDE0884. NO.40006364	High collector-emitter Voltage	5000	350	-	-	0.1	0.3	4	3

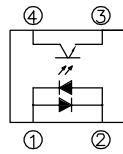
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				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=1mA, V _{CE} =2V	IF=20mA, I _C =100mA	V _{CE} =2V, I _C =20mA, R _L =1000Ω	Min.	Max.	Typ.
KB852		VDE0884. NO.40006364	High collector-emitter voltage High sensitivity	5000	350	1000	15000	-	1.2	100	20

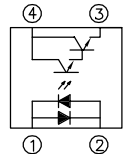
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				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=5mA, V _{CE} =5V	IF=20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB817-B		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage SMD Type	5000	35	50	600	0.1	0.2	4	3

Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=5mA, V _{CE} =5V	IF=20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB817-M		UL NO.E225308 & VDE0884. NO.40006364	High isolation voltage	5000	35	50	600	0.1	0.2	4	3

Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=1mA, V _{CE} =2V	IF=20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB355NT		UL NO.E225308 & VDE0884. NO.40017614	High current transfer ratio Small package size	3750	35	600	7500	0.8	1.0	60	53

Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=5mA, V _{CE} =5V	IF=20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB356NT		UL NO.E225308 & VDE0884. NO.40017614	High collector-emitter Voltage Small package size	3750	80	50	600	0.1	0.2	6	8
KB357NT		UL NO.E225308 & VDE0884. NO.40017614	Small package size	3750	35	50	600	-	0.2	4	3

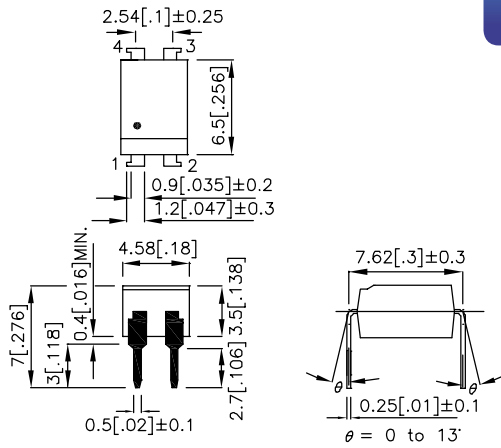
Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=±1mA, V _{CE} =5V	IF=±20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB354NT		UL NO.E225308 & VDE0884. NO.40017614	AC.input response Small package size	3750	35	20	400	0.1	0.2	4	3

Part Number	Pin Configuration	Safety Standards	Features	Absolute Maximum Ratings		Electrical Characteristics					
				Isolation Voltage(AC) Viso(Vrms)	Collector Emitter Voltage V _{CEO} (V)	CTR(%)		V(sat) (V)		Response Time (μs) Typ.	
						IF=±1mA, V _{CE} =2V	IF=±20mA, I _C =1mA	V _{CE} =2V, I _C =2mA, R _L =100Ω	Min.	Max.	Typ.
KB3541NT		UL NO.E225308 & VDE0884. NO.40017614	AC.input response High sensitivity Small package size	3750	35	450	7400	0.8	1.0	60	53

KB814, KB8141, KB815, KB816, KB817, KB851, KB852



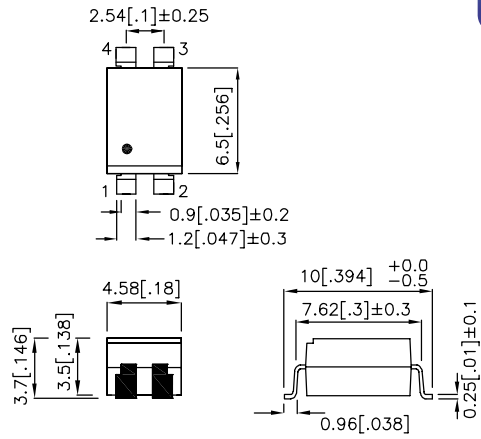
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KB817-B



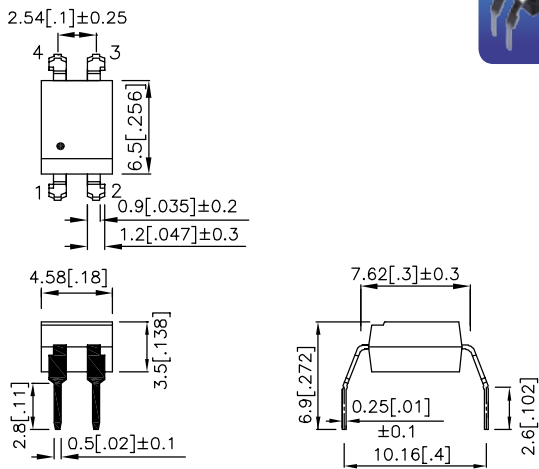
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KB817-M



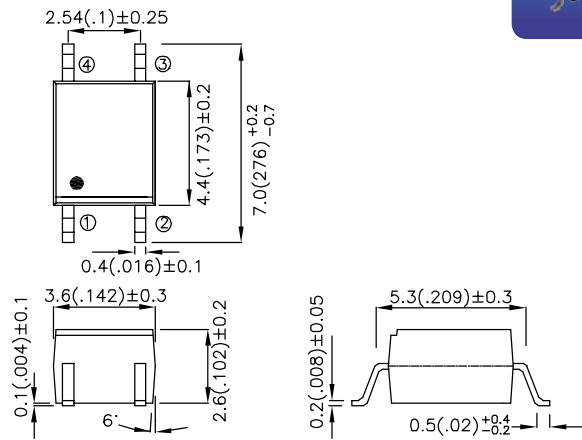
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KB355NT, KB356NT, KB357NT, KB354NT, KB3541NT

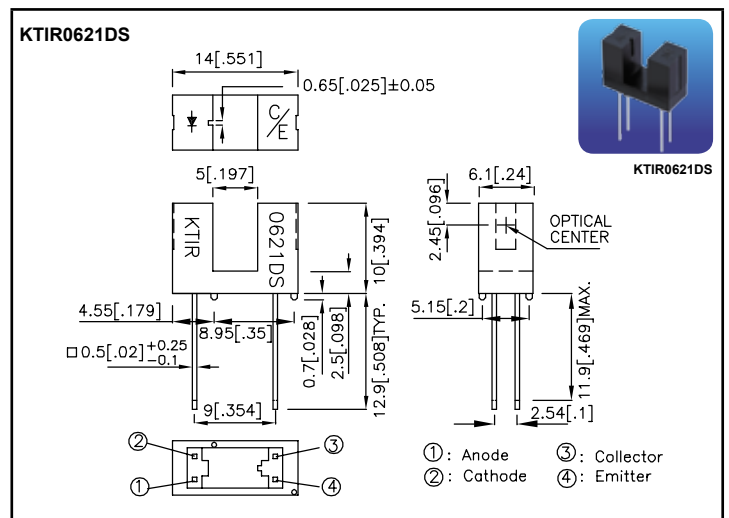
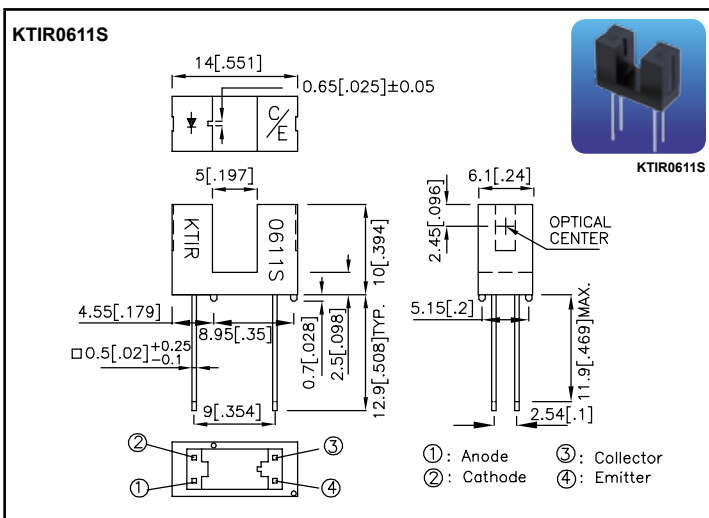
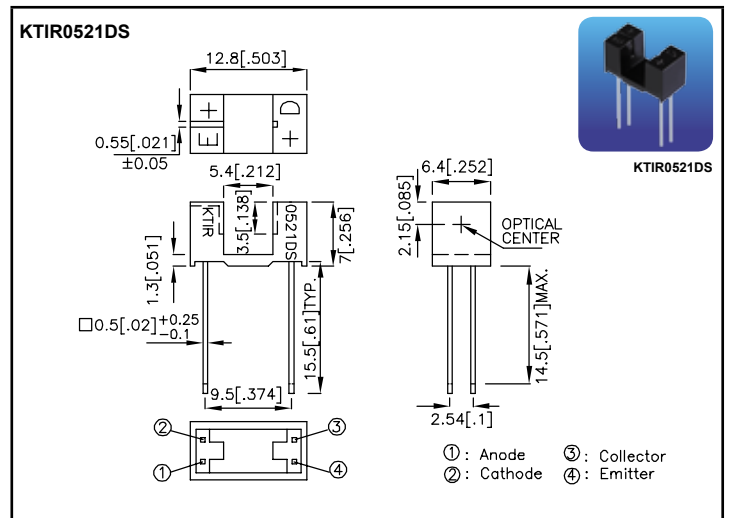
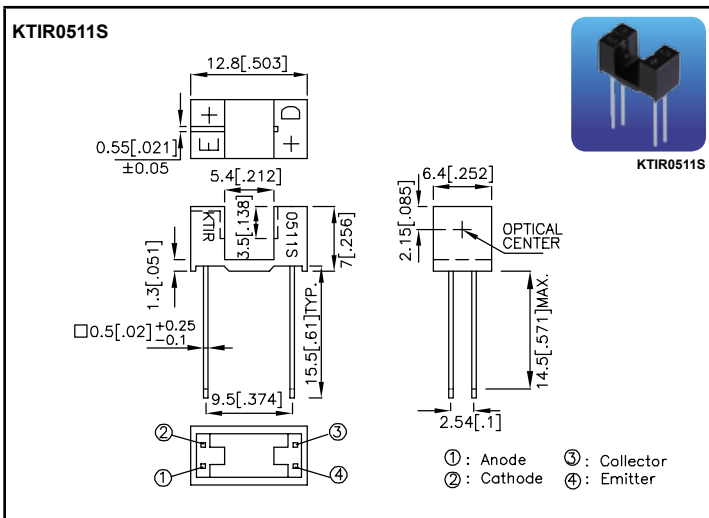


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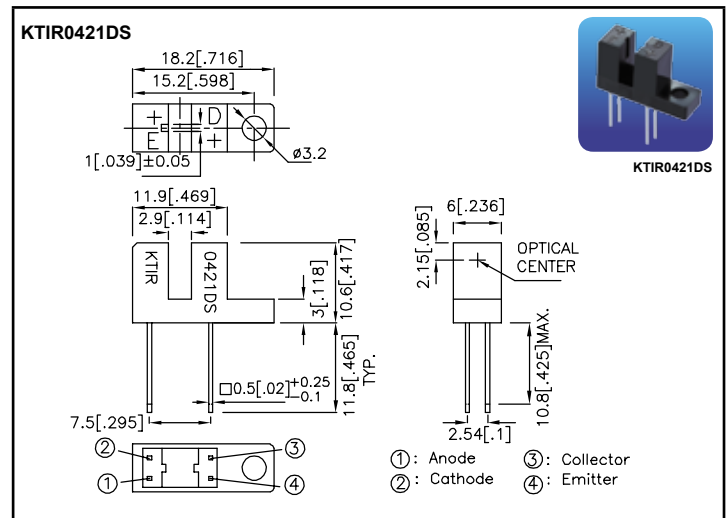
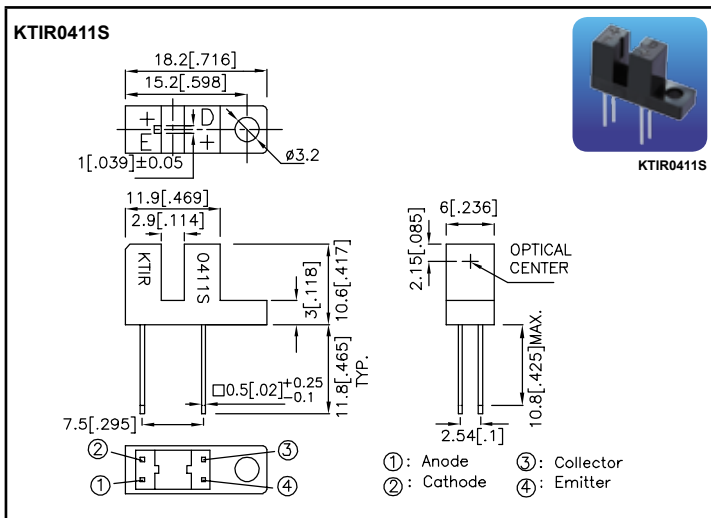
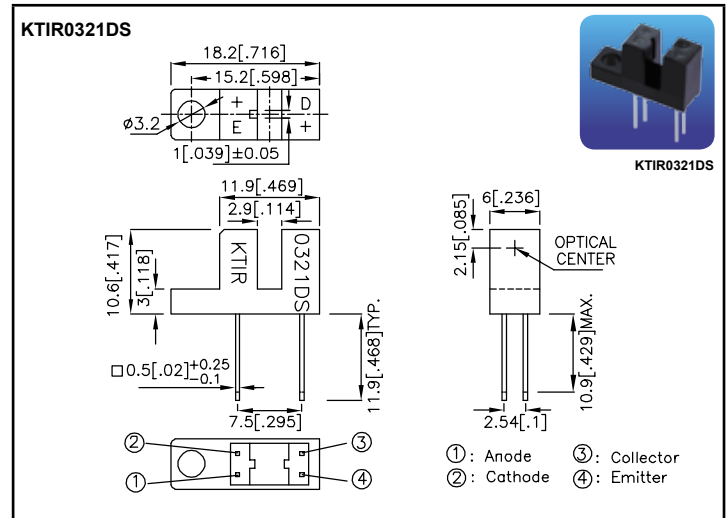
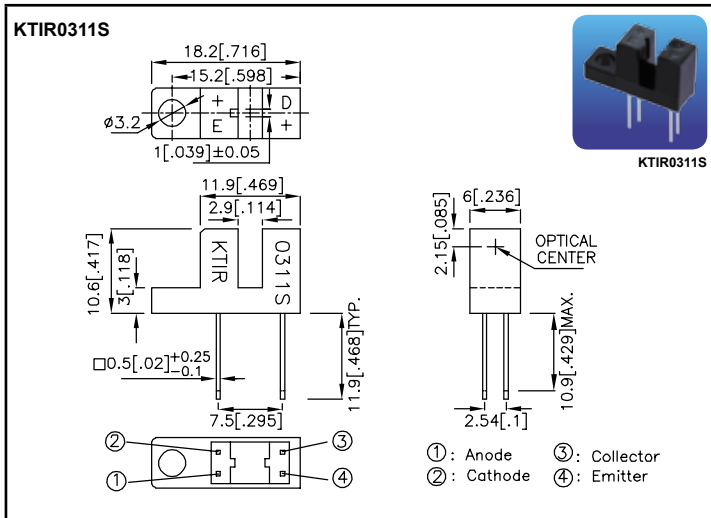
NOTES:
 1. All dimensions are in millimeters(inches).
 2. Tolerance is ±0.5mm(0.02") unless otherwise noted.

Part Number	Pin Configuration	Material	λ_P (nm)	CTR			$V_{CE(SAT)}$			Rise Time (μs)	Fall Time (μs)
				IF(mA)	$V_{CE(V)}$	Typ.(%)	IF(mA)	IC(mA)	Max.(V)	Typ.	Typ.
KTIR0511S		GaAs/SiC	940	20	5	10	40	1	0.4	5	4
KTIR0521DS		GaAs/SiC	940	1	2	180	2	1	1	90	80
KTIR0611S		GaAs/SiC	940	20	5	14	40	1	0.4	5	4
KTIR0621DS		GaAs/SiC	940	1	2	200	2	1	1	90	80



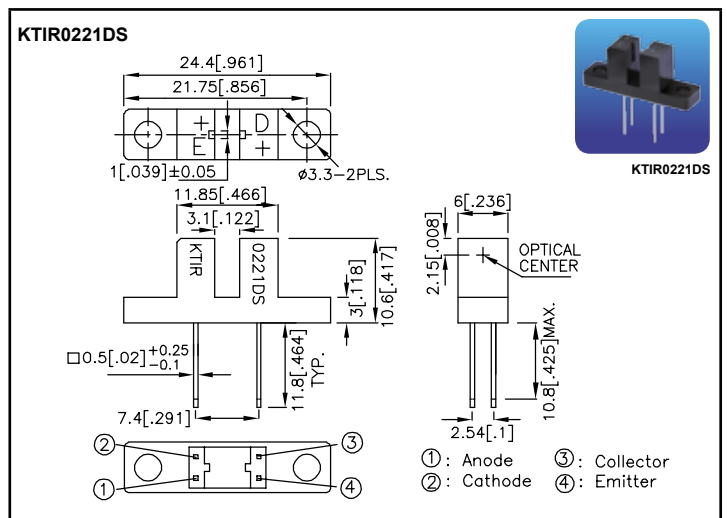
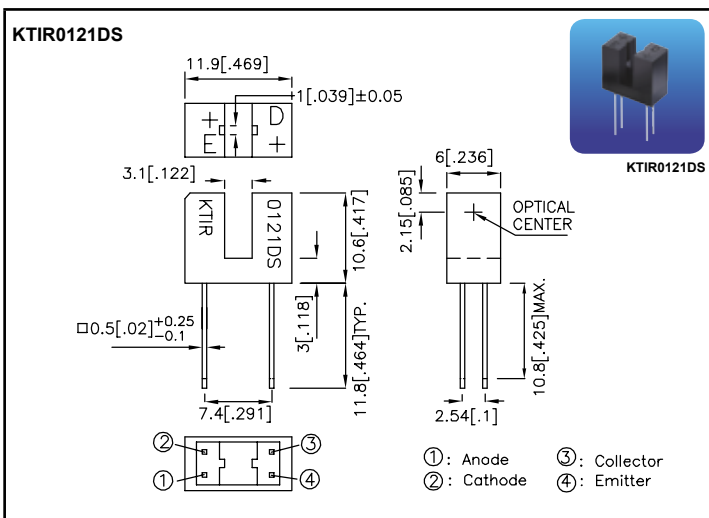
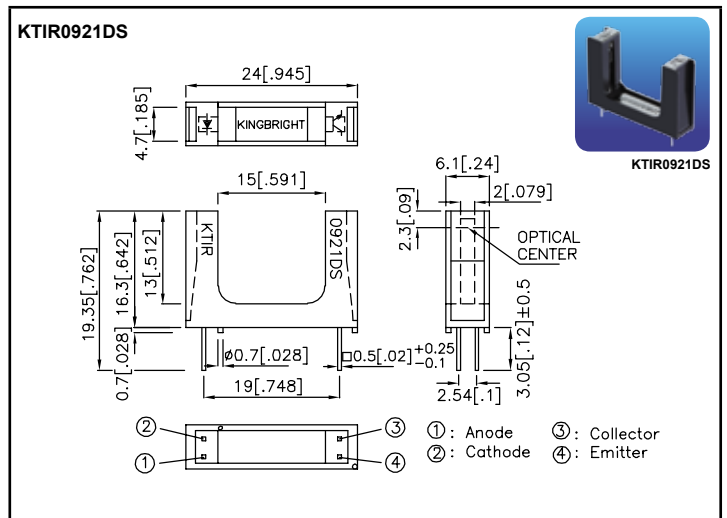
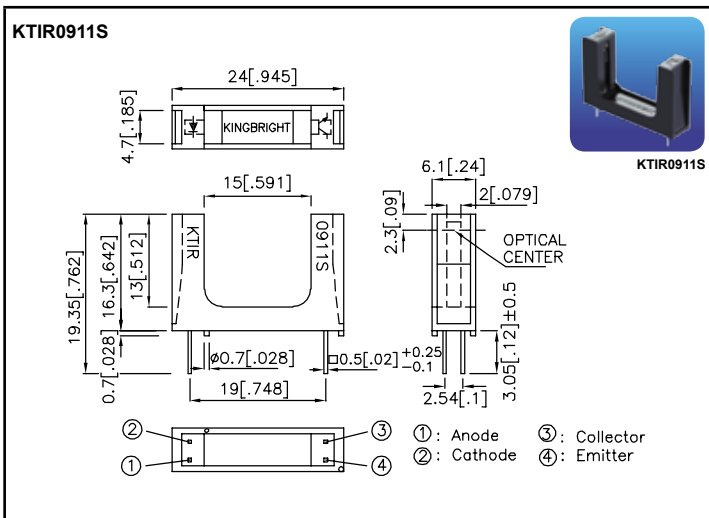
NOTES:
 1. All dimensions are in millimeters(inches).
 2. Tolerance is $\pm 0.25\text{mm}(0.01\text{'})$ unless otherwise noted.

Part Number	Pin Configuration	Material	λ_P (nm)	CTR			$V_{CE(SAT)}$			Rise Time (μs)	Fall Time (μs)
				IF(mA)	$V_{CE(V)}$	Typ.(%)	IF(mA)	IC(mA)	Max.(V)	Typ.	Typ.
KTIR0311S		GaAs/SiC	940	20	5	38	40	1	0.4	5	4
KTIR0321DS		GaAs/SiC	940	1	2	650	2	1	1	90	80
KTIR0411S		GaAs/SiC	940	20	5	38	40	1	0.4	5	4
KTIR0421DS		GaAs/SiC	940	1	2	650	2	1	1	90	80



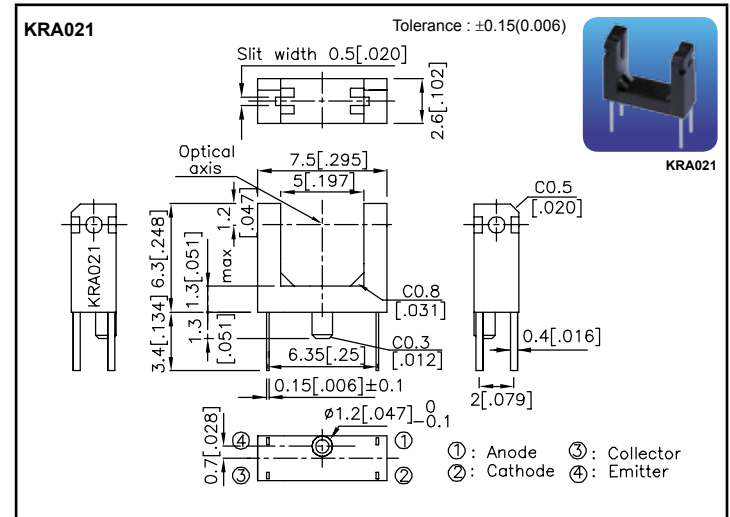
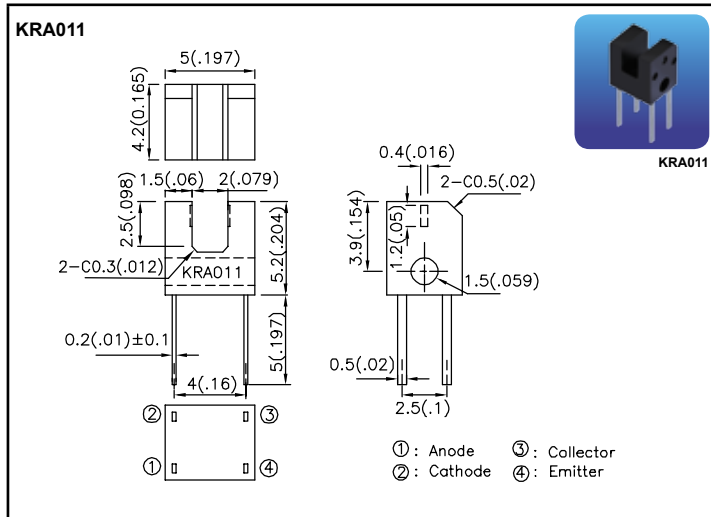
NOTES:
1. All dimensions are in millimeters(inches).
2. Tolerance is $\pm 0.25mm(0.01")$ unless otherwise noted.

Part Number	Pin Configuration	Material	λ_P (nm)	CTR			$V_{CE(SAT)}$			Rise Time (μs)	Fall Time (μs)
				IF(mA)	$V_{CE(V)}$	Typ.(%)	IF(mA)	IC(mA)	Max.(V)	Typ.	Typ.
KTIR0911S		GaAs/SiC	● 940	20	5	9.5	40	1	0.4	5	4
KTIR0921DS		GaAs/SiC	● 940	1	2	120	2	1	1	90	80
KTIR0121DS		GaAs/SiC	● 940	1	2	600	2	1	1	90	80
KTIR0221DS		GaAs/SiC	● 940	1	2	600	2	1	1	90	80



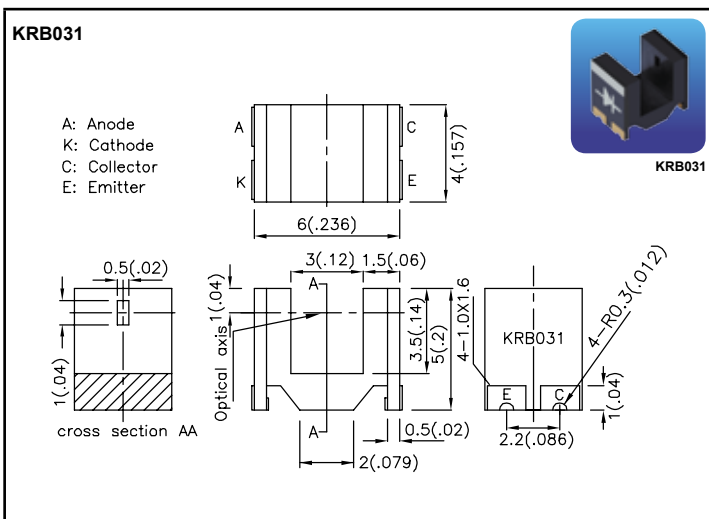
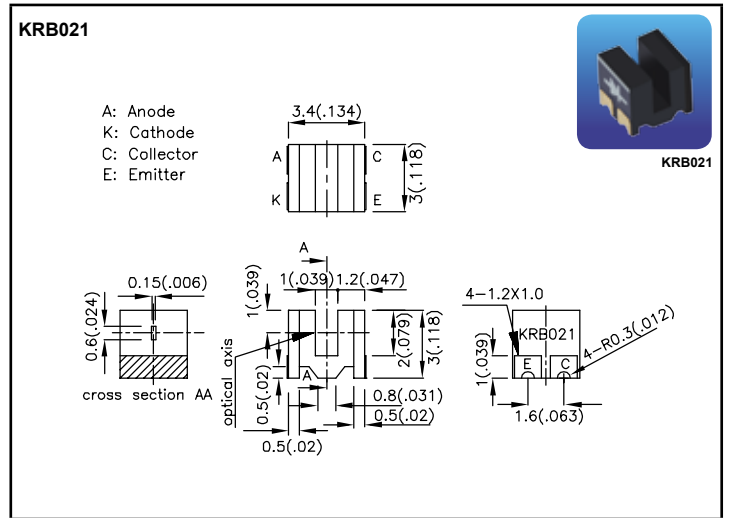
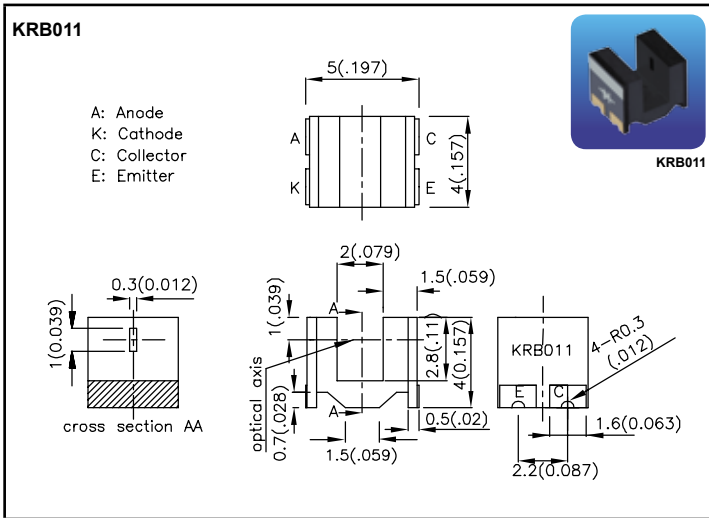
NOTES:
 1. All dimensions are in millimeters(inches).
 2. Tolerance is ±0.25mm(0.01") unless otherwise noted.

Part Number	Pin Configuration	Material	λ_P (nm)	CTR			$V_{CE(SAT)}$			Rise Time (μs)	Fall Time (μs)
				IF(mA)	$V_{CE(V)}$	Typ.(%)	IF(mA)	IC(mA)	Max.(V)	Typ.	Typ.
KRA011		GaAs/SiC	● 940	5	5	8	10	0.04	0.4	50	50
KRA021		GaAs/SiC	● 940	10	2	18	20	0.25	0.4	15	15



NOTES:
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2. Tolerance is $\pm 0.25mm(0.01")$ unless otherwise noted.

Part Number	Pin Configuration	Material	λ P (nm)	IC (μ A)		V _{CE(SAT)}			Rise Time (μ s)	Fall Time (μ s)
				V _{CE} =5V, I _F =5mA		I _F (mA)	I _C (mA)	Max.(V)	Typ.	Typ.
				Typ.						
KRB011		GaAs/SiC	● 940	650		20	0.05	0.4	8	10
KRB021		GaAs/SiC	● 940	500		20	0.05	0.4	8	10
KRB031		GaAs/SiC	● 940	150		20	0.05	0.4	8	10

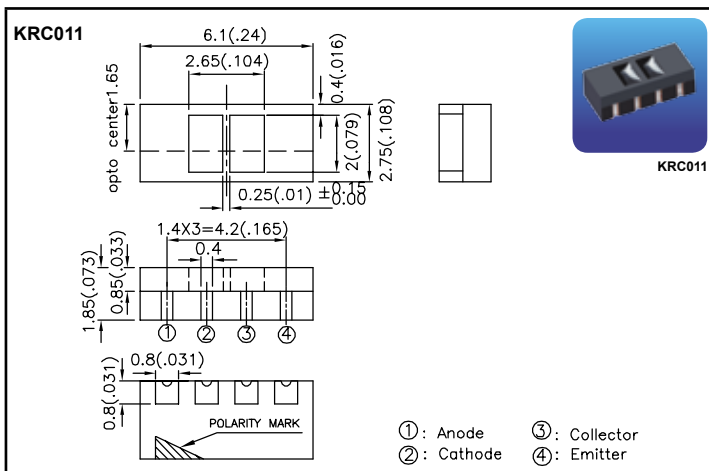
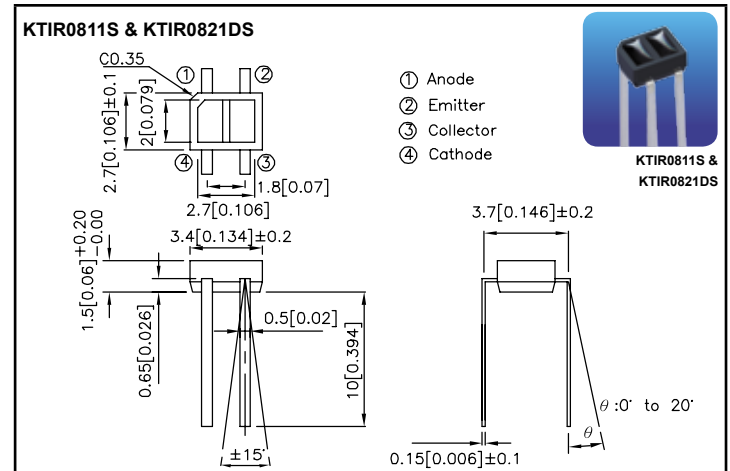
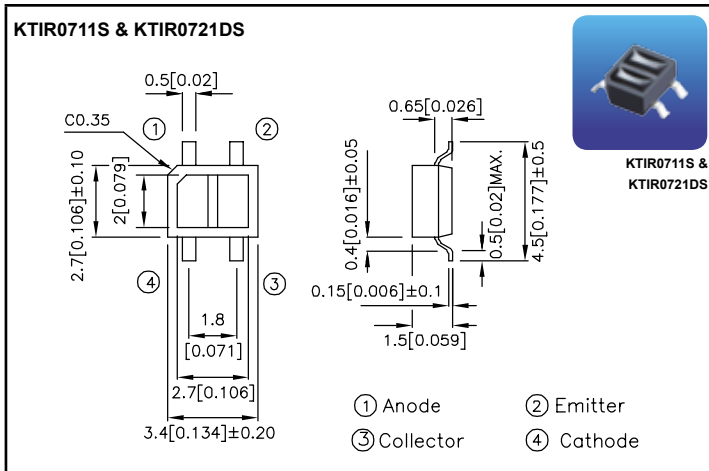


NOTES:

1. All dimensions are in millimeters(inches).
2. Tolerance is $\pm 0.15\text{mm}(0.006\text{")}$ unless otherwise noted.

Part Number	Pin Configuration	Material	λ_P (nm)	IC (μA)			$V_{CE(SAT)}$			Rise Time (μs)	Fall Time (μs)
				$V_{CE}=2\text{V}, I_F=4\text{mA}$			IF(mA)	IC(mA)	Max.(V)	Typ.	Typ.
				Min.	Typ.	Max.					
KTIR0711S		GaAs/SiC	940	10	-	400	-	-	-	20	20
KTIR0721DS		GaAs/SiC	940	-	3000	-	-	-	-	80	70
KTIR0811S		GaAs/SiC	940	10	-	400	-	-	-	20	20
KTIR0821DS		GaAs/SiC	940	-	3000	-	-	-	-	80	70

Part Number	Pin Configuration	Material	λ_P (nm)	IC (μA)			$V_{CE(SAT)}$			Rise Time (μs)	Fall Time (μs)
				$V_{CE}=5\text{V}, I_F=20\text{mA}$			IF(mA)	IC(mA)	Max.(V)	Typ.	Typ.
				Min.	Typ.	Max.					
KRC011		GaAs/SiC	940	10	-	300	-	-	-	20	20



NOTES:
 1. All dimensions are in millimeters(inches).
 2. Tolerance is $\pm 0.25\text{mm}(0.01")$ unless otherwise noted.