

# Kingbright

## Optoelectronic Components



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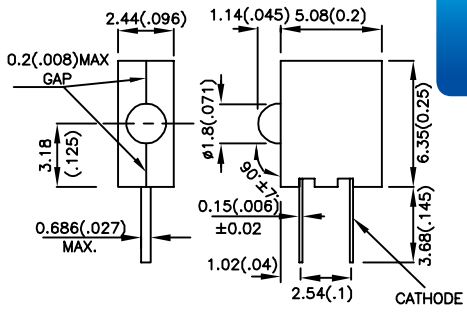

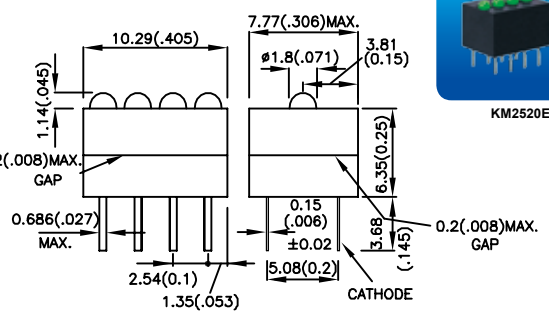

### **Circuit Board Indicator** **77**

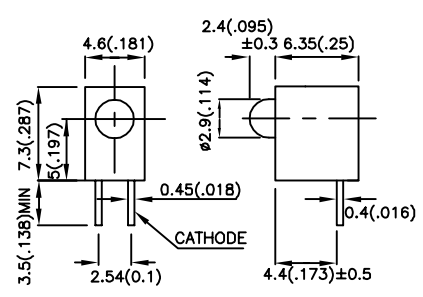

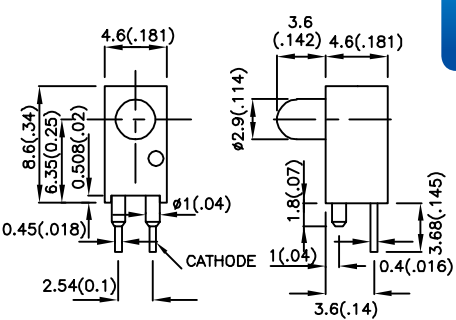

Single-Level CBI	77
Bi-Level CBI	80
Tri-Level CBI	83
Quad-Level CBI	84
With Spacer	84
SMD CBI	85

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### **LED Clips and Mounts** **86**

## SINGLE-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @20mA *V=5V		VIEWING ANGLE 2 $\theta$ 1/2	DIMENSION
				MIN.	TYP.		
KM2520EH/1ID	GaAsP/GaP	625	red diffused	7	30	40°	Subminiature Solid State Lamps  
KM2520EH/1ID-5V	GaAsP/GaP	625	red diffused	*1.8	*8	40°	
KM2520EH/1YD	GaAsP/GaP	588	yellow diffused	2.6	10	40°	
KM2520EH/1YD-5V	GaAsP/GaP	588	yellow diffused	*1	*3	40°	
KM2520EH/1SGD	GaP	568	green diffused	2.6	10	40°	
KM2520EH/1SGD-5V	GaP	568	green diffused	*1.8	*8	40°	
KM2520EG/4ID	GaAsP/GaP	625	red diffused	7	30	40°	Subminiature Solid State Lamps  
KM2520EG/4ID-5V	GaAsP/GaP	625	red diffused	*1.8	*8	40°	
KM2520EG/4YD	GaAsP/GaP	588	yellow diffused	2.6	10	40°	
KM2520EG/4YD-5V	GaAsP/GaP	588	yellow diffused	*1	*3	40°	
KM2520EG/4SGD	GaP	568	green diffused	2.6	10	40°	
KM2520EG/4SGD-5V	GaP	568	green diffused	*1.8	*8	40°	

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE 2 $\theta$ 1/2	DIMENSION
				MIN.	TYP.		
L-710A8CB/1ID	GaAsP/GaP	625	red diffused	12	25	40°	T-1 (3mm) Right Angle  
L-710A8CB/1SRD	GaAlAs	640	red diffused	*110	*280	40°	
L-710A8CB/1YD	GaAsP/GaP	588	yellow diffused	5	12	40°	
L-710A8CB/1GD	GaP	568	green diffused	8	20	40°	
L-710A8RS/1ID	GaAsP/GaP	625	red diffused	12	25	40°	T-1 (3mm) Right Angle  
L-710A8RS/1SRD	GaAlAs	640	red diffused	*110	*280	40°	
L-710A8RS/1YD	GaAsP/GaP	588	yellow diffused	5	12	40°	
L-710A8RS/1GD	GaP	568	green diffused	8	20	40°	

**NOTES:**

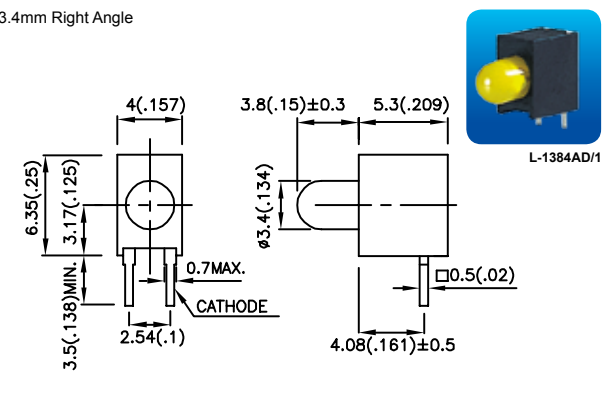
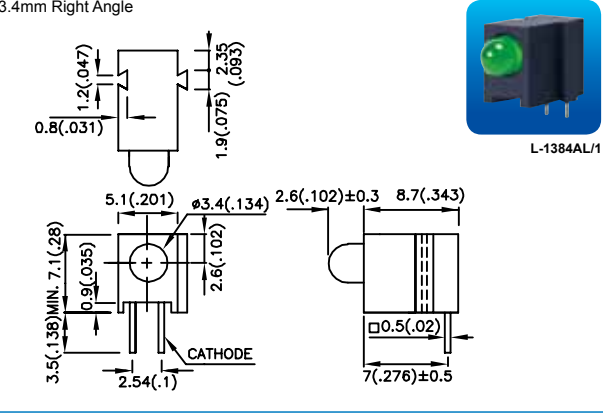
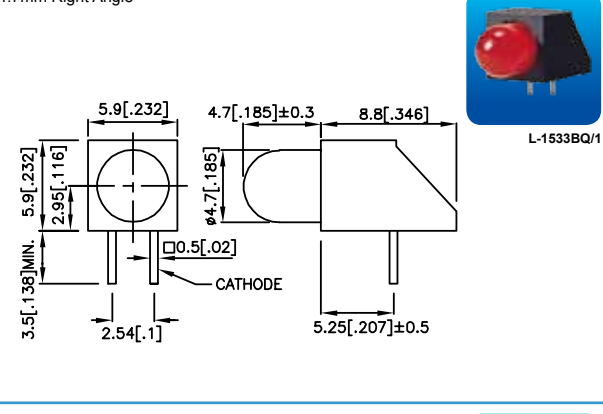
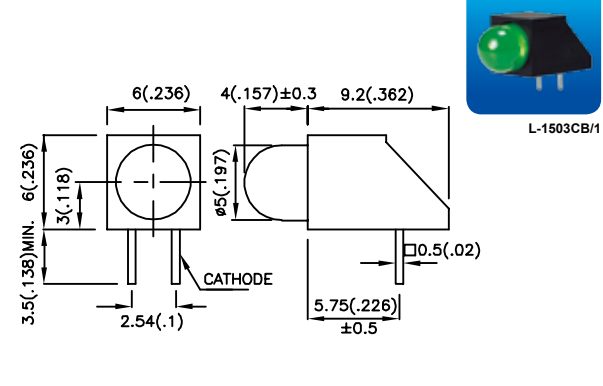
- All dimensions are in millimeters(inches).
- Tolerance is  $\pm 0.25\text{mm}(0.01")$  unless otherwise noted.

## SINGLE-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE	DIMENSION
				MIN.	TYP.		
L-7104EW/1ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Right Angle 
L-7104EW/1SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104EW/1YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104EW/1GD	GaP	568	green diffused	8	20	40°	
L-7104ZH/1ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Right Angle 
L-7104ZH/1SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104ZH/1YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104ZH/1GD	GaP	568	green diffused	8	20	40°	
L-130WDT/1EGW	GaAsP/GaP	625	white diffused	*7	*30	60°	T-1 (3mm) Right Angle 
	GaP	568		*7	*25		
L-130WDT/1EYW	GaAsP/GaP	625	white diffused	*7	*30	60°	
	GaAsP/GaP	588		*7	*20		
L-130WDT/1GYW	GaP	568	white diffused	*7	*25	60°	
	GaAsP/GaP	588		*7	*20		
L-42WUM/1EGWT	GaAsP/GaP	625	white diffused	*4	*13	100°	T-1 (3mm) Right Angle 
	GaP	568		*4	*13		
L-42WUM/1EYWT	GaAsP/GaP	625	white diffused	*4	*13	100°	
	GaAsP/GaP	588		*2.6	*6		
L-42WUM/1GYWT	GaP	568	white diffused	*4	*13	100°	
	GaAsP/GaP	588		*2.6	*6		

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

## SINGLE-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE 2 $\theta$ 1/2	DIMENSION
				MIN.	TYP.		
L-1384AD/1ID	GaAsP/GaP	625	red diffused	12	20	60°	3.4mm Right Angle 
L-1384AD/1SRD	GaAlAs	640	red diffused	*70	*200	60°	
L-1384AD/1YD	GaAsP/GaP	588	yellow diffused	8	15	60°	
L-1384AD/1GD	GaP	568	green diffused	8	15	60°	
L-1384AL/1ID	GaAsP/GaP	625	red diffused	12	20	60°	3.4mm Right Angle 
L-1384AL/1SRD	GaAlAs	640	red diffused	*70	*200	60°	
L-1384AL/1YD	GaAsP/GaP	588	yellow diffused	8	15	60°	
L-1384AL/1GD	GaP	568	green diffused	8	15	60°	
L-1533BQ/1ID	GaAsP/GaP	625	red diffused	8	30	60°	4.7mm Right Angle 
L-1533BQ/1SRD	GaAlAs	640	red diffused	*110	*400	60°	
L-1533BQ/1YD	GaAsP/GaP	588	yellow diffused	5	18	60°	
L-1533BQ/1GD	GaP	568	green diffused	5	20	60°	
L-1503CB/1ID	GaAsP/GaP	625	red diffused	8	30	60°	T-1 3/4 (5mm) Right Angle 
L-1503CB/1SRD	GaAlAs	640	red diffused	*380	*700	60°	
L-1503CB/1YD	GaAsP/GaP	588	yellow diffused	5	20	60°	
L-1503CB/1GD	GaP	568	green diffused	5	20	60°	

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## SINGLE-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @20mA		VIEWING ANGLE	DIMENSION	
				MIN.	TYP.			
L-150A9VS/1EGW	GaAsP/GaP	625	white diffused	18	50	30°	<p>T-1 3/4 (5mm) Right Angle</p> <p>L-150A9VS/1</p> <p>1 E G 3 2 Y 3</p>	
	GaP	568		10	45			
L-150A9VS/1EYW	GaAsP/GaP	625	white diffused	18	50	30°		
	GaAsP/GaP	588		7	30			
L-150A9VS/1GYW	GaP	568	white diffused	10	45	30°		
	GaAsP/GaP	588		7	30			
L-59BL/1EGW	GaAsP/GaP	625	white diffused	18	60	60°		<p>T-1 3/4 (5mm) Right Angle</p> <p>L-59BL/1</p> <p>1 E G 3 2 Y 3</p>
	GaP	568		18	50			
L-59BL/1EYW	GaAsP/GaP	625	white diffused	18	60	60°		
	GaAsP/GaP	588		18	40			
L-59BL/1GYW	GaP	568	white diffused	18	50	60°		
	GaAsP/GaP	588		18	40			
L-59CB/1EGW	GaAsP/GaP	625	white diffused	18	60	60°	<p>T-1 3/4 (5mm) Right Angle</p> <p>L-59CB/1</p> <p>1 E G 3 2 Y 3</p>	
	GaP	568		18	50			
L-59CB/1EYW	GaAsP/GaP	625	white diffused	18	60	60°		
	GaAsP/GaP	588		18	40			
L-59CB/1GYW	GaP	568	white diffused	18	50	60°		
	GaAsP/GaP	588		18	40			


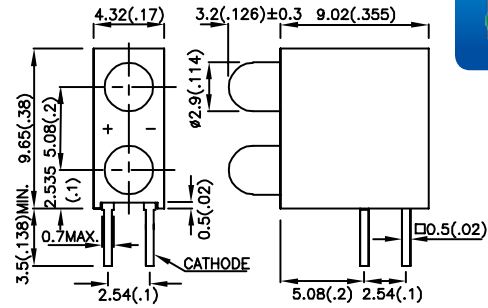

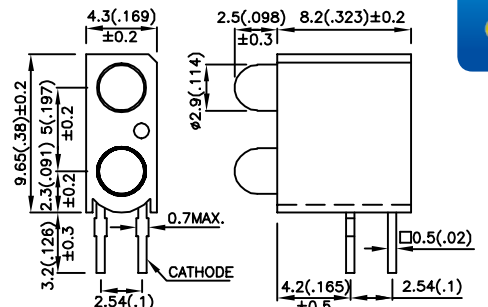

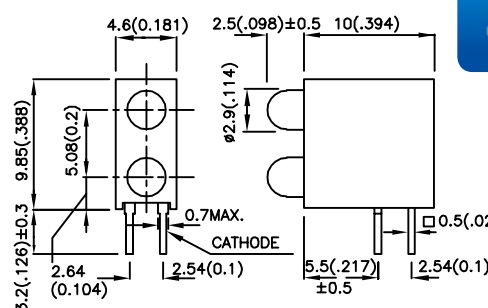

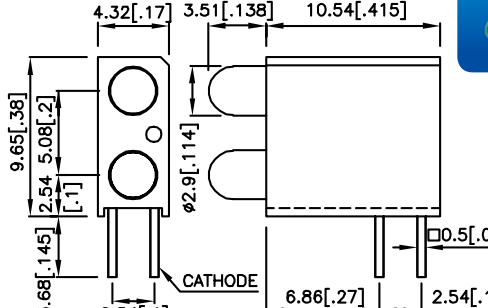
## BI-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE	DIMENSION
				MIN.	TYP.		
L-4060VH/2ID	GaAsP/GaP	625	red diffused	8	15	70°	<p>1.8mm Bi-Level</p> <p>L-4060VH/2</p>
L-4060VH/2SRD	GaAlAs	640	red diffused	*70	*200	70°	
L-4060VH/2YD	GaAsP/GaP	588	yellow diffused	1.8	5	70°	
L-4060VH/2GD	GaP	568	green diffused	5	10	70°	

### NOTES:

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- Tolerance is  $\pm 0.25\text{mm}$  ( $0.01''$ ) unless otherwise noted.

## BI-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE 2 $\theta$ 1/2	DIMENSION
				MIN.	TYP.		
L-7104EB/2ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Bi-Level  L-7104EB/2 
L-7104EB/2SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104EB/2YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104EB/2GD	GaP	568	green diffused	8	20	40°	
L-7104FG/2ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Bi-Level  L-7104FG/2 
L-7104FG/2SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104FG/2YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104FG/2GD	GaP	568	green diffused	8	20	40°	
L-7104FO/2ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Bi-Level  L-7104FO/2 
L-7104FO/2SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104FO/2YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104FO/2GD	GaP	568	green diffused	8	20	40°	
L-7104GE/2ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Bi-Level  L-7104GE/2 
L-7104GE/2SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104GE/2YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104GE/2GD	GaP	568	green diffused	8	20	40°	

**NOTES:**

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2. Tolerance is  $\pm 0.25\text{mm}(0.01")$  unless otherwise noted.

## BI-LEVEL CBI

PART NUMBER	MATERIAL	λD (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE	DIMENSION
				MIN.	TYP.		
L-7104GO/2ID	GaAsP/GaP	625	red diffused	8	20	40°	<p>T-1 (3mm) Bi-Level</p>
L-7104GO/2SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104GO/2YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104GO/2GD	GaP	568	green diffused	8	20	40°	
L-7104MD/2ID	GaAsP/GaP	625	red diffused	8	20	40°	<p>T-1 (3mm) Bi-Level</p>
L-7104MD/2SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104MD/2YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104MD/2GD	GaP	568	green diffused	8	20	40°	
L-130WCP/2EGW	GaAsP/GaP	625	white diffused	*7	*30	60°	<p>T-1 (3mm) Bi-Level</p>
	GaP	568		*7	*25		
L-130WCP/2EYW	GaAsP/GaP	625	white diffused	*7	*30	60°	
	GaAsP/GaP	588		*7	*20		
L-130WCP/2GYW	GaP	568	white diffused	*7	*25	60°	
	GaAsP/GaP	588		*7	*20		
L-73EB/2IDA	GaAsP/GaP	625	red diffused	8	30	60°	<p>4.8mm Bi-Level</p>
L-73EB/2SRDA	GaAlAs	640	red diffused	*110	*300	60°	
L-73EB/2YDA	GaAsP/GaP	588	yellow diffused	5	20	60°	
L-73EB/2GDA	GaP	568	green diffused	8	20	60°	

NOTES:  
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 2. Tolerance is ±0.25mm(0.01") unless otherwise noted.



## QUAD-LEVEL CBI

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE	DIMENSION
				MIN.	TYP.		
L-7104SB/4ID	GaAsP/GaP	625	red diffused	8	20	40°	T-1 (3mm) Quad-Level 
L-7104SB/4SRD	GaAlAs	640	red diffused	*110	*300	40°	
L-7104SB/4YD	GaAsP/GaP	588	yellow diffused	5	15	40°	
L-7104SB/4GD	GaP	568	green diffused	8	20	40°	
L-914CK/4IDT	GaAsP/GaP	625	red diffused	1.8	8	100°	2mm x 3mm Quad-Level 
L-914CK/4YDT	GaAsP/GaP	588	yellow diffused	1	4	100°	
L-914CK/4GDT	GaP	568	green diffused	1.8	6	100°	

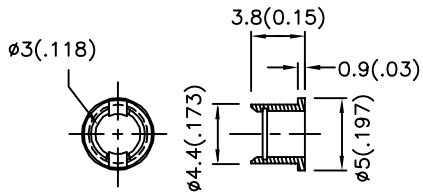
## WITH SPACER

PART NUMBER	MATERIAL	$\lambda_D$ (nm)	LENS TYPE	Iv (mcd) @10mA *20mA		VIEWING ANGLE	DIMENSION
				MIN.	TYP.		
L-7113BR-5.08/ID L-7113BR-6.35/ID L-7113BR-9.52/ID L-7113BR-17.8/ID L-7113BR-23.5/ID	GaAsP/GaP	625	red diffused	8	45	30°	T-1 3/4 (5mm) With Spacer 
L-7113BR-5.08/SRD L-7113BR-6.35/SRD L-7113BR-9.52/SRD L-7113BR-17.8/SRD L-7113BR-23.5/SRD	GaAlAs	640	red diffused	*110	*300	30°	
L-7113BR-5.08/YD L-7113BR-6.35/YD L-7113BR-9.52/YD L-7113BR-17.8/YD L-7113BR-23.5/YD	GaAsP/GaP	588	yellow diffused	5	20	30°	
L-7113BR-5.08/GD L-7113BR-6.35/GD L-7113BR-9.52/GD L-7113BR-17.8/GD L-7113BR-23.5/GD	GaP	568	green diffused	5	20	30°	
L-7113BR-5.08/SGD L-7113BR-6.35/SGD L-7113BR-9.52/SGD L-7113BR-17.8/SGD L-7113BR-23.5/SGD	GaP	568	green diffused	*18	*40	30°	

NOTES:  
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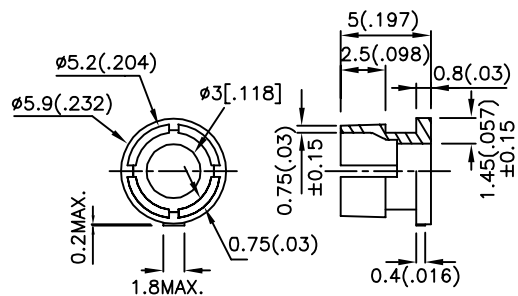


RTC-31



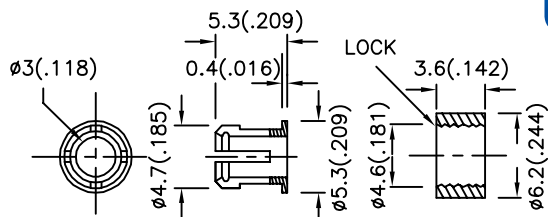
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CB-30



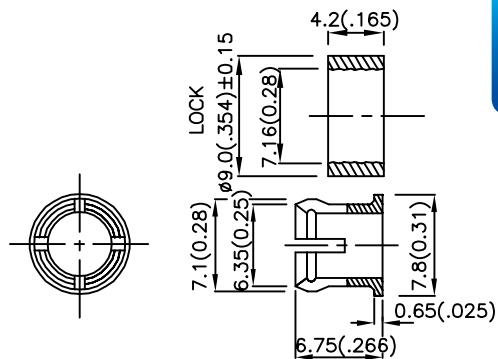
CB-30

RTC-32



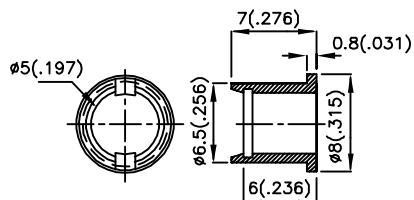
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CB-50



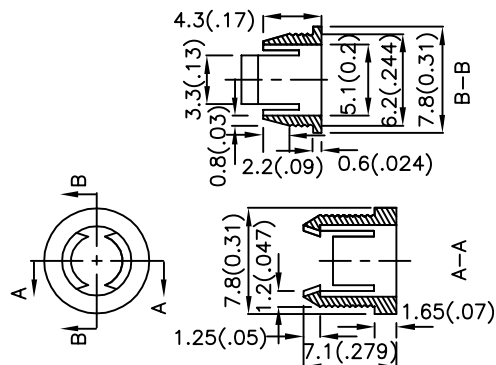
CB-50

RTC-51



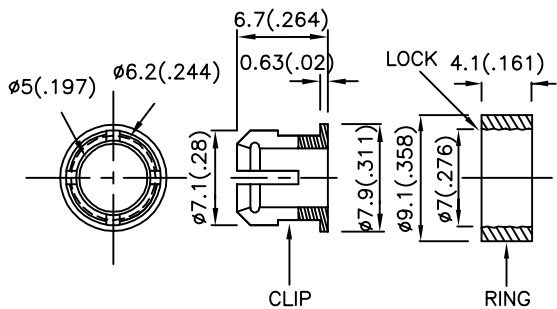
RTC-51

CB-55



CB-55

RTC-52

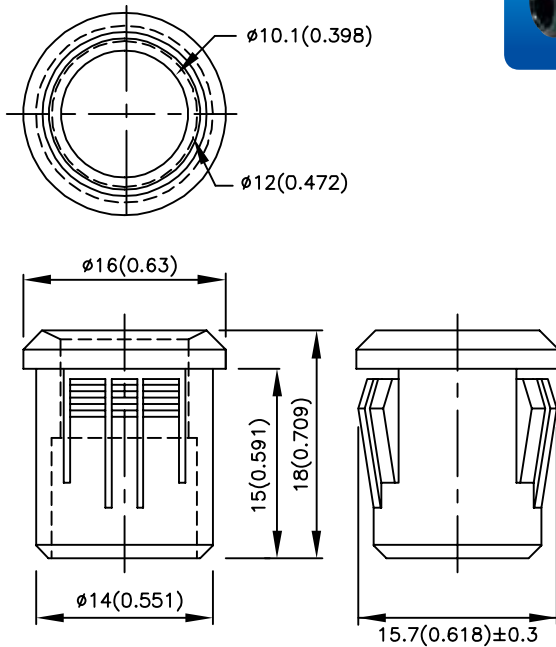


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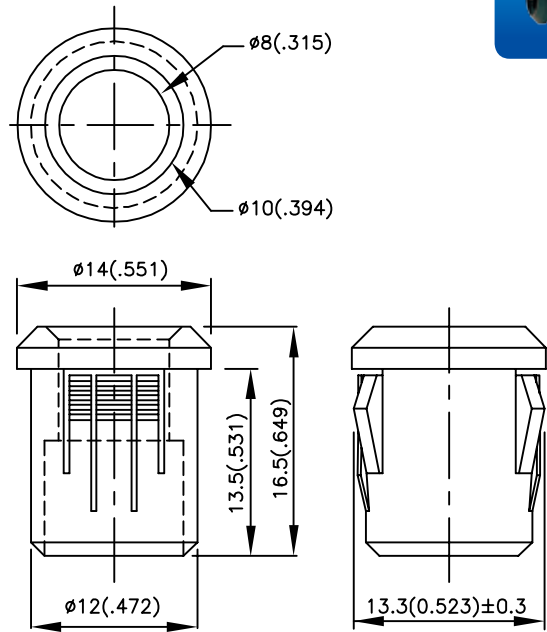
NOTES:

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

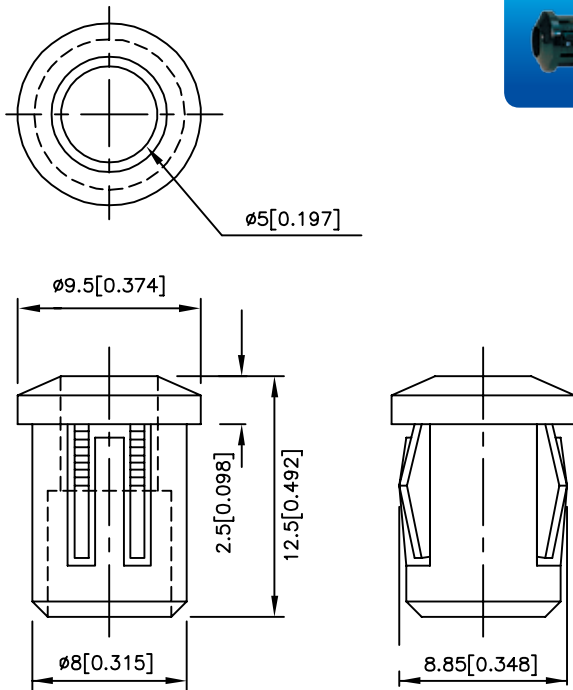
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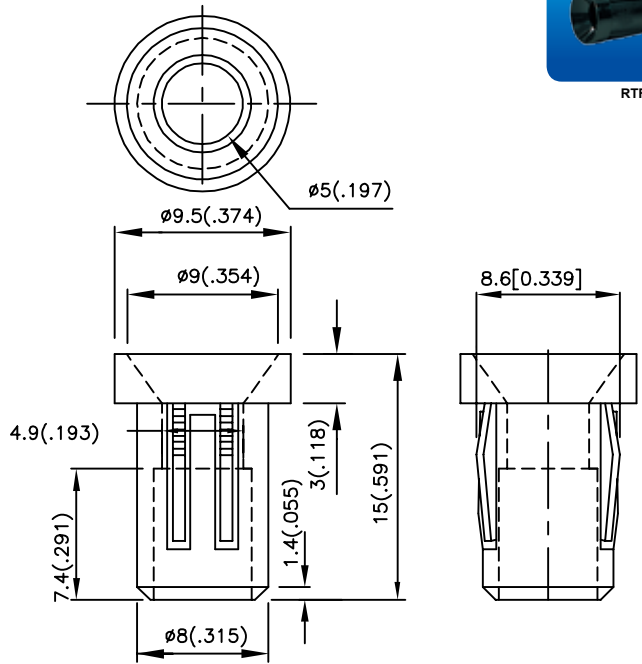
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RTF-5010



RTF-5020



NOTES:

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