

**LED Series**

**KLS9-L Standard LED Lamp Series**

**KLS9 - L - 501 3 G D - XXX**

1            2            3            4            5            6            7

1. Brand: KLS ELECTRONIC

2. Digit Mode: L-Lamp

3. Package Type (style):

4. Leads Type:

0: Surface Mounting Lead for SMD

2: 18mm Lead Length Standard

4: 25.4mm Lead Length with small Reflector

7: 25.4mm Lead Length with 2 Leads for bi-color

1: 20mm Lead Length with Stand-off

3: 25.4mm Lead Length with big Reflector

5: 25.4mm Lead Length with 3 Leads for bi-color

9: 25.4mm Lead Length with 3 Leads for bi-color

5. Color Code:

H: Red	GaP / GaP	700nm	UG: High Bright Green	AlGaInP 574nm
S: High Bright Red	GaAlAs / GaAs	SH 660nm	PG: Super Pure Green	AlGaInP 525nm
D: Super Bright Red	GaAlAs / GaAs	DH 660nm	BG: Super Bluish Green	AlGaInP 505nm
UR: Ultra Bright Red	GaAlAs / GaAlAs	DDH 660nm	B: Blue GaN / SiC	430nm
UHR: Ultra Bright Red	AlGaInP	640nm	UB: Super Bright Blue	InGaN / SiC 470nm
E: Orange	GaAsP / GaP	635nm	V: UV	InGaN / SiC405nm
UE: High Bright Orange	AlGaInP	630nm	W: White	
Y: Yellow	GaAsP / GaP	585nm	EG: Orange + Green Bi-Color	
UY: High Bright Yellow	AlGaInP	590nm	SG: High Red + Green Bi-Color	
G: Green	GaP / GaP	568nm	RGB: Multicolor	

6. Len Color: D: Color Diffused      T: Color Transparent      C: Water Clear      W: White Diffused

CD: Color Top Diffused      WD: White Top Diffused      E: Orange Diffused

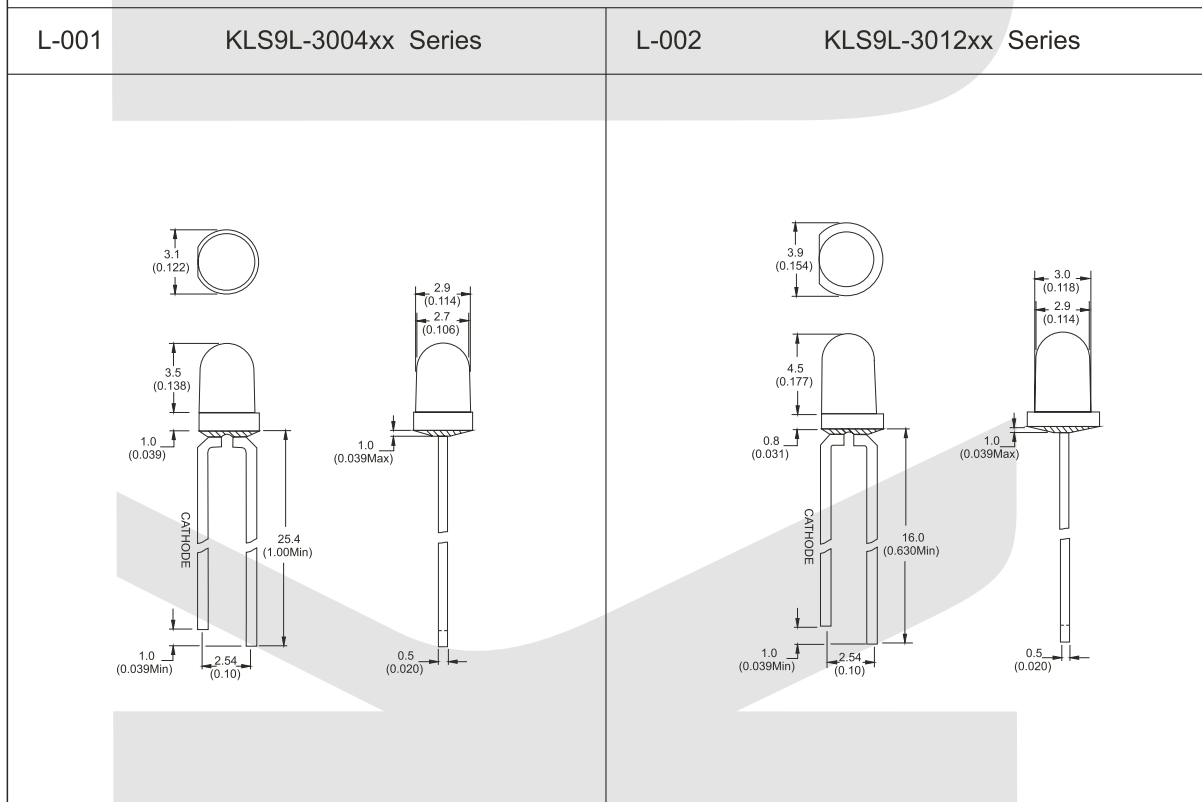
7. Special Operation & Other:

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Package	Part No. KLS9L-	Chip		Lens Appearance	Absolute Maximum Ratings				Electro-optical Data(At 20mA)			Viewing Angle 2θ1/2 (deg)	Drawing No.
		Material/Emitted Color	Peak Wave Length λp (nm)		Δλ (nm)	Pd (mw)	If (mA)	Peak (mA)	Vf(V)		Iv (mcd)		
									Typ	Max	Typ		
T-1 Standard 1.0" Lead φ3	3004HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	3.0	60	L-001
	3004GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	15	60	
	3004ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	20	60	
	3004ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	20	60	
	3004YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	15	60	
	3004GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	40	30	
	3004ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	50	30	
	3004ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	50	30	
T-1 Standard 0.5" Lead φ3	3012HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	3.6	80	L-002
	3012GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	12	80	
	3012ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	16	80	
	3012ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	16	80	
	3012YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	12	80	



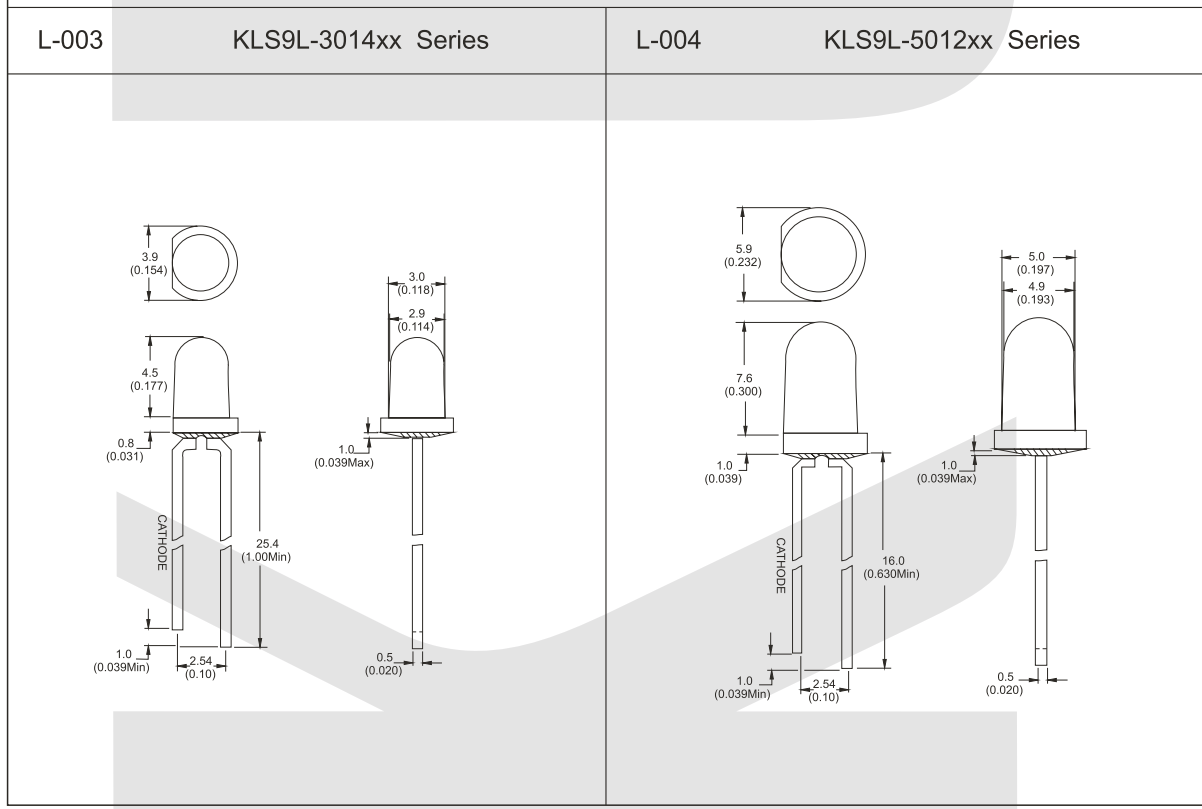
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Package	Part No. KLS9L-	Chip		Lens Appearance	Absolute Maximum Ratings				Electro-optical Data(At 20mA)			Viewing Angle 2θ1/2 (deg)	Drawing No.
		Material/Emitted Color	Peak Wave Length λp (nm)		Δλ (nm)	Pd (mw)	If (mA)	Peak (mA)	Vf(V)		Iv (mcd)		
									Typ	Max	Typ		
T-1 Standard 1.0" Lead φ3	3014HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	3.0	60	L-003
	3014GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	15	60	
	3014ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	20	60	
	3014ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	20	60	
	3014YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	15	60	
	3014GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	40	30	
	3014ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	50	30	
	3014ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	50	30	
T-1 3/4 Standard 1.0" Lead φ5	5012HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	4	80	L-004
	5012GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	14	80	
	5012ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	18	80	
	5012ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	18	80	
	5012YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	14	80	



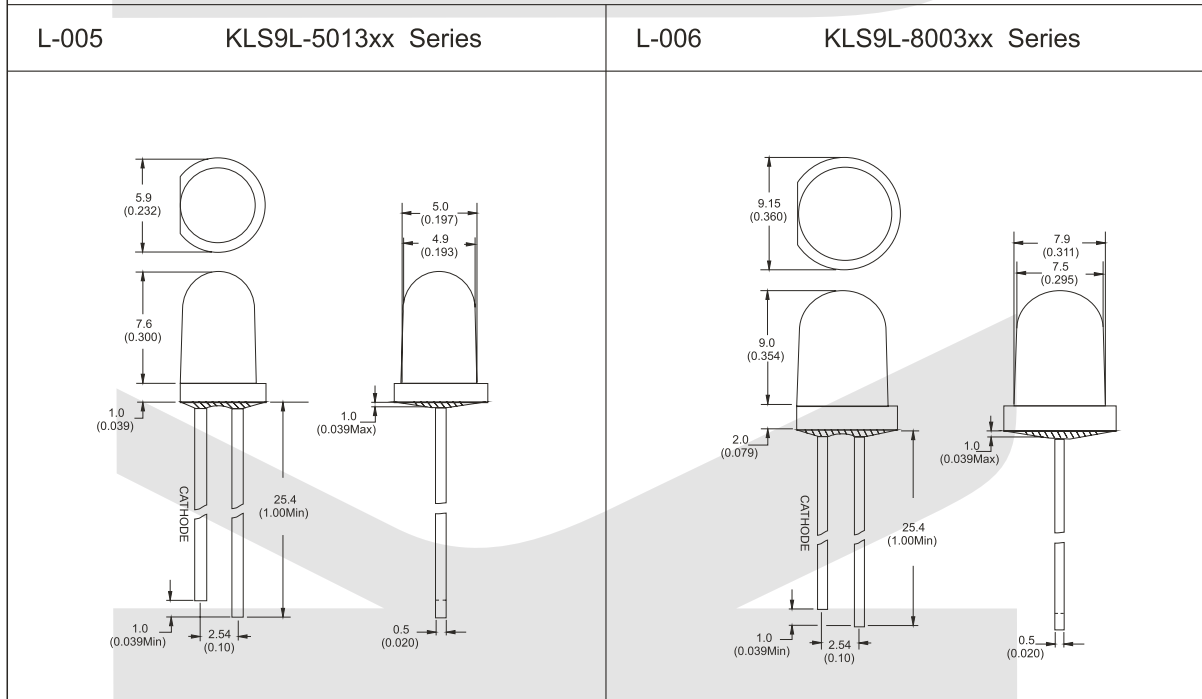
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**KLS9-L Standard LED Lamp Series**



Package	Part No. KLS9L-	Chip		Lens Appearance	Absolute Maximum Ratings				Electro-optical Data(At 20mA)			Viewing Angle 2θ1/2 (deg)	Drawing No.
		Material/Emitted Color	Peak Wave Length λp (nm)		Δλ (nm)	Pd (mw)	If (mA)	Peak (mA)	Vf(V)		Iv (mcd)		
									Typ	Max	Typ		
T-1 3/4 Standard 1.0" Lead φ5	5013HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	5	60	L-005
	5013GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	20	60	
	5013ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	30	60	
	5013ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	30	60	
	5013YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	20	60	
	5013GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	50	30	
	5013ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	80	30	
	5013ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	80	30	
	5013YT	GaAsP/GaP Yellow	585	Yellow trans	35	80	30	150	2.10	2.50	50	30	
Round 1.0" Lead φ8	8003GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	30	60	L-006
	8003ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	40	60	
	8003ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	40	60	
	8003YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	30	60	
	8003GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	60	40	
	8003ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	90	40	
	8003ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	90	40	
	8003YT	GaAsP/GaP Yellow	585	Yellow trans	35	80	30	150	2.10	2.50	60	40	



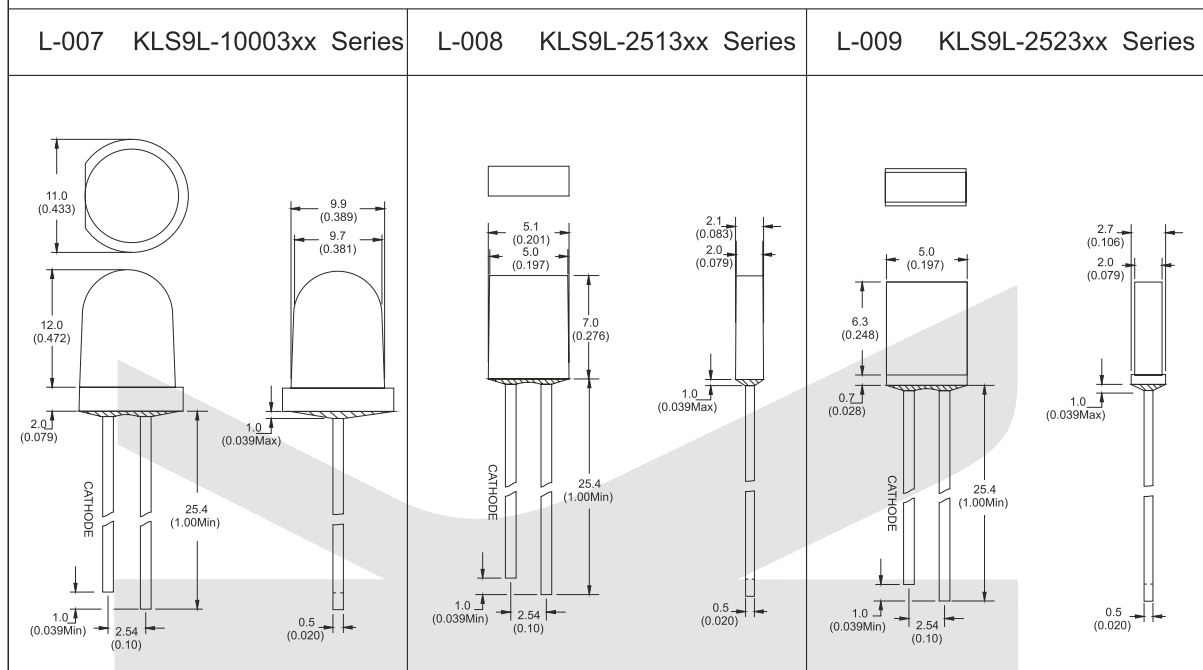
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Package	Part No. KSL9L-	Chip		Lens Appearance	Absolute Maximum Ratings				Electro-optical Data(At 20mA)			Viewing Angle 2θ1/2 (deg)	Drawing No.
		Material/Emitted Color	Peak Wave Length λp (nm)		Δλ (nm)	Pd (mw)	If (mA)	Peak (mA)	Vf(V)		Iv (mcd)		
									Typ	Max	Typ		
Round 1.0" Lead φ10	10003GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	30	60	L-007
	10003ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	40	60	
	10003ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	40	60	
	10003YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	30	60	
	10003GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	60	40	
	10003ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	90	40	
	10003ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	90	40	
2.0*5.0* 7.0mm 1.0" Lead Rectangul ar	2513HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	2	120	L-008
	2513GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	8	120	
	2513ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	10	120	
	2513ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	10	120	
	2513YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	8	120	
2.0*5.0* 7.0mm 1.0" Lead Rectangul ar	2523HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	2	120	L-009
	2523GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	8	120	
	2523ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	10	120	
	2523ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	10	120	
	2523YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	8	120	



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