#### LED Series

KLS9-L Standard LED Lamp Series

# $\frac{\text{KLS9}}{1} - \frac{\text{L}}{2} - \frac{501}{3} + \frac{3}{4} + \frac{\text{G}}{5} + \frac{\text{D}}{6} - \frac{\text{XXX}}{7}$

- 1. Brank: 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:



KLSelectronic

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1.0 \_\_\_\_\_\_2.54 (0.039Min) (0.10)

0.5



# LED Series

#### KLS9-L Standard LED Lamp Series

		Wave			A	Absolute Rat	Maximu ings	m	Electro-optical Data(At 20mA)				
Package	Part No. KLS9L-			Lens Appearance	Δ λ (nm)	Pd (mw)	If (mA)	Peak (mA)	Vf Typ	(V) Max	Iv (mcd) Typ	Viewing Angle 201/2 (deg)	Drawing No.
	3004HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	3.0	60	
	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	
T-1 Standard 1.0"	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	L-001
Lead Ø3	3004ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	50	30	
ψ3	3004ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	50	30	
	3004YT	GaAsP/GaP Yellow	585	Yellow trans	35	80	30	150	2.10	2.50	40	30	
	3012HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	3.6	80	L-002
T-1 Standard	3012GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	12	80	
0.5" Lead	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	
φ3	3012YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	12	80	
L-00	)1	KLS9L-3004	xx Se	ries	L	-002		K	LS9L-	3012>	xx Se	ries	
3.1 (0.122) 3.5 (0.133) 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0							·	3.9 0.154) 4.5 0.177)		6.0 900Min)	1.0 4 039Max)	3.0 (0.118) (0.114)	

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1.0 \_\_\_\_\_\_2.54 \_\_\_\_\_ (0.039Min) (0.10)



# LED Series

#### KLS9-L Standard LED Lamp Series

		Chip			A	Absolute 1		m		ectro-opt			
Package	Part No. KLS9L-		Peak Wave	Lens		Rat				ta(At 20r (V)	IV (mcd)	Viewing Angle 201/2	Drawin No.
	KL39L-	Material/Emitted Color	Length λp (nm)	Appearance	$\Delta \lambda$ (nm)	Pd (mw)	If (mA)	Peak (mA)	Тур	Max	Тур	(deg)	NO.
	3014HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	3.0	60	
	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	
T-1	3014ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	20	60	
Standard	3014YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	15	60	
1.0"	3014GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	40	30	L-003
Lead	3014ET	GaAsP/GaP Orange	635	Red trans	35	80	30	150	2.10	2.50	50	30	
φ3	3014ET-E	GaAsP/GaP Orange	635	Orange trans	35	80	30	150	2.10	2.50	50	30	
	3014YT	GaAsP/GaP Yellow	585	Yellow trans	35	80	30	150	2.10	2.50	40	30	
T-1 3/4	5012HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	4	80	
I-I 3/4 Standard	5012GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	14	80	L-004
1.0"	5012ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	18	80	
Lead	5012ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	18	80	
φ5	5012YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	14	80	
L-00		KLS9L-3014	+77 36		L	-004			LO9L-	.30127	x Se	lies	
	3.9 (0.154) 4.5 (0.177) (0.031) 0.8	1.0. (0.039Max	3.0 (0.118) 2.9 (0.114)			(0	5.9 (0.232) 7.6 (0.300) 1.0 1.0 3.039)		)) ) 16.0 (0.630M	1.0 (0.039Max	(0.19	9 _	
25.4 0.039Min) (0.039Min) -2.54 (0.020) -2.54 (0.020) -2.54 (0.020)								51 1	1 (0.630M				

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# LED Series

#### KLS9-L Standard LED Lamp Series

		Chip		A	Absolute Rat	Maximu ings	m	Electro-optical Data(At 20mA)					
Package	Part No. KLS9L-	Material/Emitted Color		Peak Lens Wave Appearance Length λp (nm)		Pd (mw)	If (mA)	Peak (mA)	Vfi Typ	(V) Max	Iv (mcd) Typ	Viewing Angle 201/2 (deg)	Drawing No.
	5013HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	5	60	
	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	
T-1 3/4	5013ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	30	60	
Standard	5013YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	20	60	L-005
Lead	5013GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	50	30	L-005
φ5	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	
	8003GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	30	60	
	8003ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	40	60	
Round	8003ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	40	60	
1.0"	8003YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	30	60	L-006
Lead	8003GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	60	40	2000
φ8	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	
L-005 KLS9L-5013xx Series						-006	9.16 (0.364 (0.354 (0.354 (0.354 (0.079)			8003; (0.039	+	7.9 (0.31) 7.5 (0.295) +	

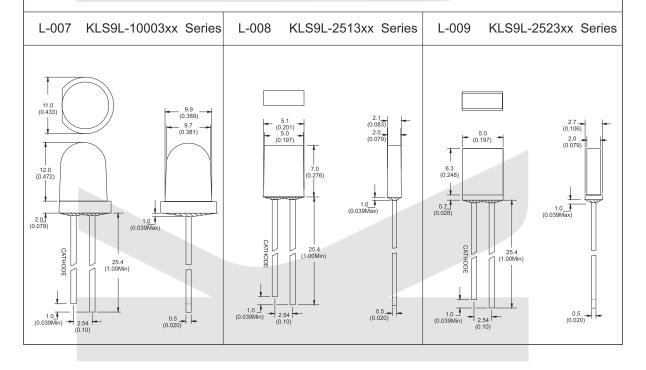
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# LED Series

# KLS9-L Standard LED Lamp Series

Package		Chip			A	bsolute Rat	Maximu ings	m	Electro-optical Data(At 20mA)				
	Part No. KSL9L-	Material/Emitted	Peak Wave	Lens Appearance	$\wedge \lambda$	Pd (mw)	If (mA)	Peak (mA)	Vf(V)		Iv (mcd)	Viewing Angle 201/2	Drawing No.
	KSE/E-	Color	Length λp (nm)	n	(nm)				Тур	Max	Тур	(deg)	1.0.
	10003GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	30	60	
	10003ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	40	60	
Round	10003ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	40	60	
1.0"	10003YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	30	60	L-007
Lead	10003GT	GaP/GaP Green	568	Green trans	30	80	30	150	2.20	2.50	60	40	L-007
φ10	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	
	10003YT	GaAsP/GaP Yellow	585	Yellow trans	35	80	30	150	2.10	2.50	60	40	
2.0*5.0*	2513HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	2	120	
7.0mm	2513GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	8	120	
1.0" Lead	2513ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	10	120	L-008
Rectangul	2513ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	10	120	
ar	2513YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	8	120	
2.0*5.0*	2523HD	GaP/GaP Red	700	Red diffused	90	40	15	50	2.25	2.60	2	120	
7.0mm	2523GD	GaP/GaP Green	568	Green diffused	30	80	30	150	2.20	2.50	8	120	
1.0" Lead	2523ED	GaAsP/GaP Orange	635	Red diffused	35	80	30	150	2.10	2.50	10	120	L-009
Rectangul	2523ED-E	GaAsP/GaP Orange	635	Orange diffused	35	80	30	150	2.10	2.50	10	120	
ar	2523YD	GaAsP/GaP Yellow	585	Yellow diffused	35	80	30	150	2.10	2.50	8	120	



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