
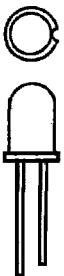




# SELECTION GUIDE

## • ULTRA BRIGHT LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY ***I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 3/4 Narrow Viewing Angle 1" Lead 5 φ	LTL-353CK-L2	GaAlAs Red (660 nm)	Water Clear	300 mcd	12 °	1.8V	7-25
		LTL-353CK-H3		Water Clear	700 mcd	12 °		
		LTL-353CK-H4		Water Clear	1000 mcd	12 °		
		LTL-353URK		Water Clear	2300 mcd	12 °		
	T-1 3/4 Standard 1" Lead 5 φ	LTL-307CK	GaAlAs Red (660 nm)	Water Clear	200 mcd	35 °	1.8V	7-28
		LTL-307URK		Water Clear	700 mcd	35 °		
	T-1 3/4 Standard 1" Lead 5 φ	LTL-4263	GaAlAs Red (660 nm)	Diffused	135 mcd	40 °	1.8V	7-31
		LTL-4264-H4		Transparent	270 mcd	16 °		
		LTL-4264-H3		Transparent	220 mcd	16 °		
		LTL-4268-H4		Water Clear	270 mcd	16 °		
		LTL-4268-H3		Water Clear	220 mcd	16 °		
		LTL-4268UR		Water Clear	1200 mcd	16 °		
	Medium Profile 4.8 φ Flange- less	LTL-387URK	GaAlAs Red (660 nm)	Water Clear	840 mcd	25 °	1.8V	7-34

Notes:



\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

\*\*\* The luminous intensity of LTL-353 serial are not include 15% Tolerance.

# SELECTION GUIDE

## • ULTRA BRIGHT LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** ( λ P)	LENS				
	T-1 Standard 1" Lead 3 φ	LTL-4261N	GaAlAs Red (660 nm)	Diffused	60 mcd	60 °	1.8V	7-37
		LTL-4261NR						
		LTL-4262N		Transparent	135 mcd	45 °		
		LTL-4262NR						
		LTL-4266N		Water Clear	170 mcd	45 °		
		LTL-4266NR						
	Rectangular Bar	LTL-3262WC	GaAlAs Red (660 nm)	Water Clear	40 mcd	80 °	1.8V	7-40

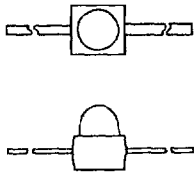
Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

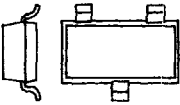
\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • AXIAL LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	Subminiature Lamp	LTL-93BCK1	GaAlAs Red (660nm)	Water Clear	200 mcd @ 20mA	34°	1.8V	7-43
		LTL-93BPK1	Bright Red (697 nm)	Water Clear	8.7 mcd	34°	2.1V	
		LTL-93BEK1	Hi. Eff. Red (635 nm)	Water Clear	19 mcd	34°	2.0V	
		LTL-93BGK1	Green (565 nm)	Water Clear	19 mcd	34°	2.1V	
		LTL-93BYK1	Yellow (585 nm)	Water Clear	19 mcd	34°	2.1V	
		LTL-93BCA1	GaAlAs Red (660nm)	Diffused	60 mcd @ 20mA	90°	1.8V	
		LTL-93BPA1	Bright Red (697 nm)	Diffused	1.7 mcd	90°	2.1V	
		LTL-93BHRA1	Hi. Eff. Red (635 nm)	Diffused	8.7 mcd	90°	2.0V	
		LTL-93BGA1	Green (565 nm)	Diffused	3.7 mcd	90°	2.1V	
		LTL-93BYA1	Yellow (585 nm)	Diffused	5.6 mcd	90°	2.1V	

## • SURFACE MOUNT LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	SOT-23 Surface Mount LED Lamp	LTL-907CK	GaAlAs Red (660nm)	Water Clear	12.6 mcd	140°	1.8V	7-50
		LTL-907PK	Bright Red (697 nm)	Water Clear	1.1 mcd	140°	2.1V	
		LTL-907LK	Green (565 nm)	Water Clear	2.8 mcd	140°	2.1V	
		LTL-907EK	Orange (630 nm)	Water Clear	5.6 mcd	140°	2.0V	
		LTL-907YK	Yellow (585 nm)	Water Clear	2.8 mcd	140°	2.1V	
		LTL-907HK	Green	Water Clear	2.8 mcd	140°	2.1V	7-54
			Orange		5.6 mcd		2.0V	
		LTL-907NK	GaAlAs Red GaAlAs Red	Water Clear	12.6 mcd	140°	1.8V	
		LTL-907JK	Orange Orange	Water Clear	5.6 mcd	140°	2.0V	


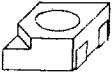
Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • SURFACE MOUNT LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	PLCC Surface Mount LED Lamp	LTL-94PURK	GaAlAs Red (660 nm)	Water Clear	80.0 mcd @ 20mA	120 °	1.8V	7-59
		LTL-94PCK	GaAlAs Red (660 nm)	Water Clear	50.0 mcd @ 20mA	120 °	1.8V	
		LTL-94PEK	Orange (630 nm)	Water Clear	8.0 mcd	120 °	2.0V	
		LTL-94PGK	Green (565 nm)	Water Clear	8.0 mcd	120 °	2.1V	
		LTL-94PKK	Pure Green (555 nm)	Water Clear	2.5 mcd	120 °	2.1V	
		LTL-94PYK	Yellow (585 nm)	Water Clear	8.0 mcd	120 °	2.1V	
		LTL-94PAK	Amber (610 nm)	Water Clear	8.0 mcd	120 °	2.1V	
	PLCC Surface Mount LED Lamp	LTL-94THK	Green	Water Clear	15.0 mcd @ 20mA	120 °	2.1V	7-66
			Orange				2.0V	
		LTL-94TDK	Green	Water Clear	15.0 mcd @ 20mA	120 °	2.1V	
			Yellow				2.1V	

Notes:

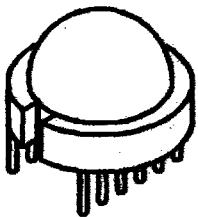
\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).





# SELECTION GUIDE

## • BIG LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ <sub>1/2</sub> *	V <sub>f</sub> TYP. @ 10mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	12 Pin DIP. Centers 20 φ	LTJ-811HR	Hi. Eff. Red (635 nm)	Diffused	25.0 mcd	180°	2.0V	7-73
		LTJ-811G	Green (565 nm)	Diffused	25.0 mcd	180°	2.1V	
		LTJ-811Y	Yellow (585 nm)	Diffused	25.0 mcd	180°	2.1V	

## • BLUE LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ <sub>1/2</sub> *	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 1/4 Narrow Viewing Angle 1" Lead 5 φ	LTL-353BJ	Blue (470 nm)	White	2.5 mcd	40°	3.0V	7-77
		LTL-353BK		Water Clear	19 mcd	12°	3.0V	
	T-1 Standard 1" Lead 3 φ	LTL-42B5	Blue (470 nm)	White	3.7 mcd	40°	3.0V	
		LTL-42B6		Water Clear	12.6 mcd	20°	3.0V	


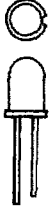
Notes:

\* 2 θ<sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.


\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • LOW CURRENT LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 2mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 2mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 Standard 1" Lead 3 φ	LTL-4221NLC	Hi. Eff. Red (635 nm)	Diffused	2.5 mcd	60 °	1.7V	7-81
		LTL-4231NLC	Green (565 nm)	Diffused	1.1 mcd	60 °	1.9V	
		LTL-4251NLC	Yellow (585 nm)	Diffused	1.1 mcd	60 °	1.8V	
	T-1 3/4 Standard 1" Lead 5 φ	LTL-307ELC	Hi. Eff. Red (635 nm)	Diffused	3.7 mcd	50 °	1.7V	
		LTL-307GLC	Green (565 nm)	Diffused	3.7 mcd	50 °	1.9V	
		LTL-307YLC	Yellow (585 nm)	Diffused	3.7 mcd	50 °	1.8V	

## • STANDARD LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 Standard High performance 1" Lead 3 φ	LTL-4201	Red (655 nm)	Diffused	0.8 mcd	40 °	1.7V	7-85
		LTL-4202		Transparent	4.0 mcd	20 °		
		LTL-4211	Bright Red (697 nm)	Diffused	2.5 mcd	40 °	2.1V	
		LTL-4212		Transparent	3.7 mcd	20 °		
		LTL-4221	Hi. Eff. Red (635 nm)	Diffused	8.7 mcd	40 °	2.0V	
		LTL-4222		Transparent	29 mcd	20 °		
		LTL-4231	Green (565 nm)	Diffused	12.6 mcd	40 °	2.1V	
		LTL-4232		Transparent	40 mcd	20 °		
		LTL-4251	Yellow (585 nm)	Diffused	8.7 mcd	40 °	2.1V	
		LTL-4252		Transparent	19 mcd	20 °		
		LTL-4291	Orange (630 nm)	Diffused	12.6 mcd	40 °	2.0V	
		LTL-4292		Transparent	29 mcd	20 °		

Notes:


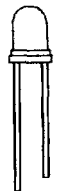
\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

LED  
LAMPS

# SELECTION GUIDE

## • STANDARD LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 Standard 1" Lead 3 φ	LTL-4201N	Red (655 nm)	Diffused	1.1 mcd	60°	1.7V	7-85
		LTL-4206N		Transparent	3.7 mcd	45°		
		LTL-4211N	Bright Red (697 nm)	Diffused	4.4 mcd	60°	2.1V	
		LTL-4212N		Transparent	5.6 mcd	45°		
		LTL-4221N	Hi. Eff. Red (635 nm)	Diffused	8.7 mcd	60°	2.0V	
		LTL-4222N		Transparent	29 mcd	45°		
		LTL-4231N	Green (565 nm)	Diffused	12.6 mcd	60°	2.1V	
		LTL-4232N		Transparent	40 mcd	45°		
		LTL-4236N		Water Clear	29 mcd	45°		
		LTL-4251N	Yellow (585 nm)	Diffused	5.6 mcd	60°	2.1V	
		LTL-4252N		Transparent	19 mcd	45°		
		LTL-4256N		Water Clear	19 mcd	45°		
		LTL-4291N	Orange (630 nm)	Diffused	8.7 mcd	60°	2.0V	
		LTL-4292N		Transparent	19 mcd	45°		
LTL-4296N	Water Clear	29 mcd		45°				
	T-1 Standard 1" Lead 3 φ	LTL-16KR	Red (655 nm)	Diffused	1.1 mcd	60°	1.7V	7-95
		LTL-16KRE		Transparent	3.7 mcd	45°		
		LTL-16KP	Bright Red (697 nm)	Diffused	4.4 mcd	60°	2.1V	
		LTL-16KPE		Transparent	8.7 mcd	45°		
		LTL-16KE	Hi. Eff. Red (635 nm)	Diffused	12.6 mcd	60°	2.0V	
		LTL-16KEE		Transparent	19 mcd	45°		
		LTL-16KG	Green (565 nm)	Diffused	12.6 mcd	60°	2.1V	
		LTL-16KGE		Transparent	40 mcd	45°		
		LTL-16KY	Yellow (585 nm)	Diffused	8.7 mcd	60°	2.1V	
		LTL-16KYE		Transparent	40 mcd	45°		


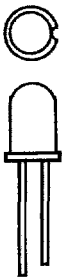
Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • STANDARD LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 <sup>3/4</sup> Standard 1" Lead High Perfor- mance 5 φ	LTL-4203	Red (655 nm)	Diffused	0.8 mcd	36°	1.7V	7-101
		LTL-4204		Transparent	5.5 mcd	16°		
		LTL-4213	Bright Red (697 nm)	Diffused	3.8 mcd	36°	2.1V	
		LTL-4214		Transparent	19 mcd	16°		
		LTL-4223	Hi. Eff. Red (635 nm)	Diffused	19 mcd	36°	2.0V	
		LTL-4224		Transparent	90 mcd	16°		
		LTL-4233	Green (565 nm)	Diffused	19 mcd	36°	2.1V	
		LTL-4234		Transparent	60 mcd	16°		
		LTL-4253	Yellow (585 nm)	Diffused	8.7 mcd	36°	2.1V	
		LTL-4254		Transparent	90 mcd	16°		
		LTL-4293	Orange (630 nm)	Diffused	29 mcd	36°	2.0V	
		LTL-4294		Transparent	90 mcd	16°		
	T-1 <sup>3/4</sup> Standard 1" Lead 5 φ	LTL-307R	Red (655 nm)	Diffused	1.7 mcd	50°	1.7V	7-101
		LTL-307RE		Transparent	3.7 mcd	40°		
		LTL-307P	Bright Red (697 nm)	Diffused	5.6 mcd	50°	2.1V	
		LTL-307PE		Transparent	8.7 mcd	40°		
		LTL-307E	Hi. Eff. Red (635 nm)	Diffused	19.0 mcd	50°	2.0V	
		LTL-307EE		Transparent	90 mcd	40°		
		LTL-307G	Green (565 nm)	Diffused	19.0 mcd	50°	2.1V	
		LTL-307GE		Transparent	60.0 mcd	40°		
		LTL-307Y	Yellow (585 nm)	Diffused	29.0 mcd	50°	2.1V	
		LTL-307YE		Transparent	40.0 mcd	40°		

Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.




\*\* Peak Emission wavelength (nm).

LED  
LAMPS




# SELECTION GUIDE

## ● STANDARD LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	T-1 3/4 Low Profile 5 φ	LTL-5224	Hi. Eff. Red (635 nm)	Transparent	29 mcd	44 °	2.0V	7-111
		LTL-5234	Green (565 nm)	Transparent	40 mcd	44 °	2.1V	
		LTL-5254	Yellow (585 nm)	Transparent	12.6 mcd	44 °	2.1V	
 	Dot point 1.8 φ	LTL-709P	Bright Red (697 nm)	Diffused	3.7 mcd	38 °	2.1V	7-115
		LTL-709E	Hi. Eff. Red (635 nm)	Diffused	12.6 mcd	38 °	2.0V	
		LTL-709L	Green (565 nm)	Diffused	8.7 mcd	38 °	2.1V	
		LTL-709Y	Yellow (585 nm)	Diffused	12.6 mcd	38 °	2.1V	

## ● SPECIAL LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	Panel Dot Indicators	LTL-1214A	Bright Red (697 nm)	Diffused	1.1 mcd	120 °	2.1V	7-119
		LTL-1234A	Green (565 nm)	Diffused	2.5 mcd	120 °	2.1V	
		LTL-1254A	Yellow (585 nm)	Diffused	3.7 mcd	120 °	2.1V	
		LTL-1294A	Orange (630 nm)	Diffused	2.5 mcd	120 °	2.0V	





Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • SPECIAL LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY lv TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 $\theta$ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** ( $\lambda$ P)	LENS				
	Arrow Head Pointers	LTL-8212A	Bright Red (697 nm)	Diffused	0.7 mcd	100°	2.1V	7-123
		LTL-8222A	Hi. Eff. Red (635 nm)	Diffused	2.5 mcd	100°	2.0V	
		LTL-8232A	Green (565 nm)	Diffused	2.5 mcd	100°	2.1V	
	Cylindrical 1" Lead 3 $\phi$	LTL-2211AL	Bright Red (697 nm)	Diffused	1.1 mcd	180°	2.1V	7-127
		LTL-2231AL	Green (565 nm)	Diffused	3.7 mcd	180°	2.1V	
		LTL-2251AL	Yellow (585 nm)	Diffused	2.5 mcd	180°	2.1V	
		LTL-2291AL	Orange (630 nm)	Diffused	2.5 mcd	180°	2.0V	
	2.0mm x 4.0mm Rectangular Bars	LTL-403P	Bright Red (697 nm)	Diffused	1.1 mcd	104°	2.1V	7-131
		LTL-403HR	Hi. Eff. Red (635 nm)	Diffused	3.7 mcd	104°	2.0V	
		LTL-403G	Green (565 nm)	Diffused	3.7 mcd	104°	2.1V	
		LTL-403Y	Yellow (585 nm)	Diffused	2.5 mcd	104°	2.1V	
	2.0mm x 5.0mm Rectangular Bars	LTL-3201A	Red (655 nm)	Diffused	0.3 mcd	140°	1.7V	7-135
		LTL-3211A	Bright Red (697 nm)	Diffused	1.1 mcd	140°	2.1V	
		LTL-3221A	Hi. Eff. Red (635 nm)	Diffused	3.7 mcd	140°	2.0V	
		LTL-3231A	Green (565 nm)	Diffused	2.5 mcd	140°	2.1V	
		LTL-3251A	Yellow (585 nm)	Diffused	3.7 mcd	140°	2.1V	
		LTL-3291A	Orange (630 nm)	Diffused	3.7 mcd	140°	2.0V	

Notes:




\*  $2 \theta$  1/2 is the off axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).


LED LAMPS

# SELECTION GUIDE

## • SPECIAL LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	2.0mm x 5.0mm Rectangular Bars Flangeless	LTL-433P	Bright Red (697 nm)	Diffused	1.1 mcd	140°	2.1V	7-139
		LTL-433G	Green (565 nm)	Diffused	3.7 mcd	140°	2.1V	
		LTL-433Y	Yellow (585 nm)	Diffused	3.7 mcd	140°	2.1V	
		LTL-433EA	Orange (630 nm)	Diffused	3.7 mcd	140°	2.0V	
	1.0mm x 5.0mm Rectangular Bars	LTL-3218A	Bright Red (697 nm)	Diffused	1.1 mcd	106°	2.1V	7-143
		LTL-3238A	Green (565 nm)	Diffused	3.7 mcd	106°	2.1V	
		LTL-3258A	Yellow (585 nm)	Diffused	2.5 mcd	106°	2.1V	
		LTL-3278A	Amber (600 nm)	Diffused	2.5 mcd	106°	2.1V	
	2.5mm x 7.1mm Rectangular Bars	LTL-3213A	Bright Red (697 nm)	Diffused	0.7 mcd	130°	2.0V	7-147
		LTL-3223A	Hi. Eff. Red (635 nm)	Diffused	5.6 mcd	130°	2.1V	
		LTL-3233A	Green (565 nm)	Diffused	3.7 mcd	130°	2.1V	
		LTL-3253A	Yellow (585 nm)	Diffused	1.7 mcd	130°	2.1V	
		LTL-3293A	Orange (630 nm)	Diffused	5.6 mcd	130°	2.0V	

## • SPECIAL LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	3.2mm x 5.6mm Reflector Cap Rectangular Bars	LTL-33221AA	Hi. Eff. Red (635 nm)	Diffused	5.6 mcd	100°	2.0V	7-151
		LTL-33231AA	Green (565 nm)	Diffused	5.6 mcd	100°	2.1V	
		LTL-33251AA	Yellow (585 nm)	Diffused	8.7 mcd	100°	2.1V	

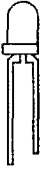



Notes:

\* 2θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • DUAL COLOR LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	BiPolar T-1 Standard Lamp	LTL-10CEJ	Hi. Eff. Red (635 nm) 2pcs	White Diffused	12.6 mcd	72°	2.0V	7-155
		LTL-10CGJ	Green (565 nm) 2pcs	White Diffused	12.6 mcd	72°	2.1V	7-158
		LTL-10CYJ	Yellow (585 nm) 2pcs	White Diffused	8.7 mcd	72°	2.1V	7-161
	Bi-Color T-1 Standard Lamp	LTL-10CDJ	Green	White Diffused	12.6 mcd	72°	2.1V	7-164
			Yellow		8.7 mcd		2.1V	
		LTL-10CHJ	Green	White Diffused	12.6 mcd	72°	2.1V	7-167
			Orange		8.7 mcd		2.0V	
	BiPolar T-1 Lamp	LTL-14CYJ	Yellow (585 nm) 2pcs	White Diffused	8.7 mcd	80°	2.1V	7-170
	Bi-Color T-1 LED Lamp	LTL-14CDJ	Green	White Diffused	12.6 mcd	80°	2.1V	7-173
			Yellow		8.7 mcd		2.1V	
		LTL-14CHJ	Green	White Diffused	4.8 mcd	200°	2.1V	7-176
			Orange		4.8 mcd		2.0V	

Notes:


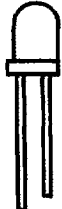

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

LED  
LAMPS

# SELECTION GUIDE

## • DUAL COLOR LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR**	LENS				
	BiPolar T-1 3/4 Standard Lamp	LTL-298EJ	Hi. Eff. Red (635 nm) 2pcs	White Diffused	19 mcd	50°	2.0V	7-179
		LTL-298GJ	Green (565 nm) 2pcs	White Diffused	19 mcd	50°	2.1V	7-182
		LTL-298YJ	Yellow (585 nm) 2pcs	White Diffused	12.6 mcd	50°	2.1V	7-185
	Bi-Color T-1 3/4 Standard Lamp	LTL-298DJ	Green	White Diffused	19 mcd	50°	2.1V	7-188
			Yellow		12.6 mcd		2.1V	
		LTL-298VJ	Green	White Diffused	19 mcd	50°	2.1V	7-191
			Red		2.5 mcd		1.7V	
		LTL-298WJ	Green	White Diffused	19 mcd	50°	2.1V	7-194
			Orange		19 mcd		2.0V	
LTL-293SJ	Green	White Diffused	40 mcd	60°	2.1V	7-197		
	GaAlAs Red		90 mcd		1.8V			
	T-1 3/4 Dual Color Indicator	LTL-30EDJ	Green	White Diffused	29 mcd	30°	2.1V	7-200
			Yellow		29 mcd		2.1V	
		LTL-30EFJ	Green	White Diffused	29 mcd	30°	2.1V	7-203
			Bright Red		3.7 mcd		2.1V	
		LTL-30EHJ	Green	White Diffused	29 mcd	30°	2.1V	7-206
			Orange		40 mcd		2.0V	
LTL-30EG	Green (565 nm) 2pcs	Green Diffused	29 mcd	30°	2.1V	7-209		




Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wavelength (nm).

# SELECTION GUIDE

## • DUAL COLOR LED LAMPS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 20mA	TYPICAL VIEWING ANGLE 2 θ 1/2 *	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR**	LENS				
	Dual Color Indicator 2.0mm x 5.0mm	LTL-58EHJ	Green	White Diffused	8.7 mcd	100 °	2.1V	7-212
			Orange		5.6 mcd		2.0V	
		LTL-58EFJ	Green	White Diffused	8.7 mcd	100 °	2.1V	7-215
			Bright Red		1.1 mcd		2.1V	
	Dual Color Indicator 1.0mm x 5.0mm	LTL-7AEFJ	Green	White Diffused	5.6 mcd	120 °	2.1V	7-218
			Bright Red		0.8 mcd		2.1V	
		LTL-7AEDJ	Green	White Diffused	5.6 mcd	120 °	2.1V	7-221
			Yellow		5.6 mcd		2.1V	
	Dual Color Indicator 3.0mm x 4.5mm	LTL-7BEHJ	Green	White Diffused	5.6 mcd	100 °	2.1V	7-224
			Orange		5.6 mcd		2.0V	

Notes:

- \* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- \*\* Peak Emission wavelength (nm).



# SELECTION GUIDE

## ● TAPE AND REEL RAIDIAL TAPE AND REEL

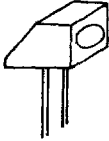
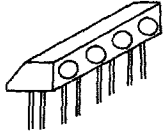
OUTLINE	OPTION CODE	DESCRIPTION	PAGE NO.
	.001 .011 .021 .031 .041 .051	5mm(0.197") Preformed Leads With -001 : 2.5mm(0.1") -011 : 4.0mm(0.157") -021 : 7.5mm(0.295") -031 : 10.0mm(0.394") -041 : 6.5mm(0.256") -051 : 5.8mm(0.228") from Seating Plane to Lamp Bottom.	7-227
	.002 .012 .022	2.54mm(0.1") Straight Leads With -002 : 18mm(0.709") -012 : 22mm(0.866") -022 : 26mm(1.024") from Feed Hole to Lamp Bottom.	7-227

## SURFACE MOUNT TAPE AND REEL

OUTLINE	OPTION CODE	DESCRIPTION	PAGE NO.
	LTL-907TA	Available with choice of orientation	7-232
	M-TA	Gull Wing, Tape and Reel, 1500 Lamp per Reel	7-235
	P-TA	Yoke Lead, Tape and Reel, 1500 Lamp per Reel	7-235
	Z-TA	Z-Bend, Tape and Reel, 1500 Lamp Per Reel	7-235
	LTL-94P-TA	Tape and Reel, 1500 Lamp per Reel	7-59

# SELECTION GUIDE

## • LED CIRCUIT BOARD AND PANEL MOUNTED INDICATORS

OUTLINE	DEVICE		DESCRIPTION		LUMINOUS INTENSITY I <sub>v</sub> TYP. @ 10mA	TYPICAL VIEWING ANGLE 2 θ 1/2*	V <sub>f</sub> TYP. @ 20mA	PAGE NO.
	PACKAGE	PART NO.	COLOR** (λ P)	LENS				
	Logic-status Indicators Holder with LTL-10200W Lamp series	LTL-503-11	Red (655 nm)	Diffused	1.1 mcd	60°	1.7V	7-244
		LTL-533-11	Green (565 nm)	Diffused	40 mcd	60°	2.1V	
		LTL-553-11	Yellow (585 nm)	Diffused	12.6 mcd	60°	2.1V	
		LTL-503-14	Red (655 nm)	Diffused	1.1 mcd	60°	1.7V	
		LTL-533-14	Green (565 nm)	Diffused	40 mcd	60°	2.1V	
		LTL-553-14	Yellow (585 nm)	Diffused	12.6 mcd	60°	2.1V	

Notes:

\* 2 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

\*\* Peak Emission wave length (nm).