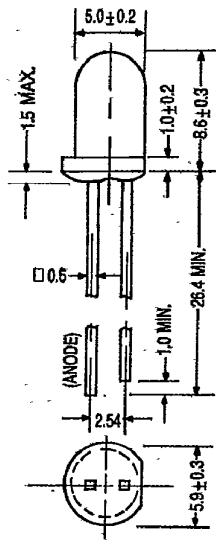


## 333 SERIES (T-1 3/4) Round Type LED Lamps (5mm)

### MAIN FEATURES:

- LOW COST.
- HIGH LIGHT OUTPUT.
- I.C. COMPATIBLE/LOW CURRENT REQUIREMENTS.
- POPULAR T-1 3/4 DIAMETER, 1" LEAD LENGTH.
- WIDE AND NARROW VIEWING ANGLE TYPES.

### Package Dimensions:



### DESCRIPTION:

The 333RD/RT series are Gallium Arsenide Phosphide red light emitting diodes. The 333HD/HT, 333GD/GT/SGD/SGT and 333PYD/PYT series are Gallium Phosphide bright red, green and yellow light emitting diodes respectively. The 333YD/YT, 333ED/ET, 333ID/IT series are Gallium Arsenide Phosphide on Gallium Phosphide yellow, orange, hi-efficiency red and amber light emitting diodes respectively. General purpose and selected brightness versions of both diffused and non-diffused lens types are available in each series.

### ABSOLUTE MAXIMUM RATINGS: (Ta = 25°C)

Reverse Voltage	:	5 Volt
Reverse Current (Vr = 5V)	:	10µA
Operating Temperature Range:	:	-40°C To 85°C
Storage Temperature Range	:	-40°C To 100°C
Lead Soldering Temperature	:	260°C For 5 Seconds (1.6 mm (1/16 inch) From Body)

NOTE: 1. All dimensions are in millimeters.

2. Lead spacing is measured where the leads emerge from the package.

3. Protruded resin under flange 1.5 mm (0.059") Max.

### PART SELECTION AND APPLICATION INFORMATION (RATINGS AT 25°C AMBIENT)

Type No.	Chip		Lens Color	Peak Wave Length λp(nm)	Absolute Maximum Ratings				Electro-Optical Characteristic						Viewing Angle 2θ½ (deg)	Remark	
	Material	Emitted Color			Δλ (nm)	Pd (mw)	If (mA)	Peak If (mA)	Vf (V)			Rec If (mA)	Iv (mcd)				
								Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.		
EL333RD	GaAsP	Red	Red Diffused	655	40	110	40	200	1.5	1.7	2.0	10~20	0.3	1.1	36	**	
EL333HD	GaP	Bright Red	Red Diffused	697	90	45	15	50	1.7	2.1	2.8	5~10	1.0	2.0	36	**	
EL333ID	GaAsP/GaP	Hi-Eff Red	Red Diffused	635	45	100	30	160	1.7	2.0	2.8	10~20	2.5	10.0	36	**	
EL333SGD	GaP	Green	Green Diffused	560	30	100	30	160	1.7	2.1	2.8	10~20	2.0	7.0	36	**	
EL333GD	GaP	Green	Green Diffused	565	30	100	30	160	1.7	2.1	2.8	10~20	2.0	10.0	36	*	
EL333PYD	GaP	Yellow	Yellow Diffused	570	30	100	30	160	1.7	2.0	2.8	10~20	2.0	10.0	36	*	
EL333YD	GaAsP/GaP	Yellow	Yellow Diffused	585	35	85	20	160	1.7	2.0	2.8	10~20	2.0	10.0	36	*	
EL333ED	GaAsP/GaP	Orange	Orange Diffused	635	45	100	30	160	1.7	2.0	2.8	10~20	2.5	9.0	36	*	
EL333RT	GaAsP	Red	Red Trans.	655	40	110	40	200	1.5	1.7	2.0	10~20	1.7	5.0	16	*	
EL333HT	GaP	Bright Red	Red Trans.	697	90	45	15	50	1.7	2.1	2.8	5~10	1.5	8.0	16	*	
EL333IT	GaAsP/GaP	Hi-Eff Red	Red Trans.	635	45	100	30	160	1.7	2.0	2.8	10~20	10.0	30.0	16	*	
EL333SGT	GaP	Green	Green Trans.	560	30	100	30	160	1.7	2.1	2.8	10~20	10.0	30.0	16	*	
EL333GT	GaP	Green	Green Trans.	565	30	100	30	160	1.7	2.1	2.8	10~20	10.0	30.0	16	*	
EL333PYT	GaP	Yellow	Yellow Trans.	570	30	100	30	160	1.7	2.0	2.8	10~20	9.0	28.0	16	*	
EL333YT	GaAsP/GaP	Yellow	Yellow Trans.	585	35	85	20	160	1.7	2.0	2.8	10~20	9.0	28.0	16	*	
EL333ET	GaAsP/GaP	Orange	Orange Trans.	635	45	100	30	160	1.7	2.0	2.8	10~20	10.0	30.0	16	*	

### TEST CONDITION FOR EACH PARAMETER:

#### PARAMETER:

REVERSE VOLTAGE  
REVERSE CURRENT  
FORWARD VOLTAGE  
LUMINOUS INTENSITY  
VIEWING ANGLE  
SPECTRAL LINE HALF-WIDTH  
POWER DISSIPATION  
PEAK FORWARD CURRENT (Duty 1/10 @ 1KHz)  
RECOMMENDED OPERATING CURRENT

#### SYMBOL

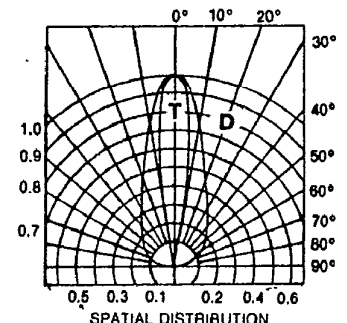
Vr  
Ir  
Vf  
Iv  
2θ½  
Δλ  
Pd  
If (Peak)  
If (Rec)

#### UNIT

VOLT  
µA  
VOLT  
MCD  
DEGREE  
nm  
mW  
mA  
mA

#### TEST CONDITION

Vr = 5.0 Volt  
If = 20mA  
If = 10mA  
If = 20mA



Remark: \*\*The most popular types    \*Common types    The rest are special types  
Hi-Eff Red → High Efficiency Red  
Trans → Transparent