

HLMP-1301, HLMP-1401, HLMP-1503, HLMP-K401, HLMP-K600 T-1 (3 mm) Diffused LED Lamps



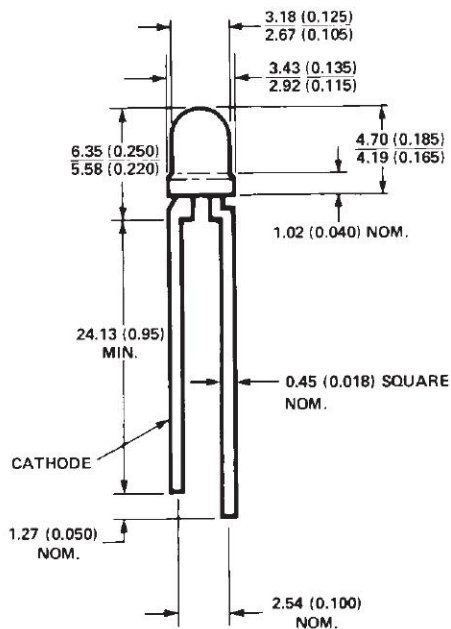
Data Sheet



Description

This family of T-1 lamps is widely used in general purpose indicator applications. Diffusants, tints, and optical design are balanced to yield superior light output and wide viewing angles. Several intensity choices are available in each color for increased design flexibility.

Package Dimensions



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (INCHES).
2. AN EPOXY MENISCUS MAY EXTEND ABOUT 1mm (0.040") DOWN THE LEADS.

Features

- High intensity
- Choice of 4 bright colors
 - High Efficiency Red
 - Orange
 - Yellow
 - High Performance Green
- Popular T-1 diameter package
- Selected minimum intensities
- Wide viewing angle
- General purpose leads
- Reliable and rugged
- Available on tape and reel

Selection Guide

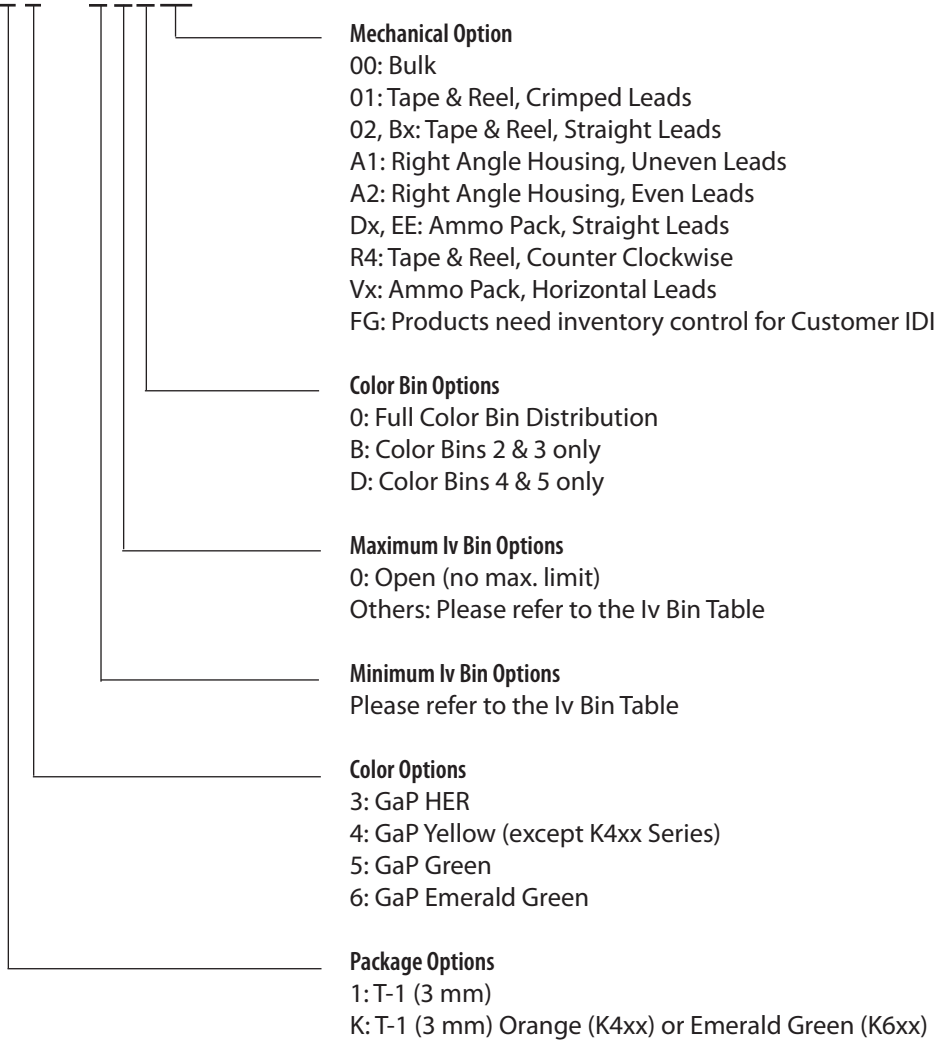
Material	Color	Part Number	Luminous Intensity I _v (mcd) at 10 mA	
			Min.	Max.
GaAsP on GaP	Red	HLMP-1301	3.4	–
		HLMP-1301-E00xx	3.4	–
		HLMP-1301-FG0xx	5.4	17.2
		HLMP-1301-G00xx	8.6	–
		HLMP-1301-GH0xx	8.6	27.6
	Yellow	HLMP-1401	2.2	–
		HLMP-1401-D00xx	3.6	–
		HLMP-1401-E00xx	5.7	–
		HLMP-1401-EF0xx	5.7	18.4
		HLMP-1401-EFBxx	5.7	18.4
	Orange	HLMP-K401	2.1	–
		HLMP-K401-E00xx	3.4	–
		HLMP-K401-EF0xx	3.4	10.8
HLMP-K401-FGDxx		5.4	17.2	
GaP	Green	HLMP-1503	1.0	–
		HLMP-1503-C00xx	2.6	–
		HLMP-1503-D00xx	4.2	–
		HLMP-1503-DE0xx	4.2	13.4
		HLMP-1503-DEDxx	4.2	13.4
	Emerald Green ^[1]	HLMP-K600	1.0	–

Note:

1. Please refer to Application Note 1061 for information comparing standard green and emerald green light output degradation...

Part Numbering System

HLMP - X X XX - X X X XX



Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$

Parameter	HER/Orange	Yellow	Green	Units
Peak Forward Current	90	60	90	mA
Average Forward Current ^[1]	25	20	25	mA
DC Current ^[2]	30	20	30	A R
Reverse Voltage (IR = 100 μA)	5	5	5	V
Transient Forward Current ^[4] (10 μsec Pulse)	500	500	500	mA
LED Junction Temperature	110	110	110	$^\circ\text{C}$
Operating Temperature Range	-40 to +100	-40 to +100	-20 to +100	$^\circ\text{C}$
Storage Temperature Range	-40 to +100	-40 to +100	-40 to +100	$^\circ\text{C}$

Notes:

1. See Figure 5 (HER/Orange), 10 (Yellow), or 15 (Green/Emerald Green) to establish pulsed operating conditions.
2. For Red, Orange, and Green series derate linearly from 50°C at $0.5\text{ mA}/^\circ\text{C}$. For Yellow series derate linearly from 50°C at $0.2\text{ mA}/^\circ\text{C}$.
3. For Red, Orange, and Green series derate power linearly from 25°C at $1.8\text{ mW}/^\circ\text{C}$. For Yellow series derate power linearly from 50°C at $1.6\text{ mW}/^\circ\text{C}$.
4. The transient peak current is the maximum non-recurring peak current that can be applied to the device without damaging the LED die and wirebond. It is not recommended that the device be operated at peak currents beyond the peak forward current listed in the Absolute Maximum Ratings.