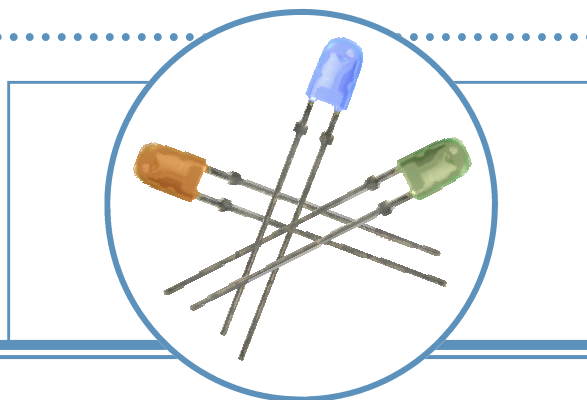


# Oval Red LED Lamp (5mm)

## OVLHRKD8

- High luminous intensity
- Defined spatial radiation
- Multiple viewing angles
- UV-resistant epoxy
- Precision optical performance

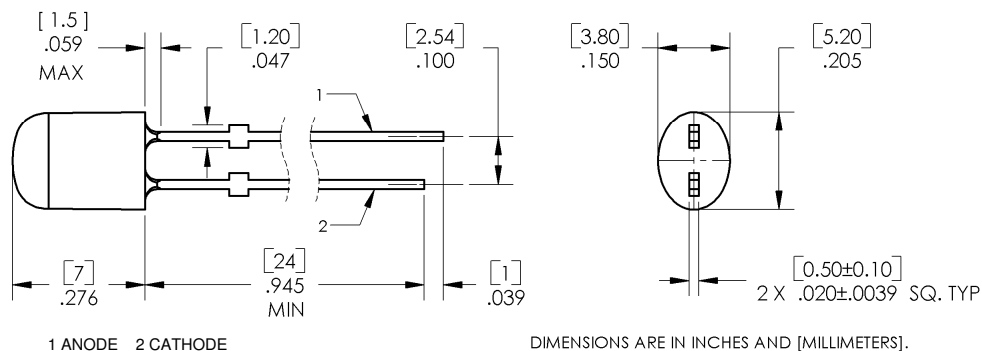


The OVLHRKD8 is designed for superior performance in outdoor environments. Its radiation pattern matches blue (OVLHBKD8), orange (OVLHQKD8), and green (OVLHGKD8) devices in identical packages to create LED pixels for full-color video screens.

## Applications

- Variable Message Signs
- Indoor/Outdoor Advertising Signage
- Traffic and Highway Signs
- Full-Color Video Signs

Part Number	Material	Emitted Color	Intensity Typ. mcd	Lens Color
OVLHRKD8	AllnGaP	Red	950	Red Diffused



Data is subject to change without prior notice.

# Oval Red LED Lamp (5mm)

## OVLHRKD8

### Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$  unless otherwise noted

Storage Temperature Range	-40 ~ +100 °C
Operating Temperature Range	-40 ~ +95 °C
Reverse Voltage	5 V
Continuous Forward Current <sup>2</sup>	50 mA
Peak Forward Current (10% Duty Cycle, 1KHz)	200 mA
Power Dissipation	130 mW
Lead Soldering Temperature (3mm from the base of the epoxy bulb) <sup>1</sup>	260 °C
Electrostatic Discharge Classification (ESD) (MIL-STD-883E)	Class 1

Note:

- Solder time less than 3 seconds at temperature extreme.
- For long-term performance, the drive currents between 10mA and 30mA are recommended. Please contact an OPTEK sales representative for more information on recommended drive conditions.

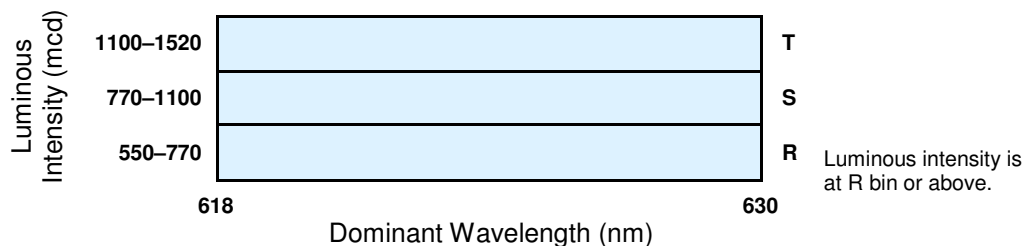
### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
$I_V$	Luminous Intensity	550	950	----	mcd	$I_F = 20\text{mA}$
$V_F$	Forward Voltage	----	2.1	2.6	V	$I_F = 20\text{mA}$
$I_R$	Reverse Current	----	----	100	$\mu\text{A}$	$V_R = 5\text{V}$
$\lambda_D$	Dominant Wavelength	618	624	630	nm	$I_F = 20\text{mA}$
$2\theta_{1/2\text{H-H}}$	50% Power Angle	----	110	----	deg	$I_F = 20\text{mA}$
$2\theta_{1/2\text{V-V}}$		----	50	----	deg	$I_F = 20\text{mA}$

### Standard Bins ( $I_F = 20\text{mA}$ )

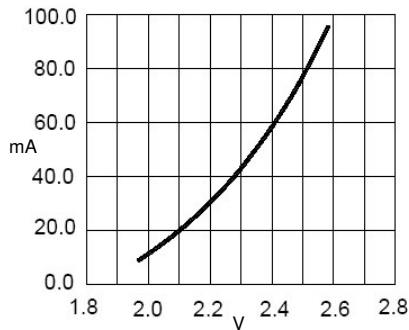
Lamps are sorted to luminous intensity ( $I_V$ ) and dominant wavelength ( $\lambda_D$ ) bins shown. Orders for OVLHRKD8 may be filled with any or all bins contained as below.



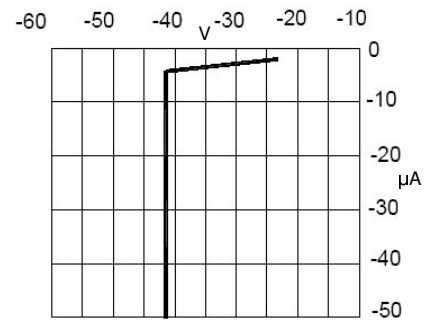
### Important Notes:

- All ranks will be included per delivery, rank ratio will be based on the chip distribution.
- To designate luminous intensity ranks, please contact OPTEK.
- Pb content <1000PPM.

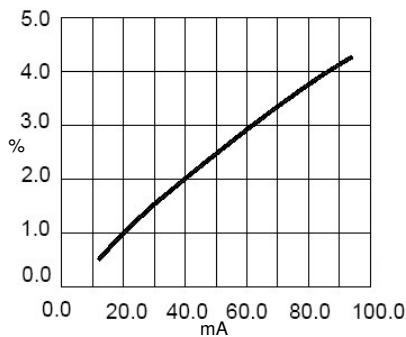
Typical Electro-Optical Characteristics Curves



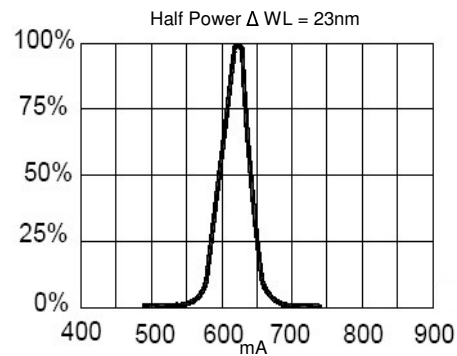
Forward Current vs. Forward Voltage



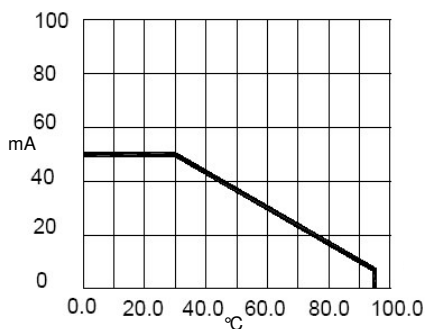
Reverse Current vs. Reverse Voltage



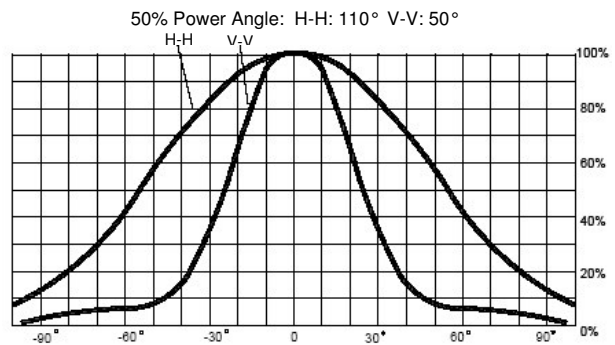
Relative Luminous Intensity vs. Forward Current



Relative Luminous Intensity vs. Wavelength



Maximum Forward DC Current vs. Ambient Temperature



Far Field Pattern

