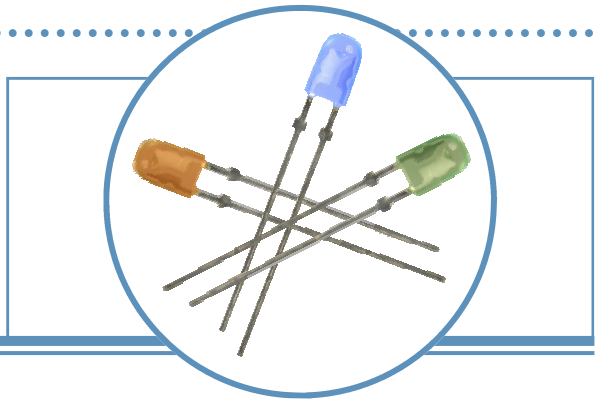
Oval Red LED Lamp (5 mm)

TT electronics
OPTEK Technology

OVLHRKD8

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

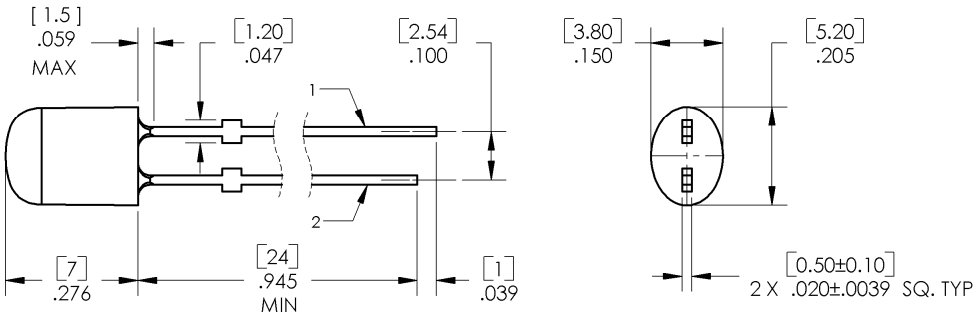


The **OVLHRKD8** is designed for superior performance in outdoor environments. Its radiation pattern matches blue (OVLHBKD8), orange (OVLHQKD8) and green (OVLHGKD8) devices in identical packages to create LED pixels for full-color video screens.

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	AlInGaP	Red	950	Red Diffused



1 ANODE 2 CATHODE

DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

RoHS Moisture

ATTENTION
OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

DO NOT LOOK DIRECTLY AT LED WITH UNSHIELDED EYES OR DAMAGE TO RETINA MAY OCCUR.

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

Absolute Maximum Ratings

T_A = 25° C unless otherwise noted

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

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

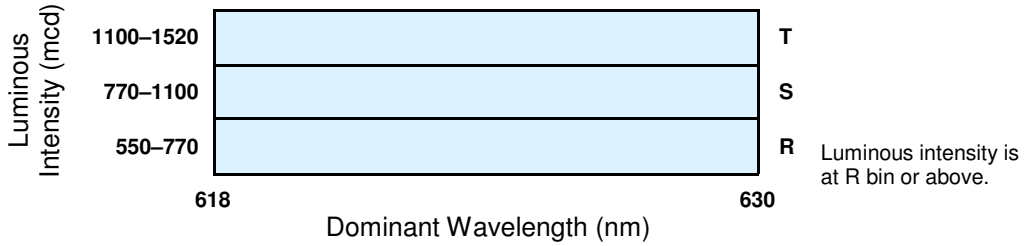
Electrical Characteristics

T_A = 25° C unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
I_v	Luminous Intensity	550	900	----	mcd	I_F = 20 mA
V_F	Forward Voltage	----	2.1	2.6	V	I_F = 20 mA
I_R	Reverse Current	----	----	100	µA	V_R = 5 V
λ_D	Dominant Wavelength	618	624	630	nm	I_F = 20 mA
2Θ½H-H	50% Power Angle	----	110	----	deg	I_F = 20 mA
2Θ½V-V		----	50	----	deg	I_F = 20 mA

Standard Bins (I_F = 20 mA)

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



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

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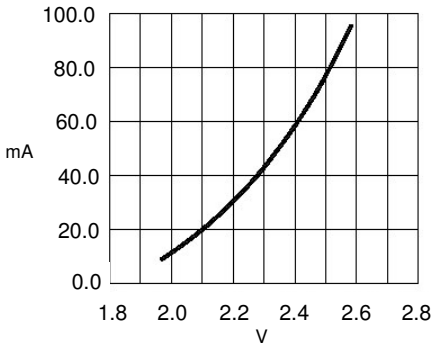
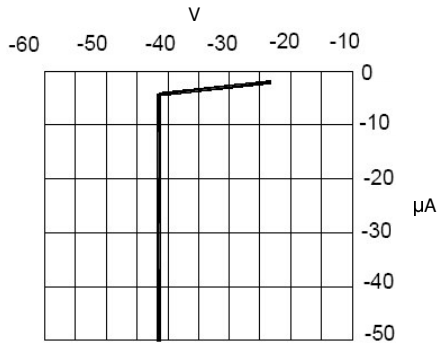
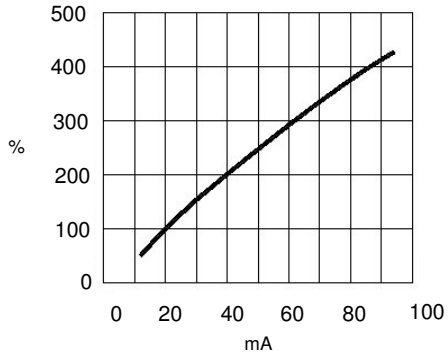
Typical Electro-Optical Characteristics Curves



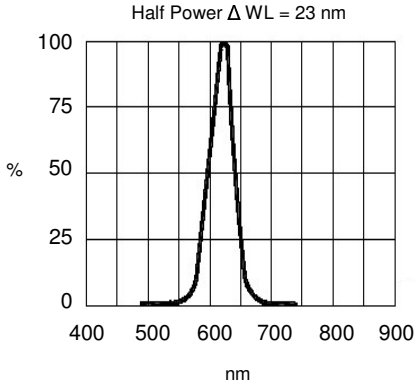
Forward Current vs Forward Voltage



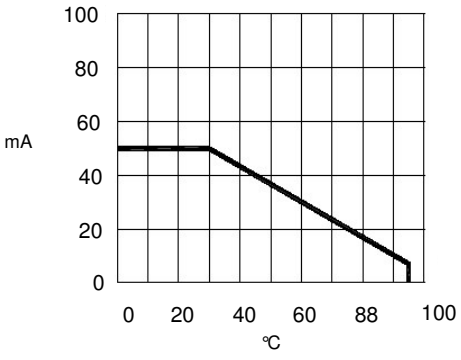
Reverse Current vs Reverse Voltage



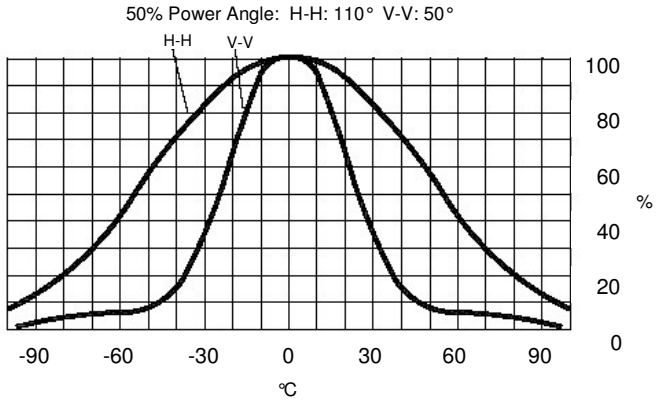
Relative Luminous Intensity vs Forward Current



Relative Luminous Intensity vs Wavelength



Maximum Forward DC Current vs Ambient Temperature



Far Field Pattern