

5mm Round Lamp Super Red LED

Features

- Popular T-1 3/4 diameter package
- High brightness
- UV resistant epoxy
- RoHS compliance



T-1 3/4

Applications

- Indoor/outdoor applications
- Indicator
- Vehicle tail light
- Variable message signs
- Center high mount stop light
- Warning light

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TLH-Q1R5-K1KK	AllnGaP	Super Red	Water Clear

Absolute Maximum Ratings (T_a=25°C)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	5	V
Average Forward Current	I_F	30	mA
Peak Forward Current (Pulse Width=0.1ms, Duty Ratio=1/10)	I_{FP}	100	mA
Power Dissipation	P_d	72	mW
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
LED Junction Temperature	T_J	125	°C
Soldering Temperature	T_{sol}	260 for 5 seconds	°C

Electro-Optical Characteristics (T_a=25°C)

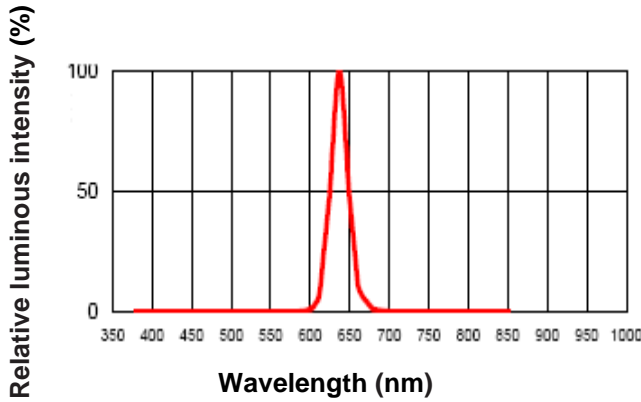
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	5520	8100	-----	mcd	I _F =20mA
Viewing Angle	2θ_{1/2}	-----	15	-----	deg	
Dominant wavelength	λ_D	620	623	630	nm	
Spectrum Radiation Bandwidth	Δλ	-----	25	-----	nm	
Forward Voltage	V_F	1.8	2.0	2.4	V	
Reverse Current	I_R	-----	-----	10	μA	V _R =5V

Notes:

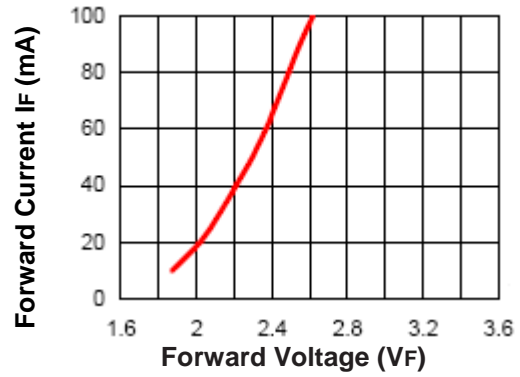
1. Tolerance of Luminous Intensity: ±15%
2. Tolerance of Dominant Wavelength: ±1.0nm
3. Tolerance of Forward Voltage: ±0.05V

Typical Electro-Optical Characteristics Curves ($T_a=25^\circ\text{C}$)

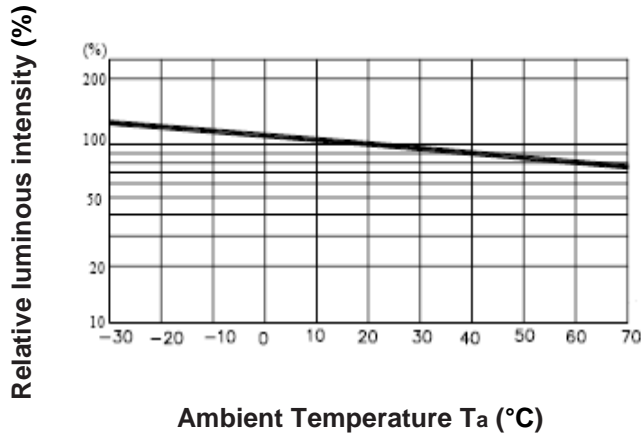
Spectrum Distribution



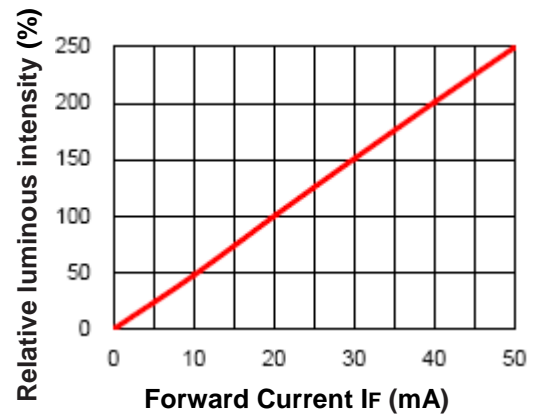
Forward Current vs. Forward Voltage



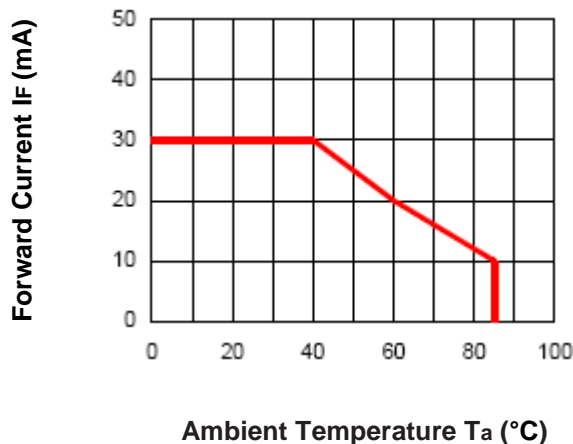
Luminous Intensity vs. Ambient Temperature



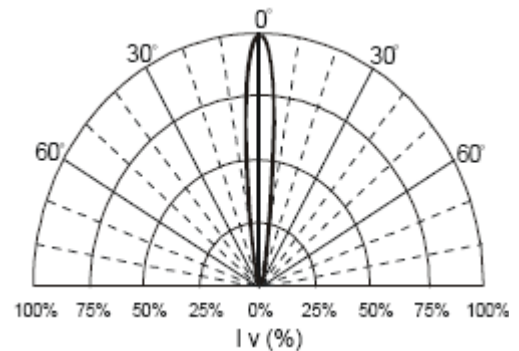
Luminous Intensity vs. Forward Current



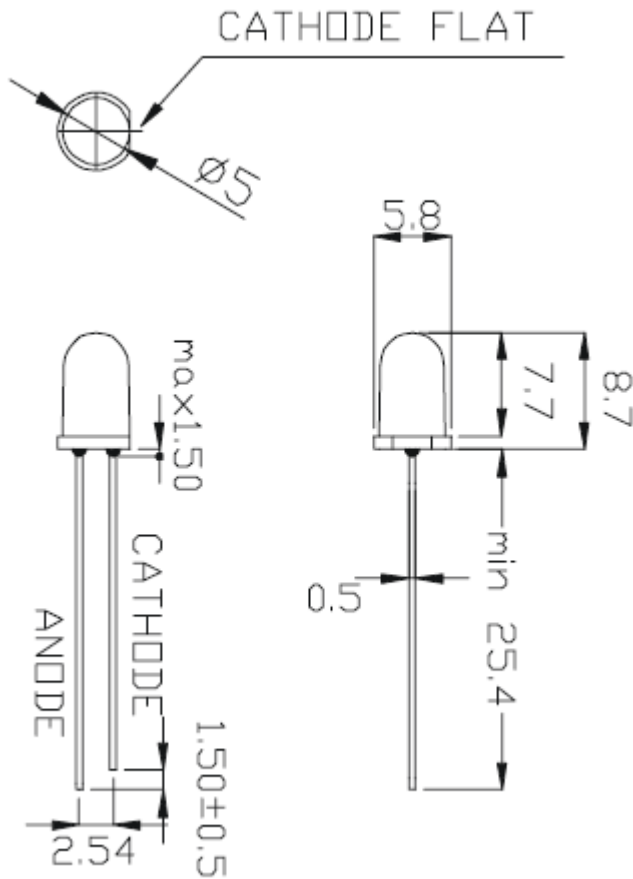
Forward Current Derating Curve



Radiation Diagram



Package Dimensions (In mm)

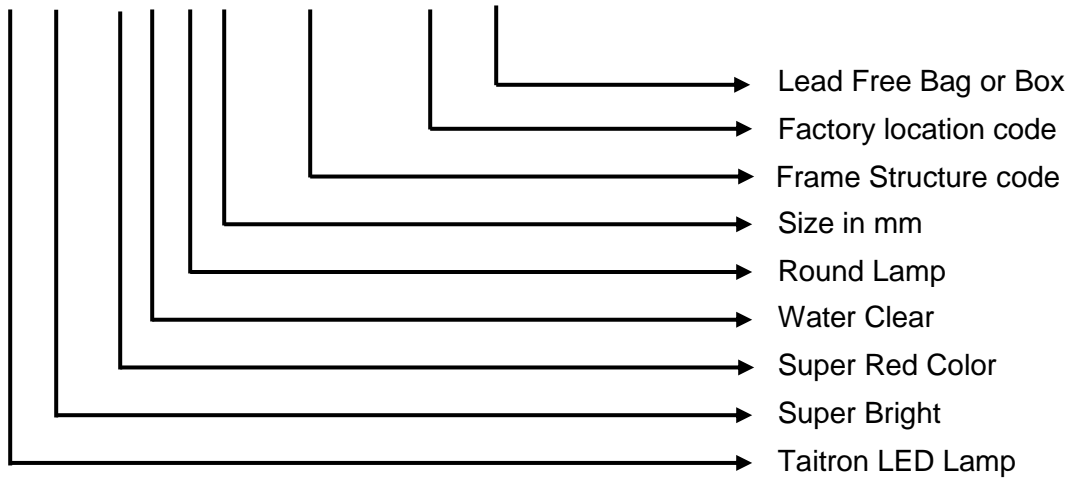


Note:

1. All dimensions are in millimeter
2. Unspecified tolerance: ± 0.20 mm
3. Protruded resin under flange is 1.5mm max.
4. Lead spacing is measured where the leads emerge from the package

Ordering Information

TL H - Q 1 R 5 - K1KK - 88 - BL



Rank Combinations

Bin Range of Dominant Wavelength

Bin	Min	Max	Unit	Condition
RB	620	625	nm	IF =20mA
R7	625	630		

Bin Range of Luminous Intensity

Bin	Min	Max	Unit	Condition
7W	5520	7735	mcd	IF =20mA
7X	7735	10830		
7Y	10830	15160		

Bin Range of Forward Voltage

Bin	Min	Max	Unit	Condition
G	1.8	2.0	V	IF =20mA
H	2.0	2.2		
J	2.2	2.4		

Notes:

1. Tolerance of Luminous Intensity: $\pm 15\%$
2. Tolerance of Dominant Wavelength: $\pm 1.0\text{nm}$
3. Tolerance of Forward Voltage: $\pm 0.05\text{V}$
4. Bin 7Y with less distribution.

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