



L645-__ _V High Bright Red LED Lamp

This series of L645-__ _V is an InGaAlP LED mounted on a lead frame with a clear epoxy lens. On forward bias, it emits a band of visible light that peaks 645nm.

1) Specifications

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|---------------------|-------------------|
| (1) Chip material | InGaAlP |
| (2) Peak wavelength | 645nm typ. |
| (3) Package | Clear epoxy resin |
| (4) Lead frame | Soldered |

2) Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	120	mW	T _a =25°C
Forward Current	I _F	50	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-30 ~ +85	°C	T _a =25°C
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	260	°C	

3) Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =20mA		2.0	2.3	V
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =20mA		2.5		mW
Peak Wavelength	λ _P	I _F =20mA	635	645	655	nm
Half Width	Δλ	I _F =20mA		20		nm

4) Characteristics of Brightness [T_a=25°C]

Type	Viewing Half Angle	Brightness I _F =20mA unit: mcd			Outer Dimension	
		Minimum	Typical	Maximum	Dimension	Figure
L645-01V	±9°		2000		φ5	1
L645-02V	±3°		3000		φ5	2
L645-03V	±12°		1500		φ5	3
L645-04V	±15°		600		φ5	4
L645-05V	±30°		100		φ5	5
L645-06V	±3°		5000		φ5	6
L645-09V	±25°(Long)		600		φ5	7
	±15°(Short)				Oval	
L645-10V	±5°		8000		φ10	8
L645-33V	±16°		500		φ3	9
L645-36V	±40°		250		φ3	10

‡ Brightness is measured by Tektronix J-16.

‡ Total Radiated Power is measured by Photodyne #500.