



## LED940-40 \_ \_ \_ High Power Metal Stem LED Lamp

The series of LED940-40 \_ \_ \_ is a GaAs LED mounted on a metal stem and covered with epoxy resin or hermetically sealed with  $\Phi 5$  glass-lens can.  
 On forward bias it emits a high power radiation, which peaks at 940nm.

### ◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	$P_D$	140	mW	$T_a=25^\circ\text{C}$
Forward Current	$I_F$	100	mA	$T_a=25^\circ\text{C}$
Pulse Forward Current	$I_{FP}$	1000	mA	$T_a=25^\circ\text{C}$
Reverse Voltage	$V_R$	5	V	$T_a=25^\circ\text{C}$
Operating Temperature	$T_{OPR}$	-30 ~ +90	$^\circ\text{C}$	$T_a=25^\circ\text{C}$
Storage Temperature	$T_{STG}$	-30 ~ +100	$^\circ\text{C}$	
Soldering Temperature	$T_{SOL}$	260	$^\circ\text{C}$	

‡ Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡ Soldering condition: Soldering condition must be completed within 3 seconds at  $260^\circ\text{C}$

### ◆ Electro-Optical Characteristics [ $T_a=25^\circ\text{C}$ ]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	$V_F$	$I_F=50\text{mA}$		1.30	1.40	V
Reverse Current	$I_R$	$V_R=5\text{V}$			10	$\mu\text{A}$
Peak Wavelength	$\lambda_{P**}$	$I_F=50\text{mA}$	925	940	955	nm
Half Width	$\Delta\lambda_{**}$	$I_F=50\text{mA}$		50		nm
Rise Time	$t_r$	$I_F=50\text{mA}$		1000		ns
Fall Time	$t_f$	$I_F=50\text{mA}$		500		ns

### ◆ Total Radiant Power and Radiant Intensity at $I_F=50\text{mA}$ [ $T_a=25^\circ\text{C}$ ] \*\*

Type No.	Total Radiant Power unit:mW			Radiant Intensity unit:mW/sr			Viewing Half Angle
	Minimum	Typical	Maximum	Minimum	Typical	Maximum	
940-40K00	10	15			3		$\pm 40^\circ$
940-40K42	5	9			45		$\pm 6^\circ$
940-40M00	11	18			10		$\pm 40^\circ$
940-40M32	8	13			40		$\pm 10^\circ$
940-40T52	3.5	6			3		$\pm 55^\circ$

\*\* ‡ Radiant Intensity is measured by Tektronix J6512

‡ Total Radiated Power is measured by Photodyne #500.

### ◆ Outer dimension (Unit: mm)

