

L780-66-60 epoxy lens type Infrared illuminator

L780-66-60 is a wide viewing and extremely high output power illuminator assembled with a total of 60 high efficiency AlGaAs diode chips, mounted on a metal stem TO-66 with AlN ceramics and covered with double coated clear silicone and epoxy resin. These devices are designed for high current operation with proper heat sinking to improve thermal conductive efficiency.

◆ Features

- 1) High reliability
- 2) Compact (TO-66) package
- 3) High output power at 780nm

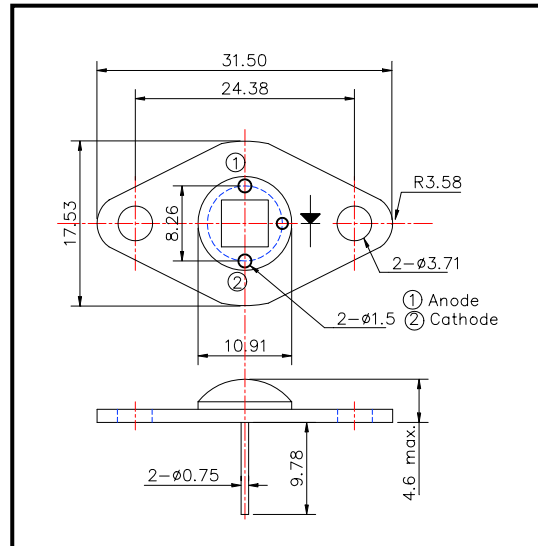
◆ Applications

- 1) For IR search light
- 2) For CCD lighting

◆ Specifications

- | | |
|---------------------|-------------------------------|
| 1) Product name | IR illuminator |
| 2) Spec. No. | L780-66-60 |
| 3) Chip | |
| (1) Material | AlGaAs |
| (2) Peak wavelength | 780nm |
| 4) Package | |
| (1) Stem | TO-66 stem with AlN |
| (2) Lens | Clear silicone and epoxy lens |

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temp.
Power Dissipation	P_D	7.8	W	$T_a=25^\circ\text{C}$
Forward Current	I_F	750	mA	$T_a=25^\circ\text{C}$
Pulse Forward Current	I_{FP}	3	A	$T_a=25^\circ\text{C}$
Reverse Voltage	V_R	50	V	$T_a=25^\circ\text{C}$
Junction Temperature	T_J	100	$^\circ\text{C}$	
Thermal Resistance	R_{thjp}	5.5	K/W	
Operating Temperature	T_{OPR}	-30 ~ +80	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-30 ~ +110	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	265	$^\circ\text{C}$	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 265 $^\circ\text{C}$

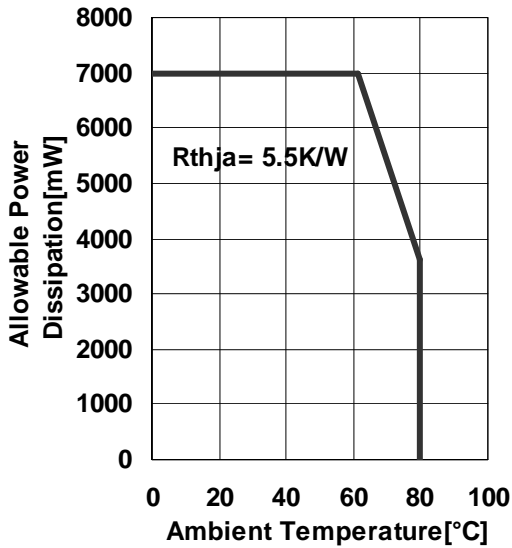
‡Thermal Resistance: Junction – Package, mounted on heat sink

◆ Electro-Optical Characteristics

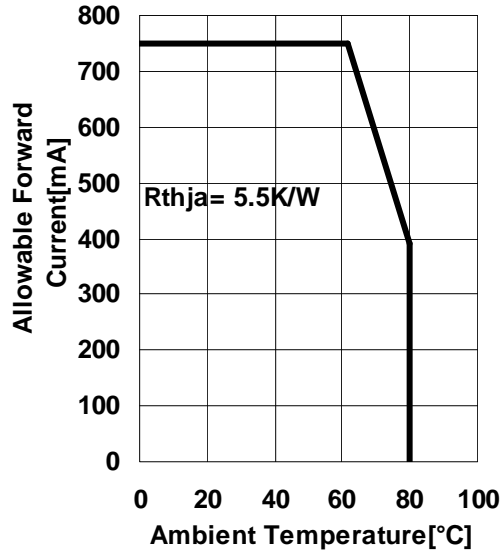
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Total Radiated Power	P_o	$I_F=600\text{mA}$		1000		mW
Total Radiated Power	P_o	$I_F=3\text{A}$		4000		mW
Radiant Intensity	I_E	$I_F=600\text{mA}$		450		mW/sr
Forward Voltage	V_F	$I_F=600\text{mA}$		9.0		V
Reverse Current	V_R	$I_R=10\mu\text{A}$	50			V
Peak Wavelength	λ_P	$I_F=600\text{mA}$		780		nm
Half Width	$\Delta\lambda$	$I_F=600\text{mA}$		40		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F=600\text{mA}$		± 60		deg.
Rise Time	t_r	$I_F=600\text{mA}$		100		ns
Fall Time	t_f	$I_F=600\text{mA}$		100		ns

L780-66-60

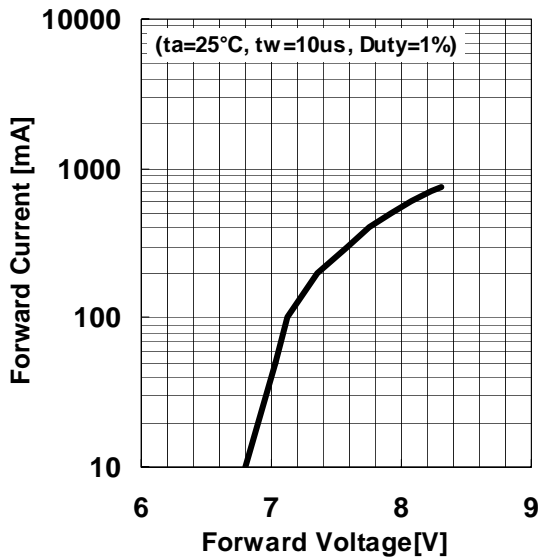
Allowable Power Dissipation- Ambient Temperature



Allowable Forward Current- Ambient Temperature



Forward Current - Forward Voltage



Relative Radiant intensity - Forward Current

